



AUBURN BOTANIC GARDENS

DRAFT MASTERPLAN REPORT

MARCH 2018

AUBURN BOTANIC GARDENS DRAFT MASTERPLAN REPORT

DATE

March 2018

PREPARED FOR

Cumberland Council

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1.0 INTRODUCTION

1.1 PURPOSE OF THIS REPORT

Cumberland Council is preparing a Masterplan for the Auburn Botanic Gardens to inform future projects and developments within the Gardens over the next 20 years.

The Draft Masterplan focuses on the design of the gardens, access, and facilities and proposes improvements to enhance visitor experience.

The adopted Masterplan will be used to identify, guide and obtain funding for improvement projects over the next 20 years.

1.2 SURROUNDING PROJECTS

In addition to the preparation of a Masterplan for the Auburn Botanic Gardens' Cumberland Council will be undertaking the following planning and designs in close proximity to the Gardens:

- The Duck River Regional Corridor Plan of Management and Masterplan - The plan will include improving open areas and bushland areas access and water quality along the corridor.
- Duck River Regional Playground - Proposed in the area to the south of the Auburn Botanic Gardens. The works will include the design and Stage 1 installation of a new playground for all ages. New seating areas and picnic facilities will be provided to facilitate large and small gatherings.



SITE PLAN

2.0 CONTEXT

2.1 AUBURN BOTANIC GARDENS

The Auburn Botanic Gardens are located in Western Sydney approximately 5km south of Parramatta.

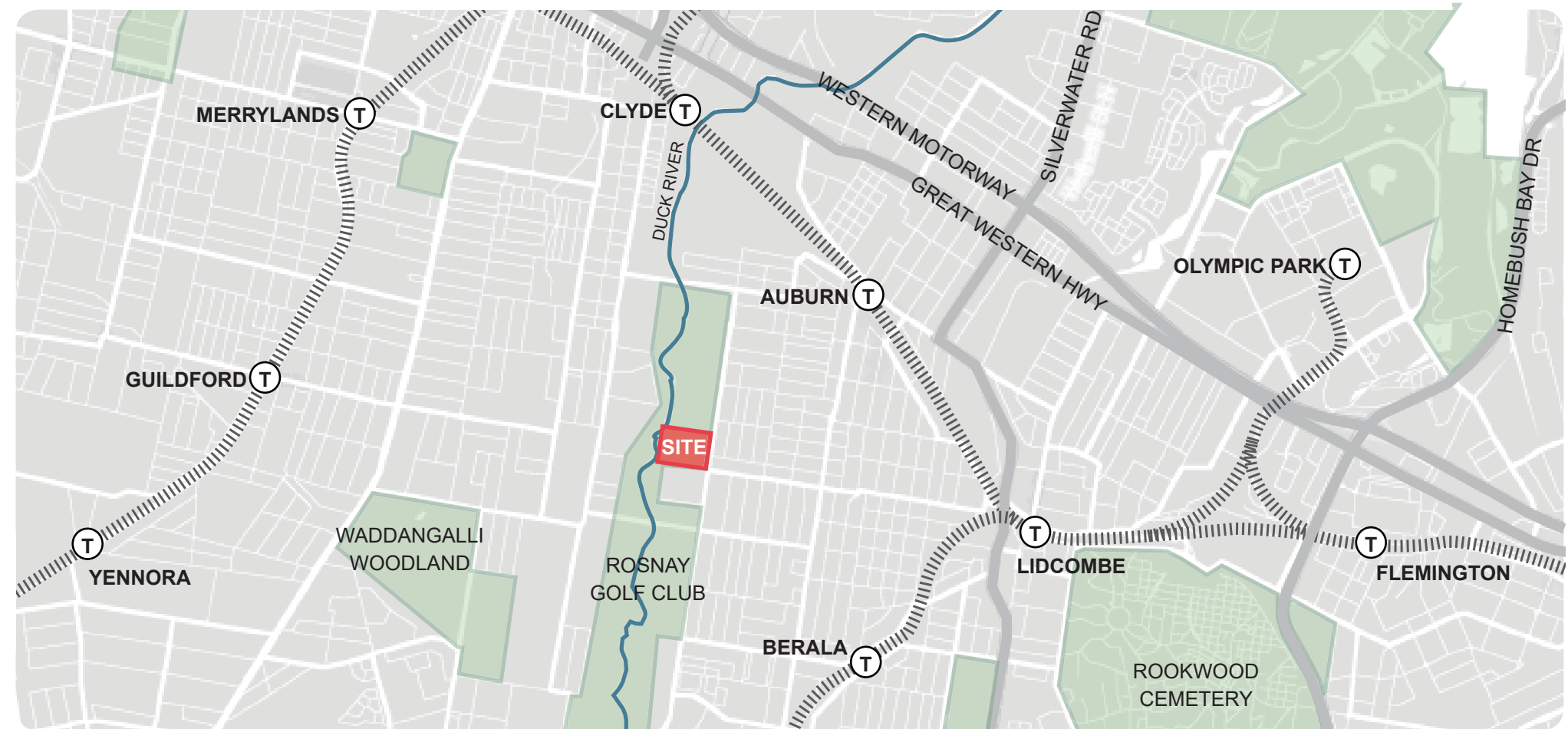
The Gardens are located within a network of open space that has been identified as the Duck River West Central Priority Area in the Sydney Green Grid Spatial Framework, prepared by the Department of Planning and the Environment.

This open space network consists of playing fields, golf courses, nature reserves, walking tracks and links, The Auburn Botanic Gardens and remnant woodland vegetation. Providing places for social gathering, play, active and passive recreation and a wildlife corridor for local fauna.

The Auburn Botanic Gardens are located along the edge of Duck River and cover an area of 7.9 hectares. The site is surrounded by the Duck River Regional Corridor to the west, Chisholm Road to the east, Chiswick Road to the south and Webbs Avenue Playing Fields to the north.

2.2 CLIMATE

Westerly and north-westerly winds have a strong influence on the climate of Auburn. In particular westerly winds are dominant in the mornings during late autumn, winter and early spring. In summer, north-easterly winds are more likely to influence the climate. The area receives approximately 980mm of rainfall a year which is average for the Sydney area. Temperatures range between a median maximum of 39°C in the summer and a median minimum of 5°C in the winter.



LOCATION PLAN

3.0 HISTORY

3.1 HISTORY OF THE AREA

The original inhabitants of the Auburn area were the Wangal clan of the Eora Aboriginal people.

Auburn is represented by three Aboriginal Land Councils – Metropolitan, Gandangara and Deerubin. The two main tribes who inhabited the Auburn area before the arrival of European settlers were Darug and Eora. However it was the meeting place for the four main tribes of the Sydney area Darug, Gandangara, Eora and Tharawal.

European settlements began in the area from 1792 when the first farms were established. Throughout the early 1800s, settlements continued to spread, focusing primarily on sheep and cattle farming.

Development of open space in the area in the 1990s was largely due to the Sydney 2000 Olympic Games. Extensive industrial lands in the north-eastern suburbs of Newington and Homebush Bay were redeveloped for sporting, recreation, entertainment and housing, especially medium and high density development. Growth in the area has continued, aided by rezoning and the redevelopment of former industrial and government land.

In 2016 the Greater Sydney Commission prepared The Greater Sydney Regional Plan which outlines a 40 year vision to meet the needs of the growing and changing population of Sydney. The draft Central City District Plan, of which Auburn is part, provides a guide for implementing the Regional Plan at a District level.

A key sustainability objective of the Central City District Plan is to establish a 'Green Grid' that is a network of high quality green spaces connecting communities to the natural landscape. The Duck River and its surrounding landscapes have been identified as a Green Grid Priority Project.

3.2 HISTORY OF THE GARDENS

In 1946 the Cumberland Planning Scheme set aside land along the Duck River corridor for use as open space. The land had previously been used for dumping and extended from Parramatta River to the water supply pipeline at Sefton.

The Gardens were located in the Auburn Municipal Council area until 2016, when they became part of the Cumberland Council in the NSW council amalgamations.

Eric Black who was the Chief Engineer of Auburn Municipal Council from 1949 - 1979 suggested that some of this land should be used for passive recreation, with a native garden and picnic areas.

The Auburn Botanic Gardens were designed to the vision of Eric Black who also managed the works on site. In 1974 Commonwealth funding became available and the Auburn Botanic Gardens gardens opened to the public on the 11th September, 1977.

Appendix 1 provides a summary of the key design objectives and layout principles for each space as detailed in the *Duck River Parklands Project Report*, Written by E.W. Black.

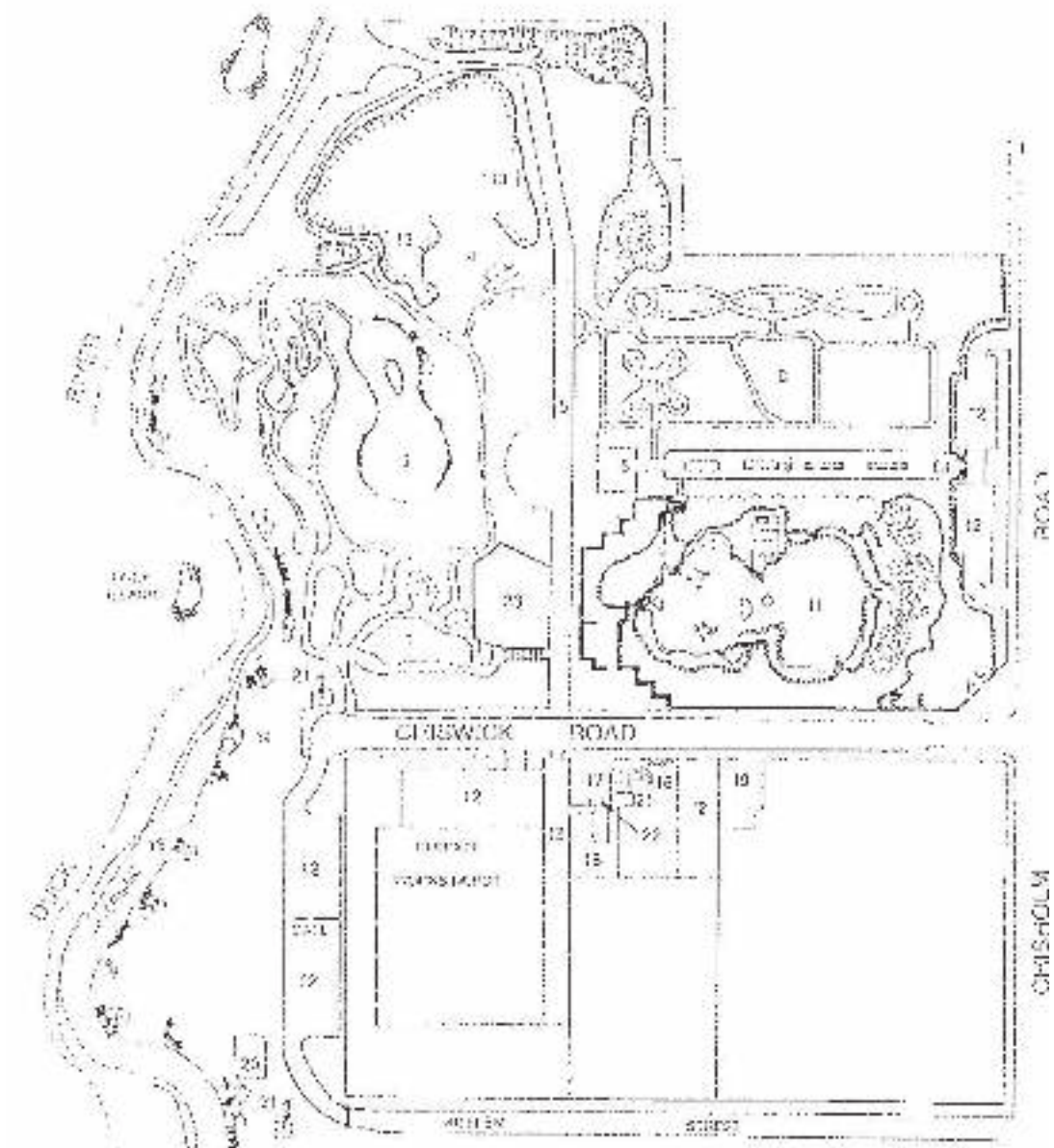
The adjacent sketch shows the original layout of the Auburn Botanic Gardens. The Gardens were composed of a variety of spaces as follows:

1. Australian Garden
2. Australian Rainforest
3. Billabong Area
4. Open Air Woodland Theatre
5. Avenue Of Remembrance
6. Central Formal Area
7. Garden Of Trees
8. Sunken Rose Garden
9. Ornamental Reflection Pool
10. Scented Garden
11. Japanese Hill And Lake Garden
12. Carpark
13. Earth Mounds Planted With Native Shrubs and Trees
14. Picnic Area
15. Riverside Walk

16. Floral Clock
17. Kiosk
18. Bonsai Garden
19. Bird Aviary
20. Community Picnic Area
21. Toilets
22. Fern House
23. Fauna Reserve



1942 aerial of the land prior to the Gardens



Auburn Councils Sketch Plan of the Auburn Botanic Gardens Precinct and Themes

4.0 FACT FINDING CONSULTATION

A fact finding consultation was held in November 2017, with an online survey available on Cumberland Councils 'Have Your Say' website. The purpose of this consultation was to find out how local residents and visitors use and enjoy the Auburn Botanic Gardens and what improvements they would like to see to the Gardens in the future.

The key finding of the survey include:

- That the majority of people who visit the Gardens go to enjoy the scenery, the Cherry Blossoms in August, to visit the animals and to relax
- The majority of people who responded to the survey (62%) visit the Auburn Botanic Gardens a couple of times a year, and 25% of respondents are regular visitors, visiting the Gardens at least once a month
- The key things people like about the Auburn Botanic Gardens are the animals, plants, the Japanese Gardens, the peace and serenity and scenery.
- The Japanese Gardens are the most visited area of the Gardens by far, followed by the Rose Garden and the Fauna Reserve
- The proposed changes as put forward in the survey, including clearer and inviting entries, more colour and seasonal planting, a succulent garden, an edible garden and a desert garden, were all received very positively. The most support was for 'more colour and seasonal planting' followed closely by a succulent garden and an edible garden.
- Providing more seating in the Gardens was strongly supported
- The proposed educational opportunities as put forward in the survey, including learning about plants, animals, indigenous edible plants, more signage indicating plant species and educational information, were all received very positively. The most support was for learning about plants followed closely by native animals.

The following key stakeholders were consulted at separate meetings.

Access and Inclusion Panel

Meeting held in January 2018. Key points raised include:

- Consider the number and location of accessible facilities
- Paths should allow for two power wheelchairs to pass
- Provide access and the opportunity for access to water for all park users
- All paving materials and maintenance must provide for accessibility
- Increase the number of accessible seating opportunities for all park users
- Improve signage along paths
- The Japanese Garden currently does not provide for inclusive access along paths, to the water, over bridges etc. and it should be upgraded to provide for the whole community.

The ATSICC Committee

Meeting held in February 2018. Key points raised include:

- Consultation should be undertaken and input sought from Kerrie Kenton re. significance of women's sites.
- Consideration should be given to incorporate solar and water recycling elements.

EXISTING PHOTOS OF GARDENS



Billabong



Fauna Reserve



Rose Garden



Avenue of Remembrance



Cherry blossoms in the Japanese Gardens



Reflection Pool

5.0 THE GARDENS TODAY

5.1 THE AUBURN BOTANIC GARDENS

The Gardens are primarily used as a passive recreation area by the local community and visitors to the area. The most common uses of the Gardens are:

- For walking and jogging along the pathways
- To enjoy the gardens and scenery
- A place for school excursions and educational activities
- Events venue of which the Cherry Blossom Festival is the most popular with up to 90,000 visitors over two weeks in 2017.
- To see the native animals in the Fauna Reserve
- To enjoy the playground
- As a venue for wedding parties, photographs and other filming.

As part of a 2001 Plan of Management, a use survey of the Gardens highlighted that between 200,000 to 250,000 people visit the Gardens each year and of these visitors, 70% come from outside the Auburn Local Government area.

5.2 EVENTS

The Gardens support a range of events throughout the year. The Cherry Blossom Festival held in August in and around the Japanese Garden is the most popular event and was attended by 90,000 visitors over two weeks in 2017. Other events managed and run by Council include outdoor cinema screenings in the Amphitheatre, Open Days and Christmas in the Gardens.

The Gardens are also available for private events such as ceremonies, filming and photography for commercial purposes which require a booking.

5.3 MANAGEMENT

The Gardens are managed by Cumberland Council who employ a dedicated full time team of 5 staff. Works include the selection and care of planting in the Gardens, fauna keepers, event preparation, upgrades, maintenance and management.

The events held in the Gardens provide a source of income for Council, and increase the requirements for maintenance due to litter, car parking and pedestrian wear & tear on the gardens and lawns.

5.4 KEY ISSUES

Detailed site analysis was carried out using information obtained from the Fact Finding Consultation, site visits, desktop studies and discussions with Council staff. This analysis revealed that although the Gardens are a great asset to the area there are opportunities to enhance the Gardens and visitors enjoyment.

In summary the key issues with the Gardens today are:

- Boundaries between different areas of the Gardens are blurred and unclear
- The edges of the Gardens have been overtaken by scrub
- Sections of limited or no understorey planting detracts from character planting areas
- The variety and number of character planting areas is limited
- The main entries to the gardens are underwhelming and not obvious upon arrival
- Visitors are not drawn into the centre or outer edges of the Gardens
- The edges of the Gardens are open and promote views of the surrounding streets, properties and fences
- Access and circulation to the northern section of the site is limited
- A number of dead end paths restrict connectivity

through the Gardens

- Universal access is not provided to all areas
- Some paths are degraded, old and uneven
- Poor water quality results in the need for the water to be dyed
- Large sections of the water system are piped underground between water bodies
- The reservoir is fenced and visually unattractive
- Little to no irrigation has resulted in very dry soils and planter beds

The detailed site analysis and opportunities identified for the Gardens is included in Appendix 2.

These issues have been explained four broad categories; Character Areas, Edges and Entries, Circulation and Hydrology. The following section, Vision and Masterplan Objectives, looks at the opportunities to address and rectify these issues in detail.



Cherry Blossom Festival



Wedding Venue

EXISTING PHOTOS OF GARDENS



Boundary fence



Informal paths in the Rainforest



Paths in the Australian Native Garden

6.0 MASTERPLAN VISION AND OBJECTIVES

6.1 THE VISION

A vision for the Auburn Botanic Gardens has been developed based on the site analysis and the opportunities identified. The masterplan aims:

To create a destination for the local community, wider Sydney and international visitors, that provides a place of serenity and where people are transported out of the city into a garden of rest and relaxation, horticultural interest and educational experiences.

6.2 THE KEY OBJECTIVES

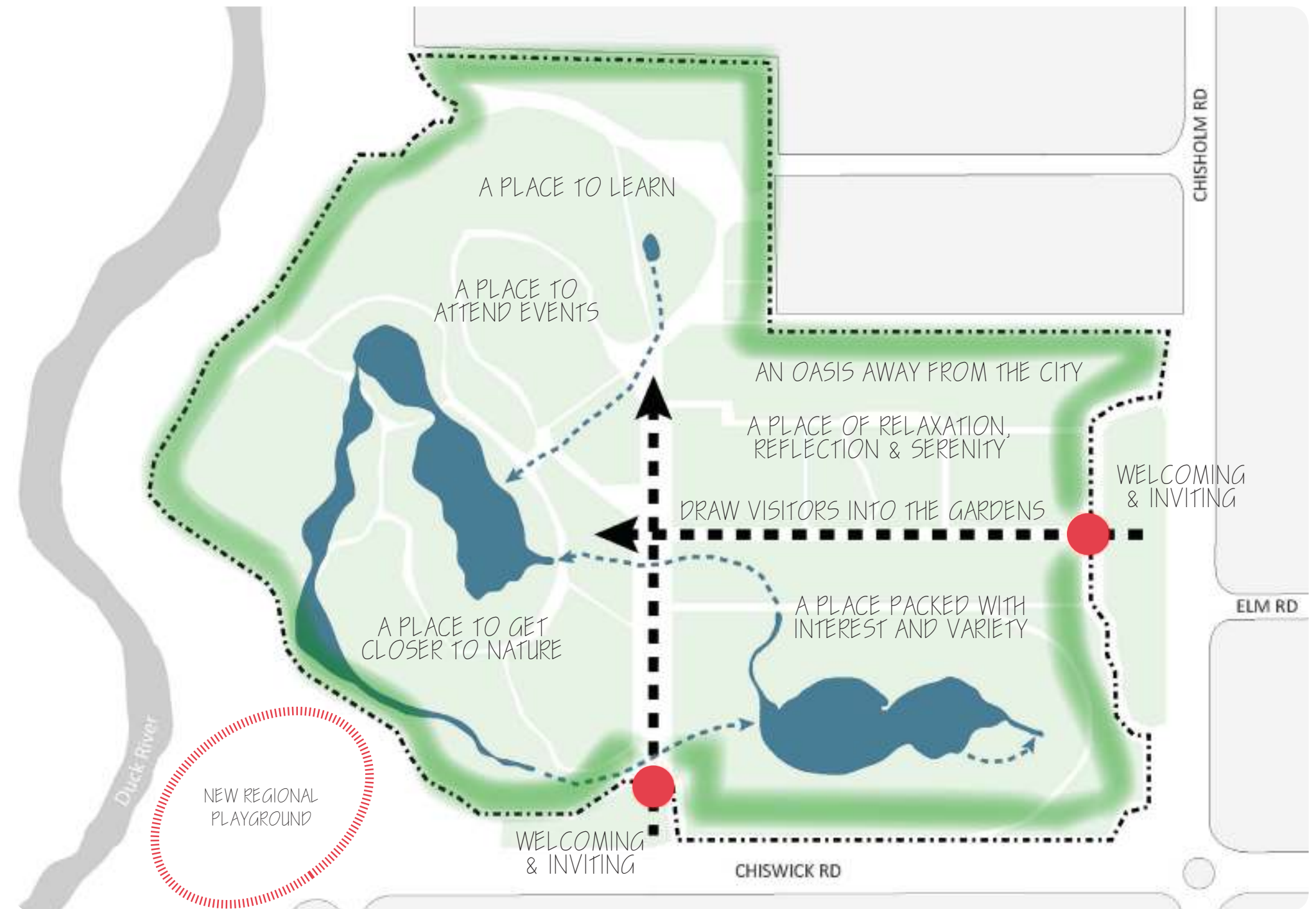
The following key objectives have been developed to realise the Auburn Botanic Gardens vision.

Create:

- An oasis
- A place to learn
- A place to attend events
- A place of relaxation & serenity
- A place that draws visitors in to explore and enjoy
- A welcoming & inviting place
- A place filled with interest and variety
- A place to feel close to nature

Sections 6.3 to 6.6 describe the vision and objectives for the Gardens.

KEY STRATEGY DIAGRAM

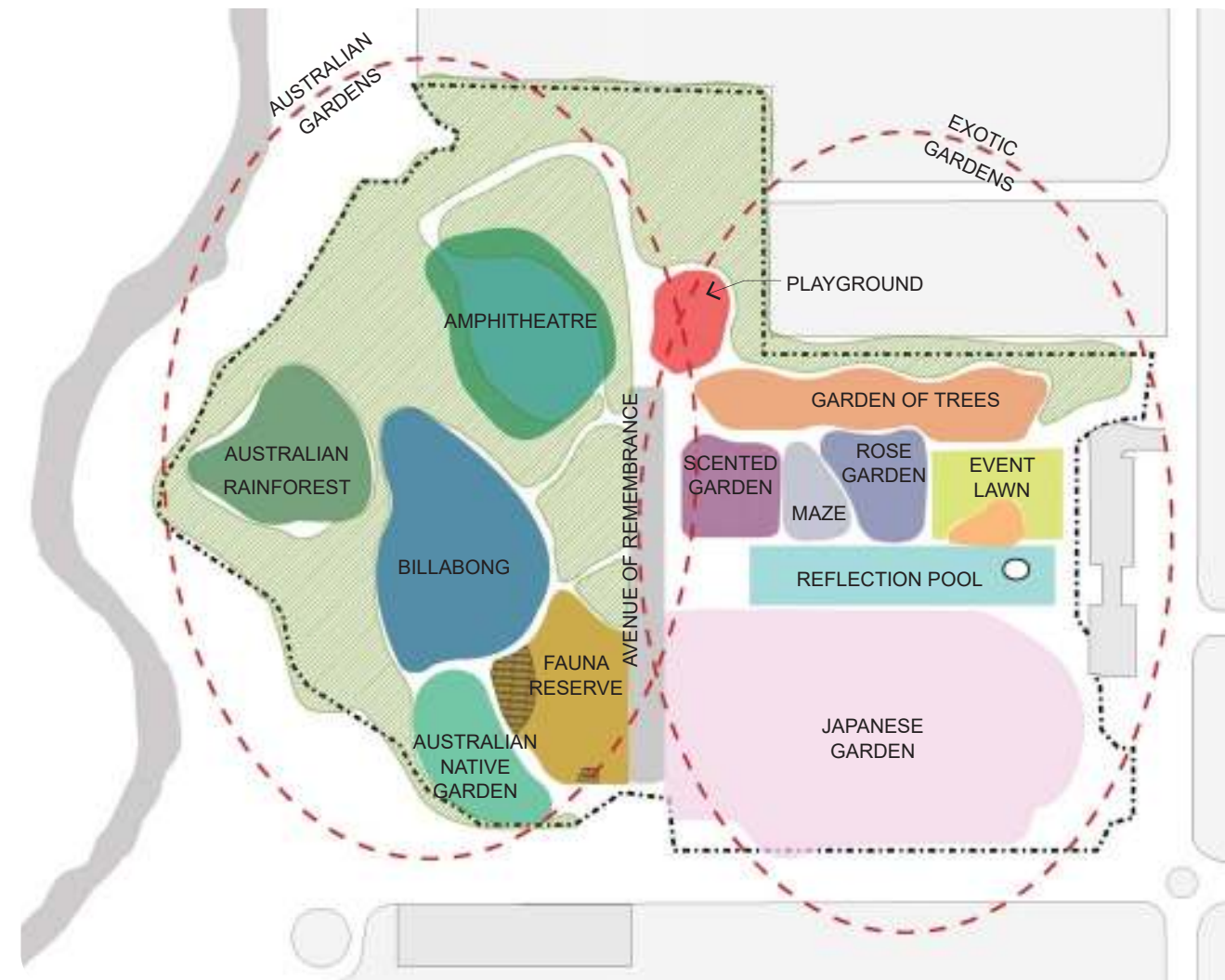


MASTERPLAN VISION AND OBJECTIVES

6.3 CHARACTER AREAS

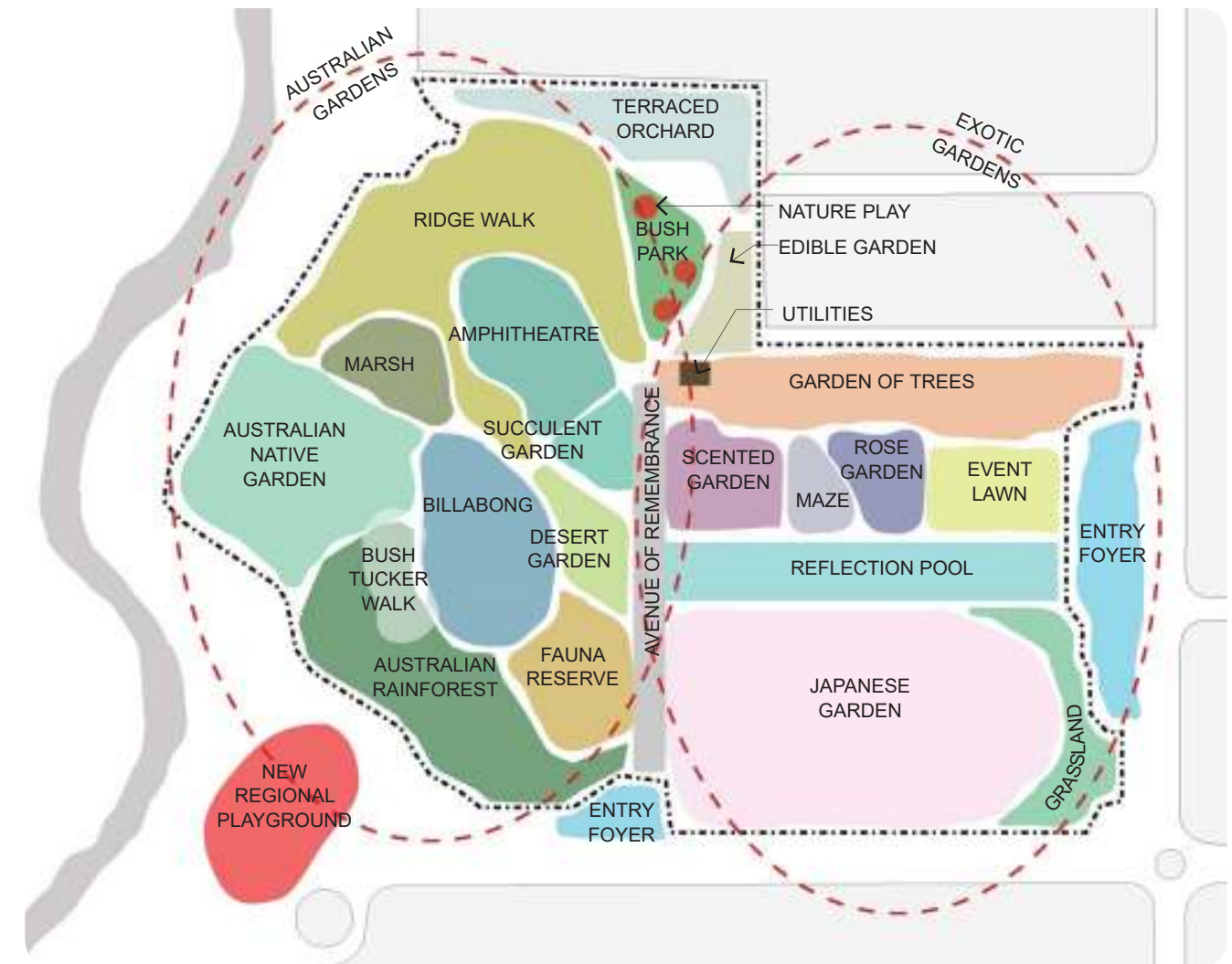
The character areas of the Auburn Botanic Gardens are distinctive spaces that provide “snapshots” of different landscapes and vegetation communities. The variety, type and quality of the character areas describe the interest, range of activities, and educational experience of the Gardens.

EXISTING ISSUES



- Boundaries between different areas of the Gardens are blurred and unclear
- The edges of the Gardens have been overtaken by scrub
- Sections of limited or no understorey planting detracts from character areas
- The variety and number of character areas are limited

PROPOSED OBJECTIVES



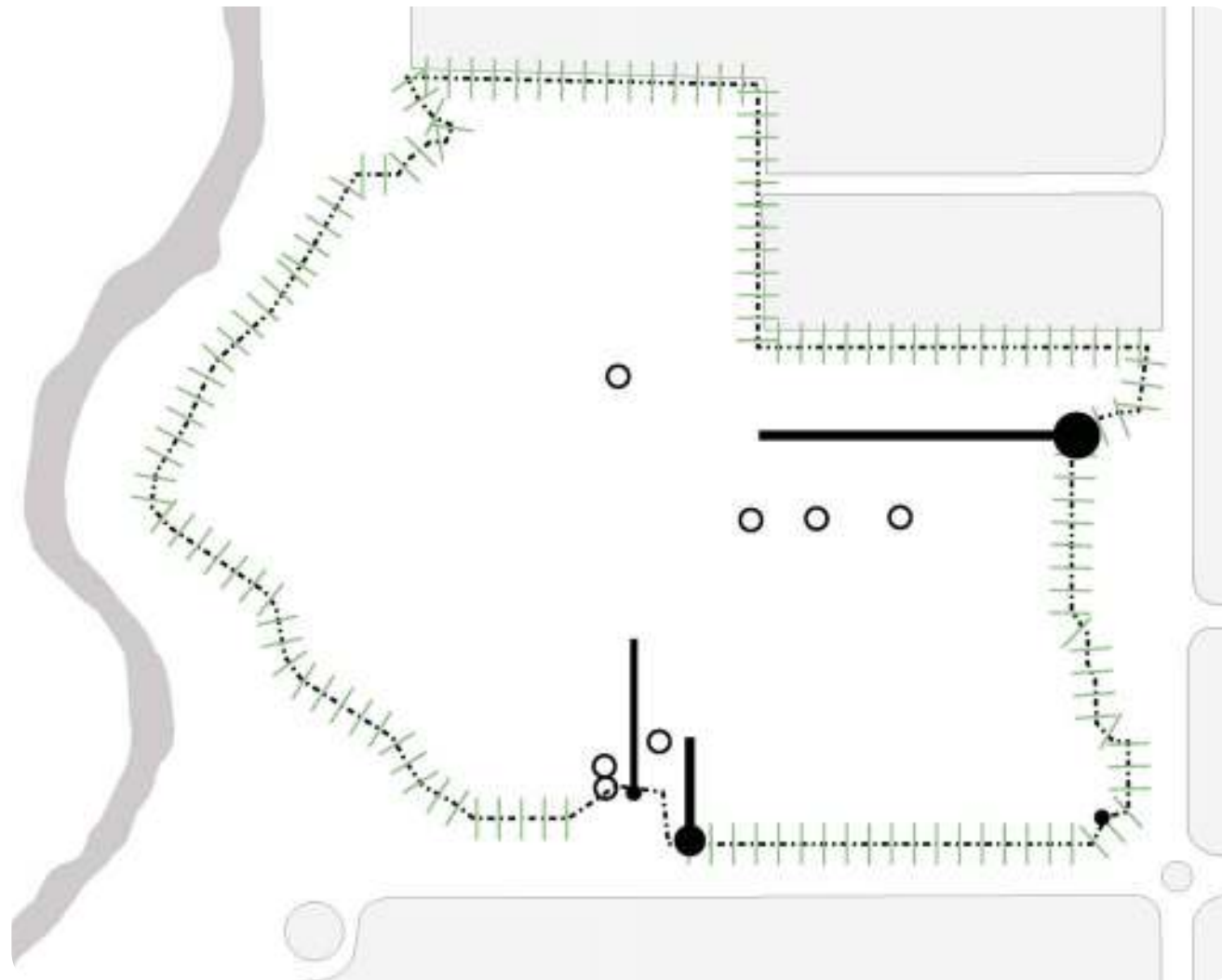
- Enhance and improve existing areas with suitable planting
- Create new character areas to add interest to the Gardens
- Clearly define individual areas with more variety in plant species
- Improve and provide new educational opportunities
- Improve the flexibility of spaces for events and create new spaces for event use
- Provide nature play within the Gardens

MASTERPLAN VISION AND OBJECTIVES

6.4 EDGES AND ENTRIES

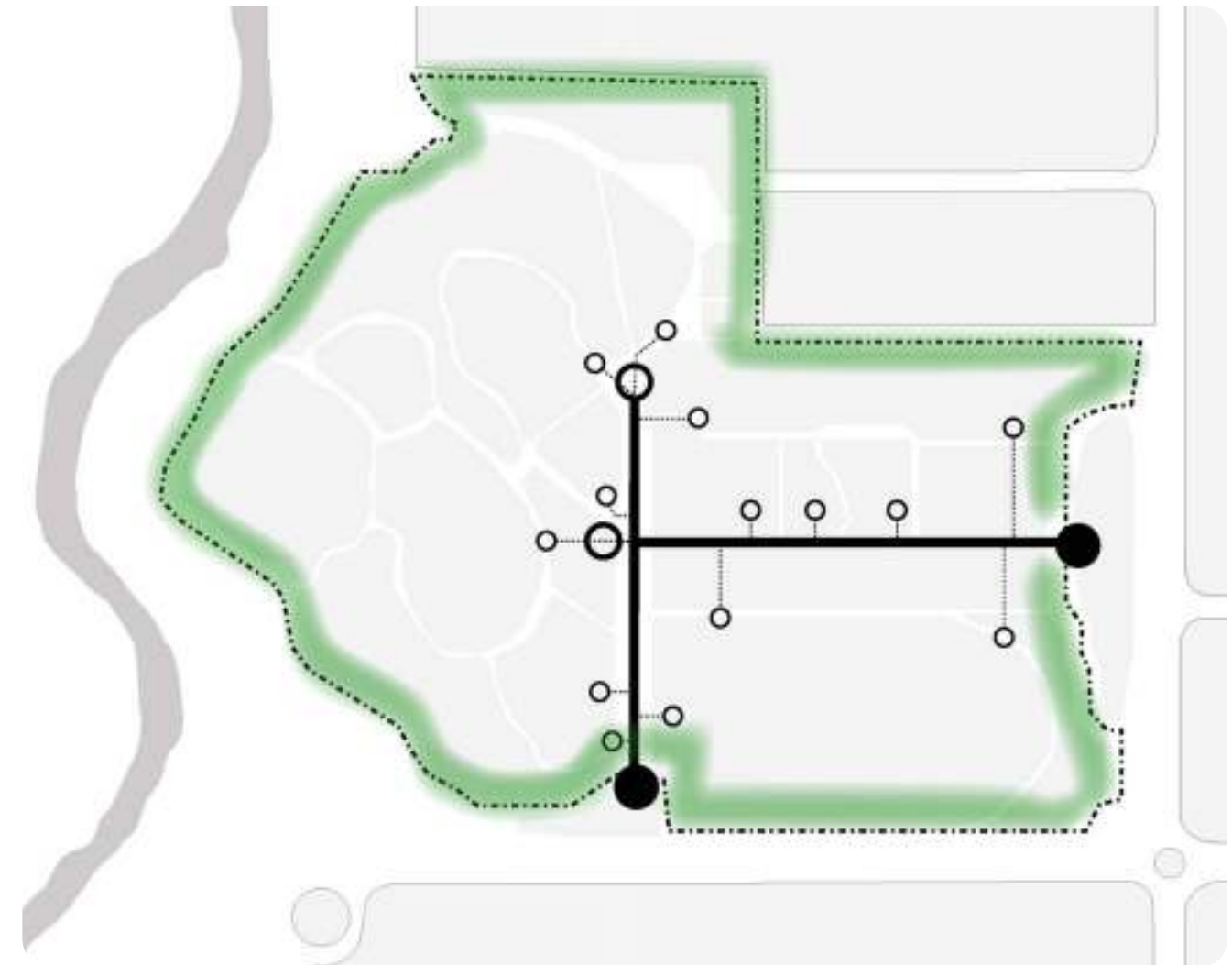
The edges and entries to the Gardens provide the first views and impressions of the Gardens. They help define the site, separate the Gardens from the surrounding suburb and frame and direct views.

EXISTING ISSUES



- The main entries to the gardens are underwhelming and not obvious upon arrival
- Visitors are not drawn into the centre or outer edges of the Gardens
- The edges of the Gardens allow distracting views of the surrounding streets, properties and fences

PROPOSED MASTERPLAN OBJECTIVES



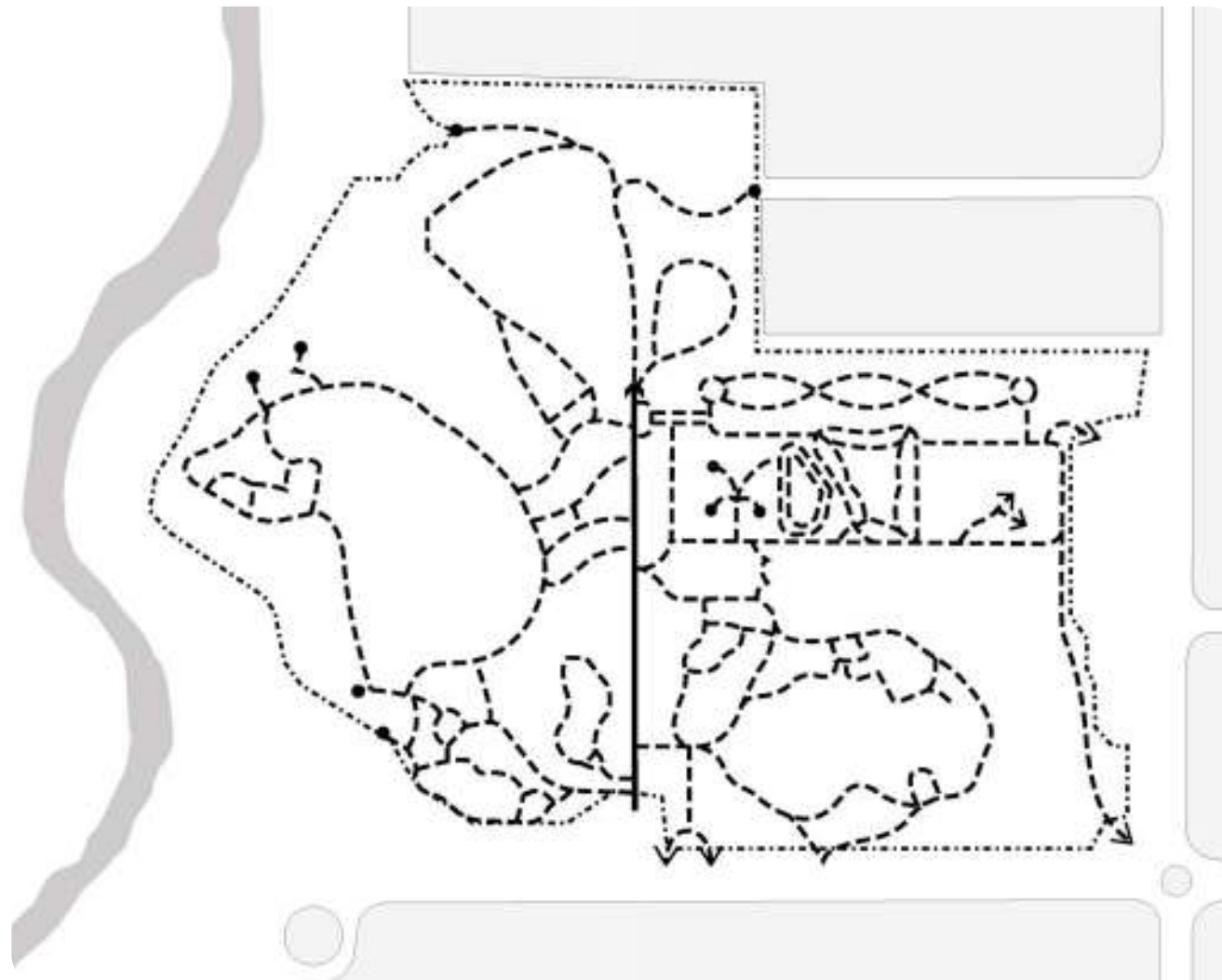
- Enhance and strengthen the central north-south and east-west axes to the Gardens
- Reposition the main entries to the Gardens to define the central axis and make them legible and attractive
- Improve the entry experience and the sense of being transported into the Gardens
- Provide focal points that draw visitors into the Garden
- Provide dense layered planting around the boundary to enclose the Gardens and screen the surrounding area from within the Gardens to reinforce the 'oasis' character

MASTERPLAN VISION AND OBJECTIVES

6.5 CIRCULATION

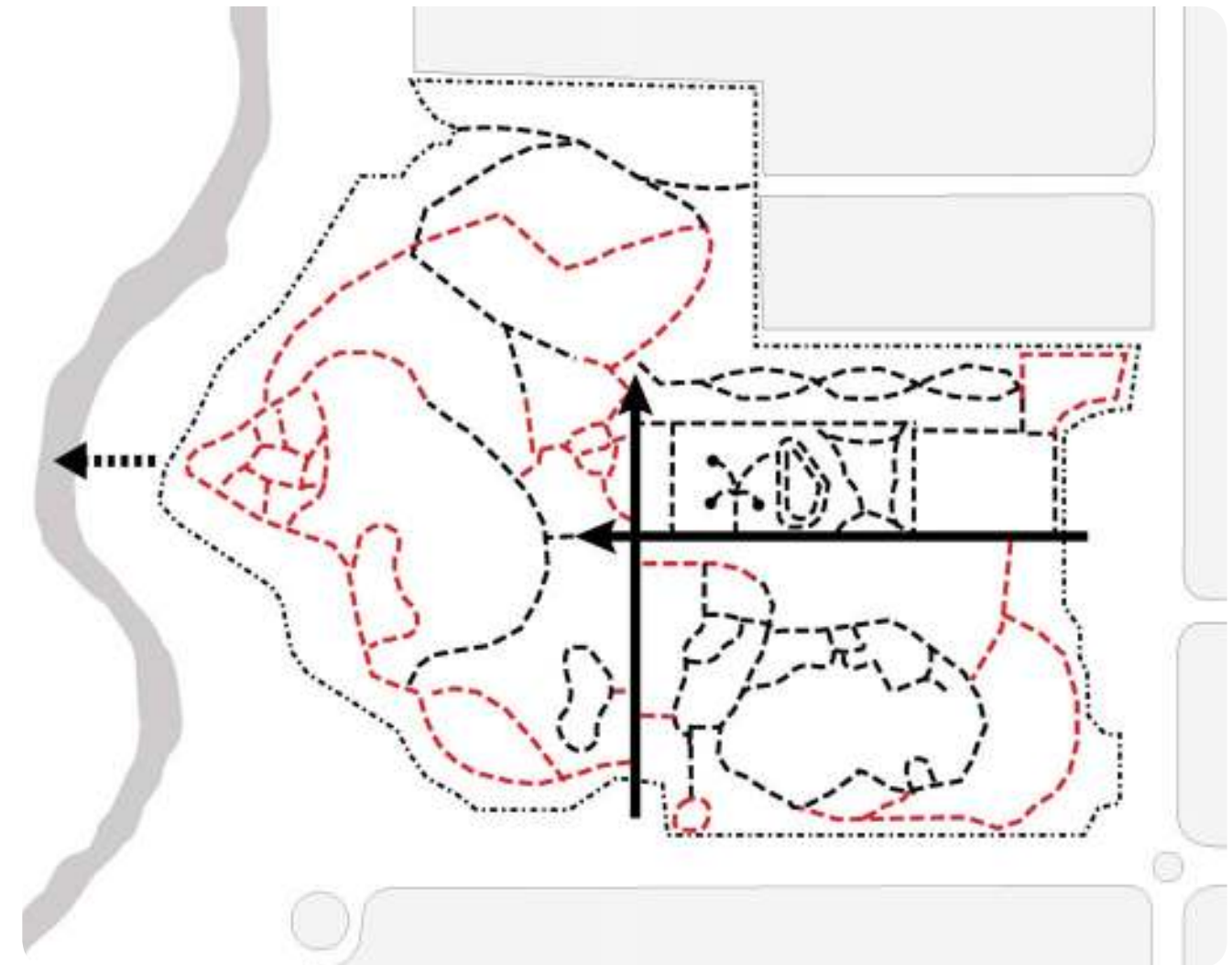
The circulation and access throughout the Gardens is an integral part of the activity and experience, helping visitors explore the Gardens in a logical and safe manner.

EXISTING ISSUES



- Access and circulation to the northern section of the site is limited
- A number of dead end paths restrict circulation and movement through the Gardens
- Some paths are degraded and need upgrading

PROPOSED MASTERPLAN OBJECTIVES



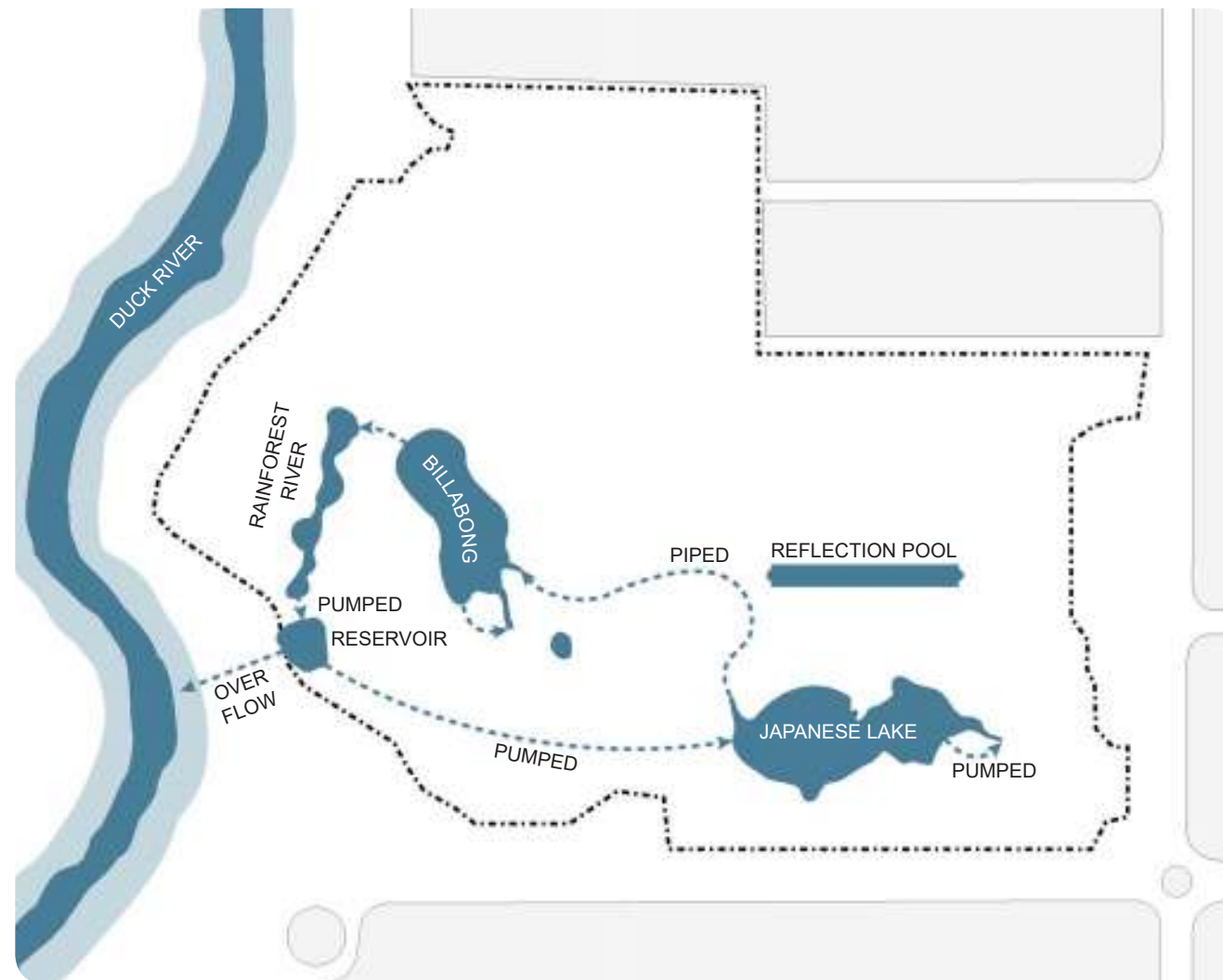
- Enhance and strengthen the central north south and east west axes
- Connect all paths to ensure access flows through the Gardens
- Provide new paths and upgrade materials to improve and promote access throughout the Gardens
- Provide universal accessibility in accordance with the Disability Discrimination Act

MASTERPLAN VISION AND OBJECTIVES

6.6 HYDROLOGY

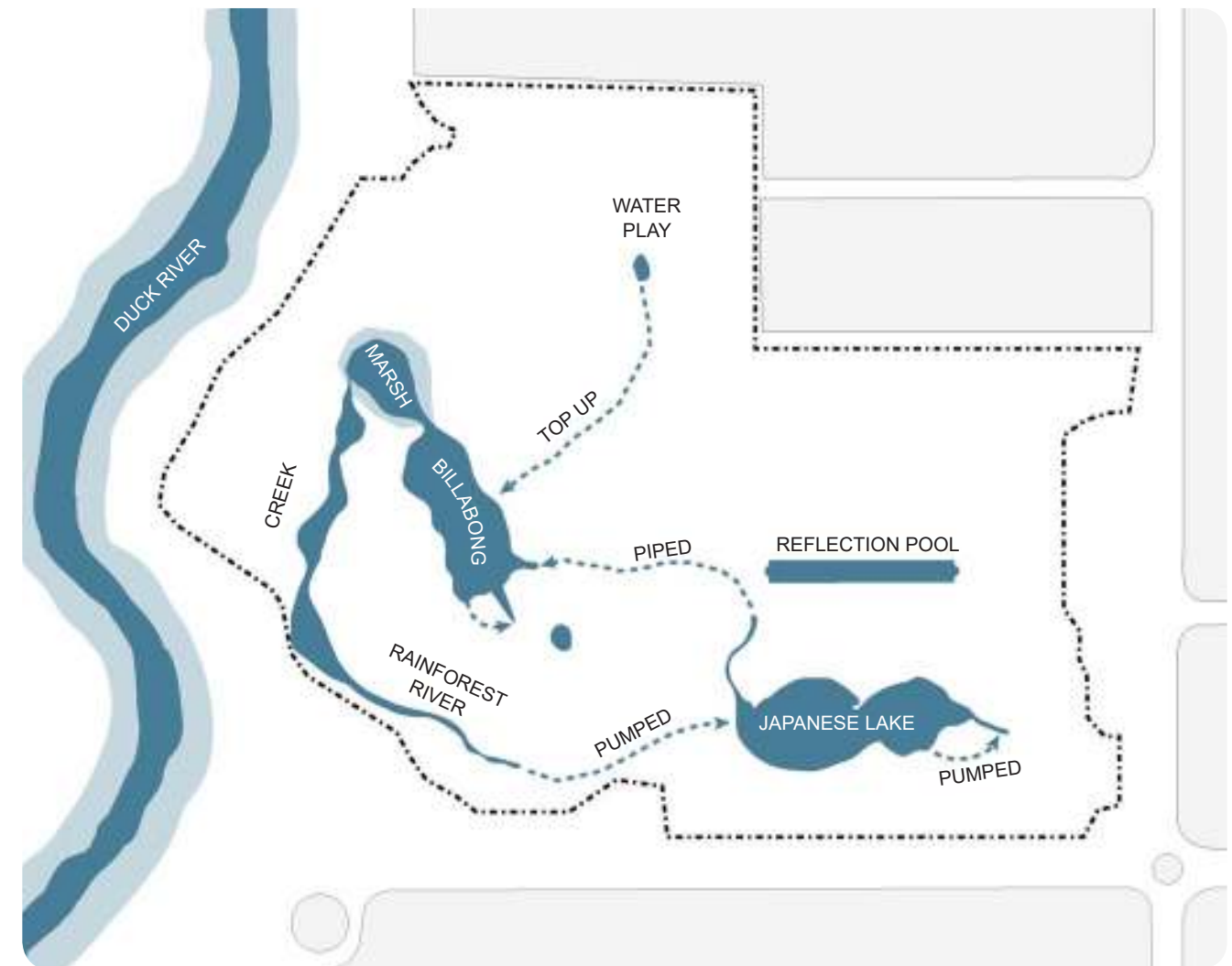
Hydrology refers to the various water bodies in the Gardens and the water flow connections that add to the serenity and relaxation of the Gardens.

EXISTING ISSUES



- Water clarity is affected by the clay lining of the water bodies and as a result the water is currently dyed
- Sections of the water system are piped underground between water bodies
- The reservoir is fenced and visually unattractive
- Lack of irrigation promoting very dry soils

PROPOSED MASTERPLAN OBJECTIVES



- Provide a natural filtration system (such as a marsh) to improve water quality
- Bring the water to the surface to make more water visible and reduce underground piping
- Incorporate the reservoir into the gardens to enhance the water experience
- Provide irrigation to planting beds
- Provide more water experiences into the Gardens

7.0 MASTERPLAN



1. Main entry
2. New entry foyer landscape
3. Fauna Park
4. Relocated Australian Rainforest
5. New rainforest river
6. Relocated Native Australian Garden
7. Bush Tucker Walk
8. Linked waterways throughout the Australian Garden
9. New Marsh
10. Open lawn area around the Billabong
11. New Rockery
12. New Desert Garden
13. New Succulent Garden
14. Amphitheatre area
15. New and enhanced Ridge Walk
16. Lookout
17. New Bush Park
18. New nature play
19. New Terraced Orchard
20. New Edible Garden
21. New toilet block and sheds
22. Garden of Trees
23. Existing Scented Garden and Wedding Pavilion
24. Existing Maze
25. Existing Rose Garden
26. Events Lawn
27. Existing Reflection Pool
28. New Plaza of Trees
29. New path to the Japanese Garden
30. Existing Japanese Garden
31. New link path and seating area
32. Possible future connection to Duck River (exit only)



0 10 20 40 60m
Scale 1:1500@A3

MASTERPLAN

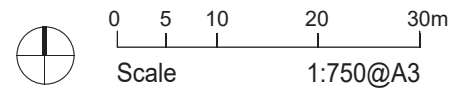
7.1 DETAILED PLAN: NORTH EASTERN SECTION



KEY PLAN



1. New Camellia walk
2. Garden of Trees replanted with summer, spring and autumn flowering species to create a floral calendar.
3. New planting along the boundary directs views into the Garden and screen adjacent streets and properties
4. New lawn surrounded by seasonal planting
5. Relocated sun dial links time with the seasonal calendar created in the Garden of Trees
6. Existing Rose Garden Arbours to be replaced
7. Wide open lawn for events and picnicking
8. Wedding Pavilion for photographs
9. Existing Scented Garden and Maze to be retained



MASTERPLAN

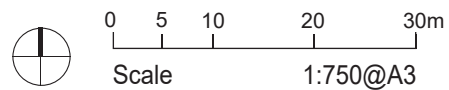
7.2 DETAILED PLAN: SOUTH EASTERN SECTION



KEY PLAN

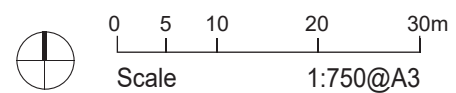


1. Relocated wide and welcoming main entry with planted pergola entry structure
2. New landscaped entry foyer and gathering space
3. Existing bus stop and drop off area including disabled access
4. New flowering tree avenue
5. Existing reflection pool to be enhanced with new edge and lighting
6. New plaza of trees with seating areas for events and informal picnicking
7. New path connecting the Japanese Gardens and the Chisholm Street entry
8. New link path and seating area to view the existing Cherry Blossom Hill
9. Boundary fence repositioned. Existing entry to be relocated
10. New entry to the Japanese Gardens formalised with a new entry gate
11. Existing Japanese Garden paths upgraded to improve access for all
12. New groundcover planting and shrub planting to areas where planting is missing such as the Cherry Blossom Hill



MASTERPLAN

7.3 DETAILED PLAN: SOUTHERN CENTRAL SECTION



KEY PLAN



1. Wide and welcoming main entry with planted pergola structure
2. New entry foyer with seating and feature planting to create a place for gathering before entering the Gardens
3. New entry to the Australian Rainforest
4. New Australian Rainforest Area with dense layered planting and educational signage connected by elevated boardwalks and lookouts
5. New Rainforest River
6. Existing Fauna Park with a new entry and gateway with education information
7. Enhance planting and edges to the Avenue of Remembrance.

MASTERPLAN

7.4 DETAILED PLAN: WESTERN SECTION



KEY PLAN



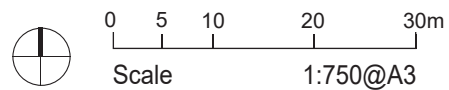
1. New marsh area with an elevated boardwalk and create habitats for birds and wildlife and a water filter system for the Gardens
2. New Native Australian Garden with planting arranged in groups between winding paths and informal seating areas.
3. Existing native planting to be planted with local understorey species
4. Existing remnant and endangered plant communities and species to be protected
5. Link and enlarge waterways throughout the Australian Garden
6. New bridge
7. Realign the fence line to improve circulation
8. Possible future link to Duck River (exit only)



0 5 10 20 30m
Scale 1:750@A3

MASTERPLAN

7.5 DETAILED PLAN: CENTRAL SECTION



KEY PLAN

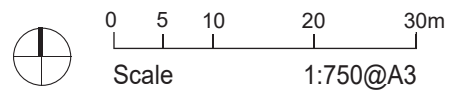


1. New Australian Desert Garden with sculptural planting to create an entry to the Australian Garden
2. New rockery with scrub planting located around the existing creeks
3. Open lawn area around the Billabong for picnicking and outdoor classrooms
4. Bush Tucker Walk with information on indigenous food sources and plants
5. New Succulent Garden and rockery with winding paths and informal seating areas
6. New planting wall to screen the back of the amphitheatre building
7. Paths realigned to lead more directly into the Amphitheatre
8. Circulation around the amphitheatre building to be adjusted
9. New focal point at the end of the Avenue of Remembrance



MASTERPLAN

7.6 DETAILED PLAN: NORTHERN CENTRAL SECTION



KEY PLAN



1. Amphitheatre Area regraded to improve use for events
2. New and enhanced Ridge Walk with a lookout to provide views over the Gardens and to Duck River
3. New Bush Park with shaded lawns and log seating for informal picnicking and relaxing
4. New Nature Play to inspire imaginative play with balancing logs, stepping stones, branches, rocks and water pump
5. New Terraced Orchard with a circuit walk linking it to the Edible Garden
6. New Edible Garden with raised planter beds and educational signage
7. New planting along the boundary directs views into the Garden and provides screening to adjacent streets and properties
8. New amenities building

8.0 DETAIL ELEMENTS

8.1 INTRODUCTION

The descriptions below refer to character areas and elements of the Auburn Botanic Gardens Masterplan and provide detailed proposals for each area. These descriptions should be read in conjunction with the Masterplan drawing.

8.2 DESIGN

- Create high quality, striking and distinct design for each character area. Design should consider circulation, sightlines, shape and form of paths and garden beds and how gathering spaces are integrated into each character area.
- The design of the Gardens is to be carried out to current Australian Standards, BCA and DDA requirements.

8.3 THE WHOLE GARDENS

- Provide irrigation to lawn and garden beds throughout the whole of the Auburn Botanic Gardens.
- Create a dense green vegetated buffer along the boundary fence of the gardens to direct views into the Gardens while also screening out surrounding properties and streets.
- Close existing entries at the Japanese Gardens and on the corner of Chiswick and Chisholm Streets.
- Create two main entries into the Gardens - one at Chisholm Road that aligns with the new east west axis and the other at the Chiswick Road end of the Avenue of Remembrance.
- Consider a future exit to the Duck River.
- Adjust the fence line at the Avenue of Remembrance entry removing the stepped edge to allow the path to flow more smoothly into the Rainforest area.
- Adjust the fence line and remove the step in it by the existing Reservoir to allow the reservoir water body and paths to flow more smoothly around this edge of the Gardens.
- Repair and paint existing boundary fences a

dark colour that visually recedes.

- Screen the water tanks and other functional apparatus or enhance their appearance by making them an art feature within the gardens.
- New toilet block with increased female, male and disabled facilities and storage sheds.
- Develop a strategy and system to enhance the water quality throughout the Gardens and remove the dye from the water.
- Where possible enhance the soil for each character area suitable for its proposed and existing plant species/communities.
- Consider spaces during day time and night time use and how they may be used for events.
- Ensure key event spaces are designed to allow flexibility in use. Consider the size and openness of the space, the volume of people it can accommodate and how the space is accessed. Consider installing inground power points and conduits to assist in event set up and provision. If areas are to be utilised for evening events consider the routes, signage and lighting required to provide access to these areas.

KEY PLAN



INDICATIVE IMAGES



DETAIL ELEMENTS

8.4 MAIN ENTRIES AND FOYERS

- Relocate the main entry along Chisholm Road to align with the Gardens new central east west axis.
- Enhance the existing entry to the Avenue of Remembrance making it the main entry to the Gardens from Chiswick Road and the car park. Close off the existing access into the Japanese Gardens.
- Prominent signage and feature planting to be installed at entries to highlight them upon approach to the Gardens.
- Main entries at Chisholm Road and Chiswick Road to have new planted entry structures that direct visitors into the Gardens. The structures should direct visitor's views forward, creating a portal that transports visitors from the suburbs into the tranquil gardens. Planting to be encouraged on the structures to make them a living part of the gardens.
- A new paved entry foyer to be located at the Chiswick Road entry. The area is to include seating areas for people to gather and congregate before entering the Gardens.
- A new hard and soft landscape entry foyer/marshalling area to be located at the Chisholm Road entry in place of the existing car park. This space is to be predominantly open, providing a view of the Gardens from the road with pedestrian paths leading toward the main entry.
- Provide colourful and feature planting along Chisholm Road with wide gaps between to allow sightlines and access to the main entry.
- Retain the existing bus stop and drop off area along Chisholm Road.
- Retain vehicular access and the vehicular gate in the boundary fence along Chisholm Road that can be used for event set up and maintenance access.

KEY PLAN



INDICATIVE IMAGES



DETAIL ELEMENTS

8.5 GARDEN OF TREES

- Remove the existing native vegetation and stump grind major roots.
- Improve the soils making them suitable for seasonal exotic species.
- Retain the existing 'knot' paths.
- Install low walls on corners and to the central planting beds to protect planting from being trampled by visitors. Mound planting beds up to tops of new walls.
- Replant the Garden of Trees with autumn, summer and spring flowering trees and shrubs in a floral calendar that changes through the seasons respectively from west to east (as per the original concept design for the Gardens).
- Create a lawn area at the eastern end of the Garden of Trees that is edged by a dense and layered buffer of evergreen and seasonal planting, to create a colourful and intimate open space, and a secondary event space. Provide a gravel path around edge of the space between the planting bed and lawn area to increase circulation and easy access to view the gardens beds.
- Relocate the sundial (currently located by the Reflection Pool) into the new lawn area linking time with the seasonal calendar created in the Garden of Trees.
- Provide additional seating along the knot paths and around the edges of the new lawn.
- Create a new Camellia walk along the southern edge of the Garden of Trees (as per the original concept design for the Gardens). Keep trees in this area to a minimum to allow solar access to adjacent gardens and planting.
- Install a dense layered buffer of evergreen and seasonal planting along the Gardens fence line to screen surrounding streets and properties. Evergreen species create a year round green edge that highlights and creates a backdrop to the seasonal display in the Garden.

KEY PLAN



INDICATIVE IMAGES



DETAIL ELEMENTS

8.6 SCENTED GARDEN / MAZE / ROSE GARDEN / EVENTS LAWN

- Increase the diversity and number of plant species in the scented gardens. Incorporate additional sensory planting along path edges with strong and vibrant colours, textures and scents that encourage local birds and butterflies into the garden.
- Enhance the existing wedding pavilion and provide power and lighting to facilitate events.
- Add low hedges and groundcovers to the existing Maze area.
- Replace the existing arbours in the rose garden with structures that are more gardenesque and in keeping with the formality of the Rose Garden. Plant and train new climbing roses up the new arbours.
- Add additional rose planting to the Rose Garden to fill out the garden beds.
- Enlarge the event and picnic lawn by removing the existing conifer planting and extending the lawn out to the surrounding path edges.
- Install a dense layered planting buffer along the Gardens boundary to screen the adjacent street from view.
- Provide lighting to the event lawn.

KEY PLAN



INDICATIVE IMAGES



DETAIL ELEMENTS

8.7 REFLECTION POOL / PLAZA OF TREES

- Create a new, straight and wide east-west axis path that links the new main entry from Chisholm Road to the Avenue of Remembrance. Install lighting along the paths edge.
- Install a new flowering tree avenue that accentuates the new central axis, provides seasonal colour, shade, reflections and creates an inviting entry experience. The trees will provide an asymmetrical formality to the reflection pool, a background for wedding photos and a permeable edge between the different and adjacent spaces.
- Create a new plaza of trees at the western end of the reflection pool with in ground power supplies and seating areas for events, picnicking and seasonal colour. The plaza will create a formal space at the end of the reflection pool and junction between the key axis paths strengthening the formal east-west axis, improving sightlines and circulation between key areas of the Gardens.
- Repair and enhance the Reflection Pool, by improving the water quality, repairing any leaks and replacing the base of the pool. Reconstruct the pool edge to create a crisp and clean junction between the water and lawn by removing the stepped edge and replacing the edge with a wide dark and crisp edged capping stone.
- Remove the existing timber arbour near the boundary fence along Chisholm Road and replace with a dense layered planting buffer to screen the adjacent street from view.
- Relocate the sundial at the eastern end of the Reflection Pool into the new lawn at the eastern end of the Garden of Trees to link time and the seasonal calendar.
- Create an open and level lawn at the eastern end of the Reflection Pool for picnicking and as an event spill over space.

KEY PLAN



INDICATIVE IMAGES



DETAIL ELEMENTS

8.8 JAPANESE GARDEN

- Install a new path between the Japanese Garden and the new Chisholm Road entry to improve access and circulation around the eastern side of the Gardens.
- Establish a new link path from the new Chisholm Road entry around the eastern end of the Japanese Garden that links into the southern side. This path will provide access to an intimate lawn area with seating and views of the Japanese Gardens Cherry Blossom hill.
- Install a dense layered planting buffer along the Gardens boundary to screen the adjacent street from view.
- Adjust the boundary fence and path to close off existing entry from Chiswick Road and incorporate the looped paths and garden beds into the Japanese Garden.
- Enlarge the entry to the Japanese Gardens from the Avenue of Remembrance. Formalise and make this entry visible with a new entry gate that matches the style and structures in the Japanese Garden.
- Existing paths within and around the Japanese Garden to be retained and enhanced in line with DDA requirements.
- New groundcover and shrub planting to be installed in garden beds where planting is patchy or missing, particularly under the cherry blossom trees adjacent to the Reflection Pool and the Cherry Blossom hill.

KEY PLAN



INDICATIVE IMAGES



DETAIL ELEMENTS

8.9 AVENUE OF REMEMBRANCE AVE / FAUNA RESERVE

- Relocate the entry to the Fauna Park away from the main entry on Chiswick Road, create a new entry structure suited to how the Park is used and educational talks conducted today.
- Install new educational signage and interactive information throughout the Fauna Park and at the entry.
- Amalgamate the maintenance area beside the wombat enclosure with the other maintenance facilities located at the back of the Fauna Park.
- Fences visible along the Avenue of Remembrance to be visually uniform and unobtrusive in colour and materials to emphasise the grand nature of the Avenue. Secondary fences to be removed and all fences to be screened by planting where possible.
- Planting, gravel and/or decorative mulch to be installed under the Tallowood trees along the Avenue of Remembrance.
- Cut back the edge of the mound at the end of the Avenue of Remembrance to create room for a focal point and to allow the pedestrian path to sweep into the Amphitheatre. A new wall to retain the mound can form part of the focal point through use of materials, texture and how planting is incorporated around or in the wall.
- A new focal point is to be installed at the end of the Avenue of Remembrance to visually encourage visitors into the Gardens and create a termination to the Avenue. The focal point is to provide interest through form, plant species, materials, colour and height.

KEY PLAN



INDICATIVE IMAGES



DETAIL ELEMENTS

8.10 RAINFOREST

- Create a new Rainforest Area close to the Chiswick Road entry to create a dense and lush area of vegetation visible from outside the Gardens.
- Remove the existing native vegetation, paths and rocks. Retain key trees such as the scar tree and work carefully around the roots.
- Improve the soils in this area making them suitable for rainforest species.
- Create a new river by regrading and extending the reservoir into the Rainforest area.
- Plant new Australian rainforest species (to the west) that transition into temperate rainforest species (to the east) in the Rainforest Area. Locate Australian rainforest species with indigenous and edible qualities in and around the Bush Tucker Walk.
- Ensure a very dense layered planting buffer is installed along the Gardens boundary and the Fauna areas fence line to screen the adjacent street and fences from view.
- Install planting to replicate rainforest conditions with tall canopy trees and layers of understory planting.
- Adjust the entry to the new Rainforest area making it clear and inviting from the Avenue of Remembrance. Remove the existing low arbour, relocate the fauna maintenance area and adjust the fence line to widen and open up the entry.
- Create a simplified path network of elevated boardwalks and lookouts over the Rainforest River that provides access between wide and densely layered areas of vegetation. Ensure paths are well set back from the property boundaries and the fence line of the Fauna Reserve.

KEY PLAN



INDICATIVE IMAGES



DETAIL ELEMENTS

8.11 AUSTRALIAN NATIVE GARDEN

- Create a new Australian Native Garden in the western corner of the Gardens that relates to the existing vegetation along Duck River, and the endangered and protected areas of remnant vegetation along the Gardens boundary.
- Remove the existing vegetation, paths and rocks. Retain key trees suitable for this new plant community and work carefully around their roots.
- Improve the soils in this area making them suitable for Australian native species.
- Realign the boundary fence removing the sharp step in the fence line near the existing Reservoir allowing it to be regraded, shaped, extended and connected to the existing river and improve circulation around its edge.
- Enlarge and link the existing Rainforest River with the new Marsh Area and the reshaped Reservoir.
- Provide a new bridge over the widened river enhancing the presence of water within the Gardens and the transition between areas.
- Create a network of paths with a range of large and small planting beds in between. Consider using concrete for the main path that wraps around the garden and compacted cement stabilised gravel paths, more in keeping with bush paths, between the planting beds.
- Create informal seating areas located at path widenings. Provide seating as a mix of traditional seats and rocks suitable for seating.
- Install bush rocks throughout the Australian Native Gardens as individually and in groups. Carefully locate rocks to define paths and discourage visitors from walking in garden beds.
- Plant the new Native Gardens with a range of native plants from around Australia. Arrange species in Family name groupings contained

in continuous planting beds as per the original concept for this area.

- The existing native planting along the Gardens boundary to be enhanced with layered understorey planting of indigenous species that perform well in the area to screen the boundary fence and contain views within the Gardens.
- Existing remnant and endangered plant communities and species to be protected and incorporated into the Australian Native Gardens, with new signage and information provided for visitors.
- A possible future link to Duck River is to be considered as part of the Duck River Link project.

KEY PLAN



INDICATIVE IMAGES



DETAIL ELEMENTS

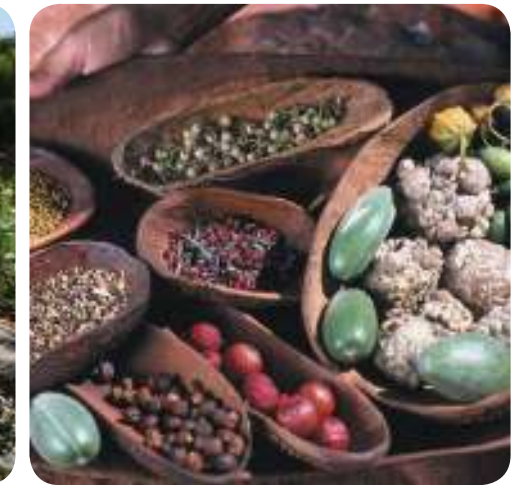
8.12 BILLABONG / BUSH TUCKER WALK

- Create a rockery and bush area around the south-eastern end of the Billabong. Install rocks and gravel in and around the two existing streams to enhance their creek like feel and character. Install large sandstone boulders and bush rocks along the edge of the Billabong, streams and footpath. Interplant with sections of native scrub planting, with small open areas of lawn and gravel. Arrange rocks to have a playful edge to inspire imaginative play.
- Retain the existing bridge over the stream and install a second natural looking stone bridge or stepping stones over the second stream to improve circulation around the Billabong.
- Retain the existing open lawn area for picnicking and use as an outdoor classroom.
- Install natural seating opportunities around the Billabong using hardwood logs and tree trunks from native species.
- Incorporate native aquatic planting into the Billabong to create bird habitat and help clean the water. Provide edges to planting areas below water level to contain planting areas and inhibit spreading throughout the whole Billabong.
- Create a bush tucker walk that provides information on Indigenous food sources and plants in rainforest and bushland areas. Path to create a loop with widenings and seating at regular intervals that can be used as small gathering spaces and places to relax. Paths to feel like bush paths, consider using compacted cement stabilised gravel paths.
- Plant species traditionally used as food sources to be planted close to path edges with informative signage. Consider ways for the signage and information to be integrated into and around the walk and the use of interactive elements.

KEY PLAN



INDICATIVE IMAGES



DETAIL ELEMENTS

8.13 MARSH

- Cut back and reconfigure the existing mound around the northern end of the Billabong to create a large dished area that can be made into a new Marsh. Improve the soils suitable for marsh and aquatic planting and prepare the base of the water body for water retention. Design the marsh so that it acts as the overflow area for the Gardens water system, with controlled localised flooding during large storm events.
- Create a natural looking weir between the Billabong and Marsh that allows water to flow from the Billabong into the Marsh, and inhibits aquatic planting spreading into the Billabong.
- Create a shallow rocky bottom with riffles between the Marsh and river that runs alongside the Australian Gardens to inhibit aquatic planting spreading downstream.
- Install an elevated boardwalk with lookout areas through and over the Marsh.
- Plant appropriate aquatic species and consider other methods that can be employed in the marsh to naturally filtrate and clean the water.
- Create habitats for birds and other wildlife.

KEY PLAN



INDICATIVE IMAGES



DETAIL ELEMENTS

8.14 DESERT GARDEN

- Create a new Desert Garden that is sculptural in form, creates a focal point and an entry to the other Australian Gardens beyond.
- Clear existing vegetation and prepare the ground and soils to suit desert species.
- Create a wide and welcoming central stone path that provides access through the Desert Garden to the other Australian Gardens beyond. This path is to be a less formal extension of the new east-west axis.
- Create secondary gravel paths that wrap informally around swathes and clumps of planting. Use larger rocks and gravel to discourage visitors from walking in open planting beds. Use a variety of coloured gravels that overlap and transition into one another to represent wind swept desert landscapes.
- Create an elevated sculptural central feature with rocks and iconic Australian planting focal point at the end of the east-west axis.
- Install planting in dense swathes around the edges of the Desert Garden, and in more sparse arrangements to the centre of the Garden. Locate sculptural feature planting close to the central path.
- Install Australian desert species in the southern section of the garden and around the central path. Transition the planting into exotic desert species to the north, closer to the Succulent Garden.
- Create informal seating areas using large flat topped rocks located at path widenings and indents in planting beds.

KEY PLAN



INDICATIVE IMAGES



DETAIL ELEMENTS

8.15 SUCCULENT GARDEN

- Create a new succulent garden to showcase their wide variations in texture, detail, form and colour.
- Clear existing vegetation and prepare the ground and soils to suit succulent planting.
- Mound garden beds to better showcase the succulent planting.
- Along the Gardens edge with the Avenue of Remembrance create an elevated rockery with pockets of succulent planting set among the rocks.
- Install low walls and rock edges along sections of the paths to lift planting beds to better display and protect delicate succulent planting. Strategically locate walls to protect garden beds and planting from visitors. Create gaps between sections of wall to allow planting to cascade down to the paths.
- Create a network of winding concrete paths around medium sized planter beds. Arrange paths so that a series of short views are created that are always directed towards areas of planting and terminated by feature planting.
- Create new seating areas set into planting beds. Wider planting walls to be used as informal seating edges.
- Planting to be laid out so that low groundcovers are located closer to paths and taller specimens behind, creating a layered effect. Accent planting to be carefully positioned to terminate key views.
- Create a new vertical planting wall to screen the back of the existing stage building.

KEY PLAN



INDICATIVE IMAGES



DETAIL ELEMENTS

8.16 AMPHITHEATRE

- Cut back the existing mounds at the entry to the Amphitheatre and move the entry footpaths away from the stage building. The new entry paths are to be realigned so that they are wider, clear of the roof of the building (to allow vehicular access required for event set up), allow pedestrians to flow more directly into the space and provide clear sightlines to the amphitheatre upon approach.
- Adjust the circulation to the back of the stage building, creating a narrow path that runs along the façade of the building. Once the proposed new utilities block and toilets has been established in the Gardens, close the stage building and existing toilets to the public, and limit use to park staff and hirers of the facility.
- Regrade the Amphitheatre lawn area and install drainage to resolve existing waterlogging issues. Smooth out the slope and contours of the amphitheatre lawn.
- Create a level area in front of the stage that can be used for events. The level area will increase the flexibility of this area and the type and range of events that this area can be used for.
- Install new underground conduits from the stage to the centre of the Amphitheatre to allow for cable installation for events.

KEY PLAN



INDICATIVE IMAGES



DETAIL ELEMENTS

8.17 RIDGE WALK

- Locally regrade the edges of the mounds around the entry to the Amphitheatre and around the new marsh.
- Create a new Ridge Walk from the top of the Amphitheatre into the Australian Garden to link the western and northern sections of the site.
- Regrade, enhance and realign the existing Ridge Walk to the north of the Amphitheatre to link with the new Bush Park.
- Create a lookout with seating area that provides views across that Gardens and to Duck River.
- Paths to feel like bush paths, consider using compacted cement stabilised gravel paths and stone steps.
- The existing native planting along the edges to be enhanced with layered understory planting of indigenous species that perform well in the area.
- Create habitats for birds and other wildlife.

KEY PLAN



INDICATIVE IMAGES



DETAIL ELEMENTS

8.18 BUSH PARK AND NATURE PLAY

- Create a new Bush Park with tall native trees that provide dappled shade to open lawn areas that can be used for picnicking, relaxing, play, outdoor classrooms and events.
- Ensure new and existing tree planting have clear stems up to 2.5m to allow open vistas throughout the Bush Park.
- Install natural seating opportunities in the Park using hardwood logs and tree trunks from native species.
- Plant small pockets of low native planting around the trees to break up the space, create edges and informally separate groups.
- Provide nature play opportunities in the Bush Park including elements such as balancing logs, stepping stones, loose branches, rocks, sand and other natural elements to inspire imaginative and creative play.
- Provide a new water play pump with channel. Connect the water overflow and waste pipes into the Gardens water system to utilise waste water.

KEY PLAN



INDICATIVE IMAGES



DETAIL ELEMENTS

8.19 EDIBLE GARDEN / TERRACED ORCHARD

- New terraced orchard to be graded into the existing mound along the northern edge of the site. Clear existing vegetation and prepare the ground and soils to suit orchard planting.
- Create a new circuit walk to connect the upper level terrace with the Bush Park and Edible Garden.
- Plant fruiting and nut trees in rows and at even spacing along terraces and at ground level in the Terraced Orchard.
- Create a grove of fruiting and nut trees at ground level in the Terraced Orchard.
- Create a new Edible Garden with raised planter beds and educational information signage.
- Potential for the Edible Garden and Terraced Orchard to be managed and worked by the community, with excess produce used to feed the animals in the Fauna Park.
- Sheds connected to the new toilet block to be used for storage of tools, equipment and materials required for the management and working of the Edible Garden.

KEY PLAN



INDICATIVE IMAGES



DETAIL ELEMENTS

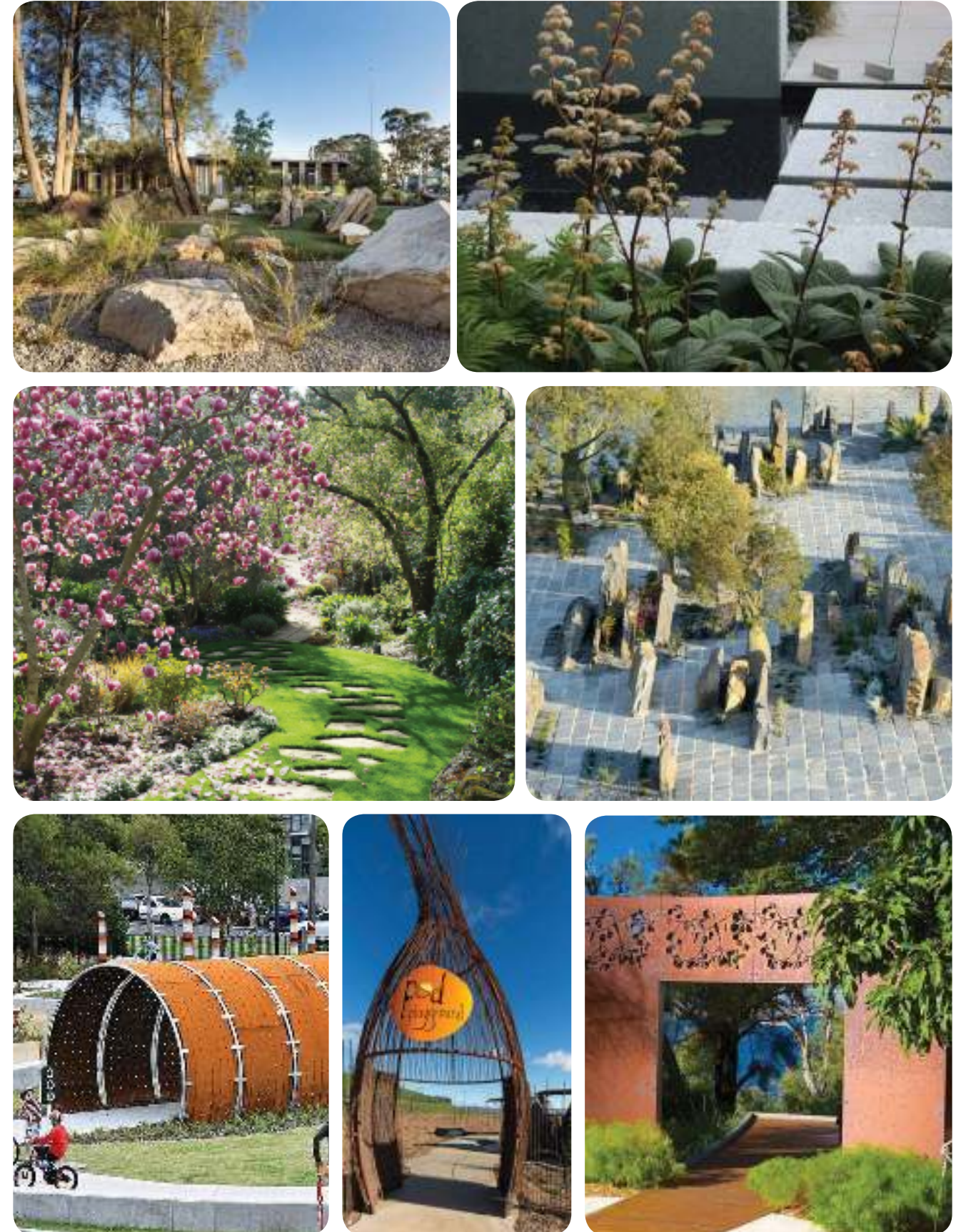
8.20 MATERIALS

- Materials selected for the Gardens should be varied and suit the character area they are to be used in. An overlay of consistent elements should be used to tie the Gardens together.
- The materiality of elements such as footpaths, bridges, edges, fences and walls should be carefully selected to suit and add to the character area in which they are located. Particular consideration in the selection of materials should be given to their aesthetic qualities, how they add and fit into the character of the area they are to be used in, their longevity and robustness and their ongoing maintenance and repair.
- Key structures and elements in the Gardens, such as entry structures to character areas and elements such as arbours and decorative screens, should be made out of an agreed and limited material palette. The aim being to create a family of elements throughout the Gardens that tie all the individual and unique areas together.
- Consistent signage and furniture palettes will help tie all the different areas of the Gardens together.

KEY PLAN



INDICATIVE IMAGES



DETAIL ELEMENTS

8.21 FURNITURE

- The furniture in the Gardens, including seats, bins, signs, bollards, etc should form a family of elements in terms of form, materials and colour. Selected components should be robust, require low levels of maintenance and be easily available to procure and replace.
- It is recommended that a furniture palette is established for the Gardens that defines the product specification, supplier, materials, colours and fixings for each type of furniture.
- Furniture should be carefully positioned where it will be most useful. For example seating should be located in a variety of places to ensure comfort and provide a variety of conditions. Placement should consider sun, shade, direction, views, circulation routes, and how they are grouped or located singly.

KEY PLAN



INDICATIVE IMAGES



8.22 SIGNAGE

- Create a signage suite for the gardens including main entry signs, entry signs to the different areas of the gardens, information and educational signage, wayfinding signage and plant species name plates.
- It is recommended that a signage strategy is prepared for the Gardens that establish the design, materials, graphic layout, colour palette, text and symbols, for each type of sign, its specification and ordering/manufacturing information. The strategy should also propose the location of main signs and the principles to determine the location of all other signage types.
- The main signs to the Auburn Botanic Gardens should be a feature that prominently promotes the Gardens and highlights the main entries on Chisholm Road and Chiswick Road.



DETAIL ELEMENTS

8.23 ART

- Public art can be incorporated into the gardens to create interest, reflect the history of the site, provide educational information, interaction, evoke reactions, express new ideas and/or to question issues. It should be carefully considered and add to the enjoyment and experiences of visitors and help add to the character of the Gardens.
- Art can be displayed in the Gardens as permanent, temporary or seasonal installations that have physical or sensual qualities. It can be visually dominant and eye catching or be a subtle element in the Gardens to be discovered.
- It is recommended that an art strategy is prepared for the Gardens that establish the principles of how art is to be incorporated into the gardens, and how it would be commissioned, managed, maintained and decommissioned.

KEY PLAN



INDICATIVE IMAGES



9.0 PRIORITY AREAS

9.1 INTRODUCTION

As part of the masterplan process Cumberland Council identified three areas to be further developed.

The following areas were selected:

1. The Desert Garden
2. The Succulent Garden
3. A section of the Garden of Trees

The Desert and Succulent Gardens were selected for further design development as they will provide new plant communities, add interest, educational opportunities and vibrancy to the Gardens. The Desert Garden in particular will encourage visitors to explore the Australian Gardens beyond as well as being a place of strong visual interest in its own right.

The Garden of Trees was selected as work can begin immediately with very little preparation and change to the existing path network. Works to this area would make a significant difference to an area that is already well visited, by screening adjacent properties and increasing colour and seasonal interest within the Gardens.

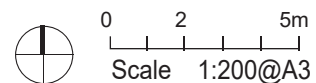


10.0 PRIORITY AREA: DESERT GARDEN

10.1 CONCEPT PLAN

A flat, sculptural and sparse landscape that creates an entry foyer to the Australian Gardens

1. Wide and welcoming entry to the Desert Garden and Australian Gardens beyond.
2. Stone paths provide access through the Desert Garden. Paved edge to be irregular and toothed, sliding and fracturing into the surrounding desert landscape.
3. Informal paths consisting of red, yellow and white sand/gravel representing the wind swept and shifting desert landscape.
4. Sculptural rocks and accent planting create focal points that draw visitors into the Desert Garden. Rocks placed on end and angled to create interesting forms that can be planted in between.
5. Large flat rocks create seating opportunities where paths widen. Seating rocks should have minimum dimensions of 450mm wide x 600mm long.
6. Swathes of planting enclose the desert garden (minimum 1.5m wide).
7. Drifts of single plants are protected by areas of crushed gravel with rough edges (30-50mm), rip rap rocks (75-200mm) and large rocks located on corners to discourage visitors walking over and trampling these areas of planting.
8. A central sculptural area creates a feature within the Desert Garden and a focal point in the wider Botanic Gardens. Located at the intersection of key sight lines, this area is elevated (at a minimum of 500mm) above the surrounding paths and edged by rocks and sloping ground (max 1:4). A large feature tree surrounded by sculptural planting creates a planting statement.
9. A formal row of grass planting creates a border between the Desert Garden and the Avenue of Remembrance.



PRIORITY AREA: DESERT GARDEN

10.2 CONCEPT SECTION



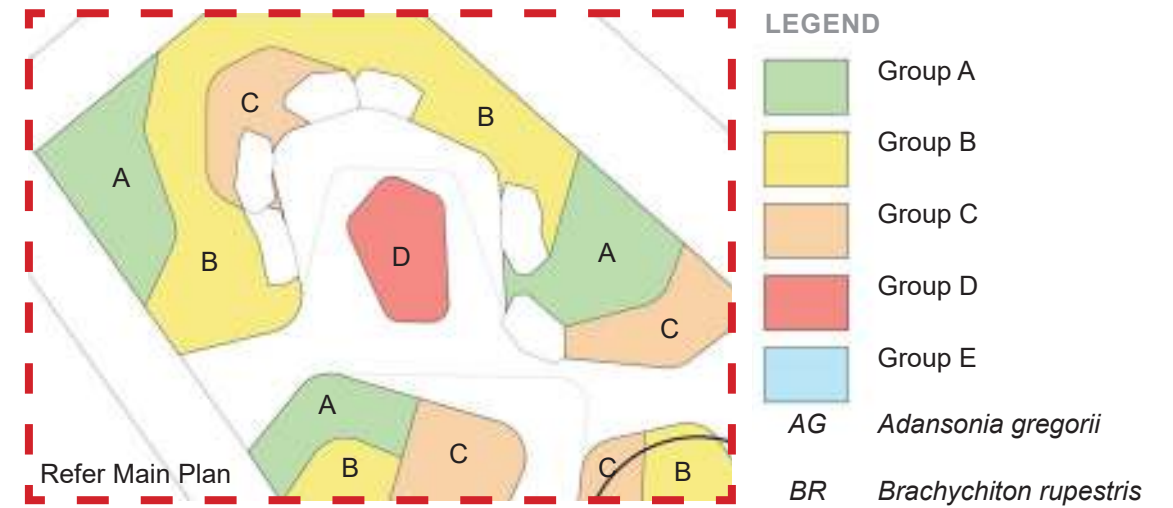
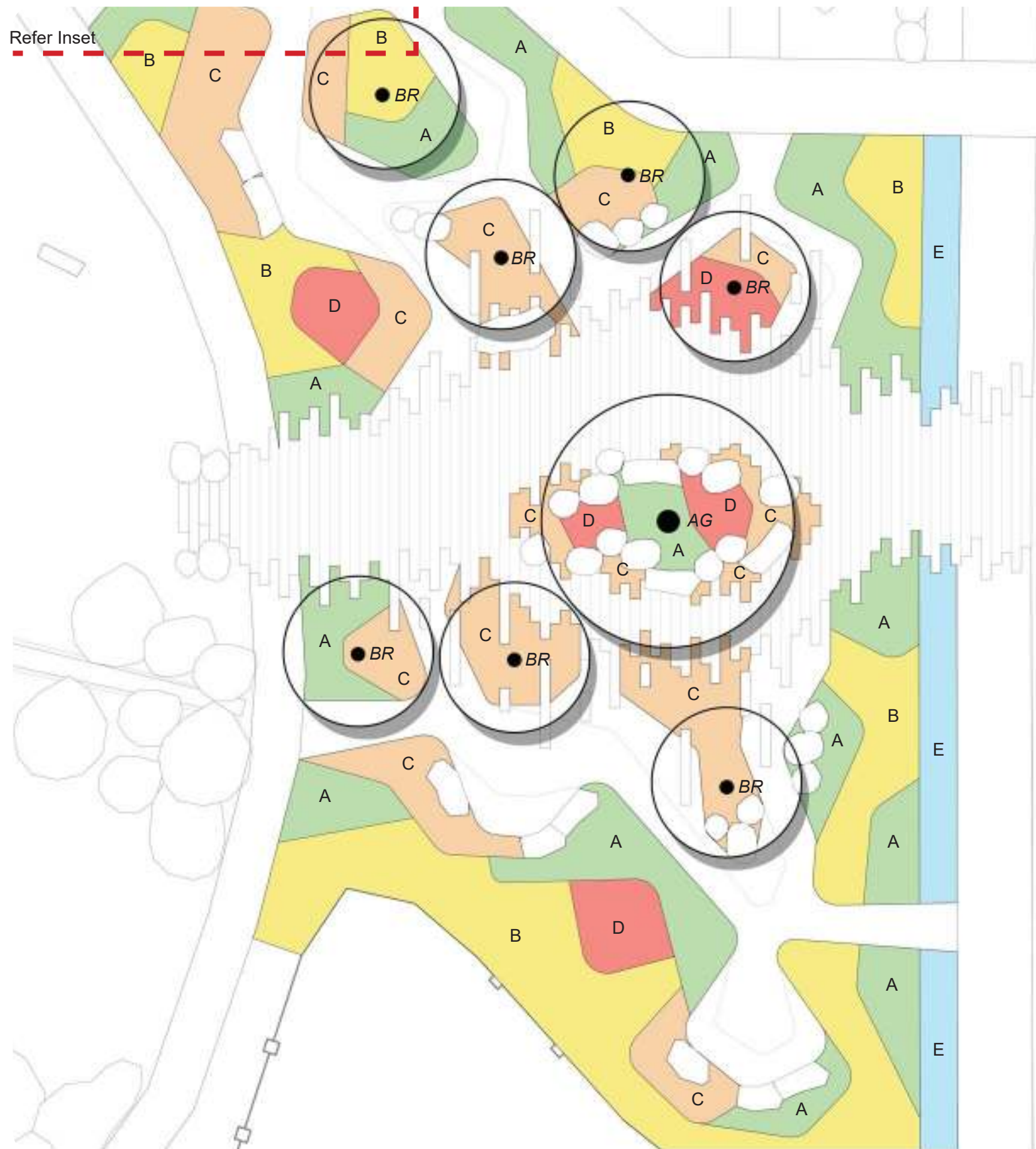
KEY PLAN



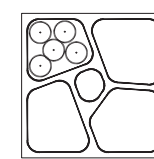
1. Stone paths provide access through the Desert Garden.
2. Sculptural rocks and accent planting create focal points that draw visitors into and through the desert garden.
3. A central sculptural area creates a feature within the Desert Landscape and a focal point in the wider Botanic Gardens. Located at the intersection of key sight lines, this area is elevated (at a minimum of 500mm) above the surrounding paths and edged by rocks and sloping ground (max 1:4). A large feature tree such as an Australian Boab surrounded by sculptural planting creates a planting statement and focal point to the gardens.

PRIORITY AREA: DESERT GARDEN

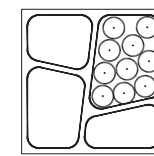
10.3 PLANTING PLAN



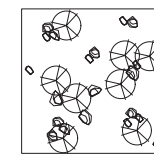
10.4 PLANTING GROUPS



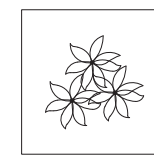
Group A
Planting consists of low growing desert plants (groundcovers to 0.5m high). This group is to be planted at close spacings to create a dense area of foliage. Species are to be clumped together in small groups of 3-5 plants.



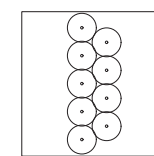
Group B
Planting consists of medium to high desert plants (shrubs 0.5-1m high). This group is to be planted at close spacings to create a dense area of foliage. Species are to be clumped together in small groups of 5-10 plants.



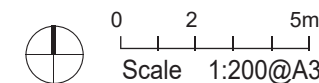
Group C
Consists of individual and small groups of plants (1-3 plants) with areas of clear gravel surrounding them. Gravel areas to consist of large coarse gravel, intermingled with feature rocks that give a harsh, rugged and arid feel to the garden.



Group D
Planting consists of accent desert species with a sculptural form planted in small clumps (1-5 plants). Positioned along key sight lines within the garden they can be located in any of the Group A, B or C beds.

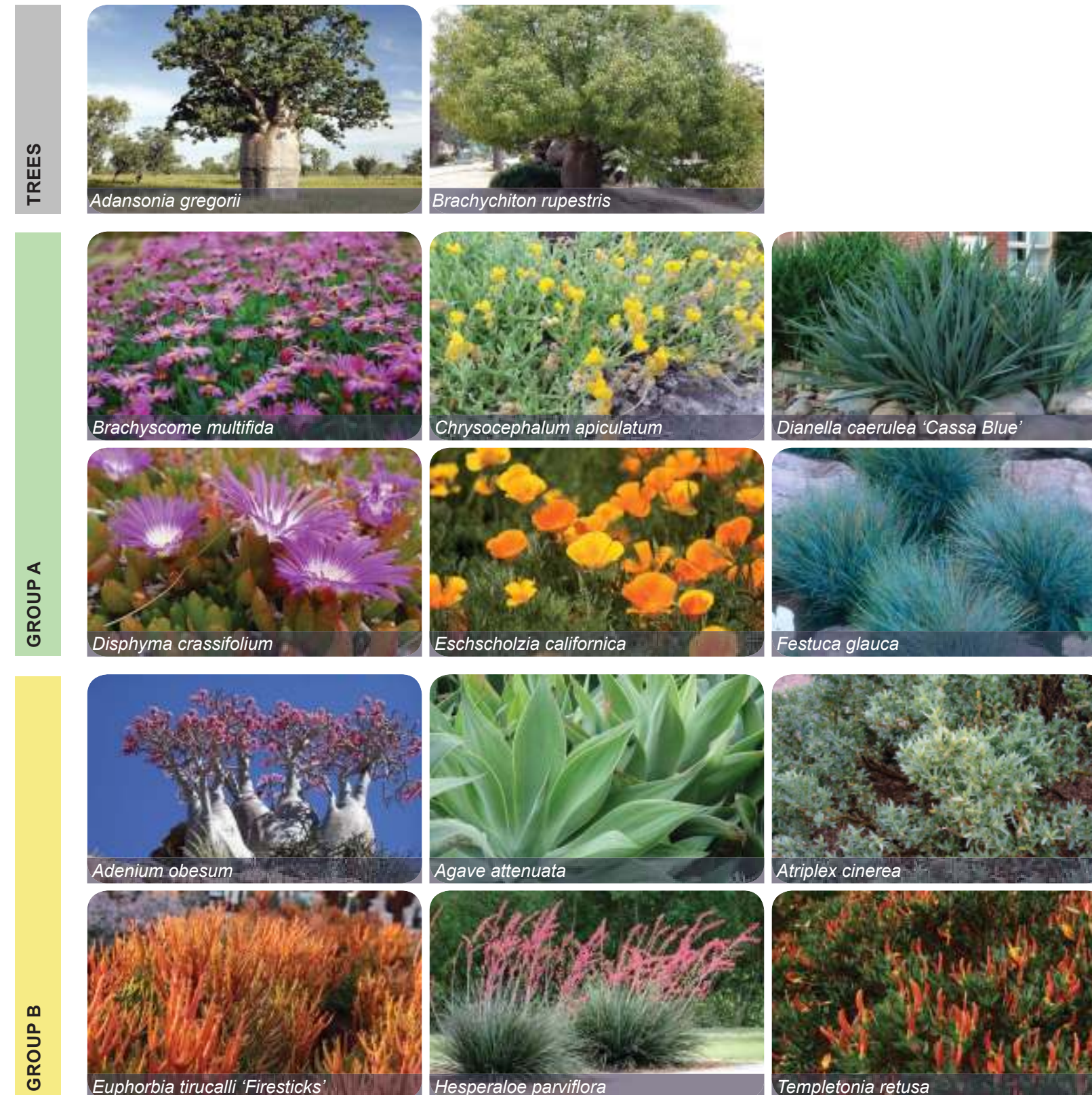


Group E
Is a formal planted border to the gardens creating a transition between the Desert Garden and the Avenue of Remembrance. Plants to be planted in formal staggered rows at close spacings to ensure no gaps are created.



PRIORITY AREA: DESERT GARDEN

10.5 PLANTING PALETTE



Botanical Name	Common Name	Native
TREES		
<i>Adansonia gregorii</i>	Boab	Y
<i>Brachychiton rupestris</i>	Queensland Bottle Tree	Y
GROUP A: LOW PLANTING		
<i>Actinotus helianthi</i>	Flannel Flower	Y
<i>Brachyscome multifida</i>	Cut-leaved Daisy	Y
<i>Delosperma cooperi</i>	Trailing Ice Plant	N
<i>Dianella caerulea 'Cassa Blue'</i>	Cassa Blue	Y
<i>Disphyma crassifolium</i>	Round-leaved Pigface	Y
<i>Chrysocephalum apiculatum</i>	Common Everlasting	Y
<i>Eremophila subteretifolia</i>	Lake King Eremophila	Y
<i>Erigeron karvinskianus</i>	Mexican Daisy	N
<i>Eschscholzia californica</i>	California poppy	N
<i>Festuca glauca</i>	Blue Fescue	Y
<i>Halosarcia indica</i>	Glasswort	Y
<i>Kalanchoe thyrsiflora</i>	Flapjacks	N
<i>Lechenaultia formosa</i>	Red Lechenaultia	Y
<i>Maireana brevifolia</i>	Cotton Bush	Y
<i>Myoporum parvifolium 'Yareena'</i>	Yareena Myoporum	Y
<i>Salvia dorrii</i>	Desert Sage	N
<i>Xerochrysum bracteatum</i>	Golden Everlasting	Y
GROUP B: MEDIUM PLANTING		
<i>Adenium obesum</i>	Desert Rose	N
<i>Agave attenuata</i>	Soft Leaved Agave	N
<i>Anigozanthos 'Bush Blitz'</i>	Kangaroo Paw	Y
<i>Anigozanthos 'Bush Gold'</i>	Kangaroo Paw	Y
<i>Atriplex cinerea</i>	Grey Saltbush	Y
<i>Euphorbia tirucalli 'Firesticks'</i>	Firesticks	N
<i>Grevillea juncifolia</i>	Honeysuckle Grevillea	Y
<i>Hakea sericea</i>	Needlebush	Y
<i>Hesperaloe parviflora</i>	Red Yucca	N
<i>Leucophyta brownii</i>	Cushion Bush	Y
<i>Templetonia retusa</i>	Cockies Tongues	Y

PRIORITY AREA: DESERT GARDEN



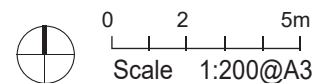
Botanical Name	Common Name	Native
GROUP C: INDIVIDUAL CLUSTER PLANTING		
<i>Festuca glauca</i>	Blue Fescue	N
<i>Echinocactus grusonii</i>	Golden Barrel Cactus	N
<i>Echinopsis huascha</i>	Red Touch Cactus	N
<i>Opuntia microdasys</i>	Bunny Ears Cactus	N
<i>Themeda australis 'Mingo'</i>	Kangaroo Grass	Y
<i>Triodia sp.</i>	Spinifex	Y
GROUP D: ACCENTS		
<i>Dasyllirion wheeleri</i>	Common Sotol	N
<i>Opuntia microdasys</i>	Bunny Ears Cactus	N
<i>Yucca elephantipes</i>	Soft Tipped Yucca	N
<i>Xanthorrhoea johnsonii</i>	Grass Tree	Y
GROUP E: GRASS BORDER PLANTING		
<i>Lomandra longifolia</i>	Spiney-headed Matt Rush	Y

11.0 PRIORITY AREA: SUCCULENT GARDEN

11.1 CONCEPT PLAN

A garden of intricate textures, detail, colours and variety of forms

1. Shot blast concrete meandering paths wind around planting areas. Paths generally 2m wide with occasional pinch points 1.5m wide.
2. Paths and planting areas arranged to ensure short views directed toward accent planting.
3. Planters are mounded to display planting and to provide suitable drainage conditions for succulent gardens (maximum grade of mounds to be 1:4 with a 200mm wide level strip along path edges).
4. Large rocks (approx. size 300mm - 500mm) create a feature in the gardens and are to be carefully located on corners to discourage visitors walking over and trampling planting areas.
5. Stone walls with bullnose brick capping on edge (450mm high x 230mm wide) create elevated sections of garden to better display and protect intricate and delicate species.
6. Planting areas cascade down to paths between walls and rocks.
7. Stone seating walls with bull nosed brick on edge capping (450mm high x 470mm wide) located in seating areas surrounded by planting.
8. A rockery of terraced garden beds displays planting between rough rock walls. The back of the rockery forms a wall along the edge of the Succulent Garden.
9. A formal row of grass planting creates a border between the Succulent Garden and the Avenue of Remembrance.



PRIORITY AREA: SUCCULENT GARDEN

11.2 CONCEPT SECTION



KEY PLAN








1. Shot blast concrete meandering paths wind around planting areas. Paths generally 2m wide with occasional pinch points 1.5m wide.
2. Planters are mounded to display planting and to provide suitable drainage conditions for succulent gardens (maximum grade of mounds to be 1:4 with a 200mm wide level strip along path edges).
3. Large rocks (approx. size 300mm - 500mm round) create a feature in the gardens and are to be carefully located on corners to discourage visitors walking over and trampling planting areas.
4. Stone walls with bull nose brick on edge capping (450mm high x 230mm wide) create elevated sections of garden to better display and protect intricate and delicate species, allowing planting areas to cascade down to paths.
5. Stone seating walls with bull nosed brick on edge capping (450mm high x 470mm wide) located in seating areas surrounded by planting.
6. Accent planting positioned in key sight lines to guide visitors through the garden.

PRIORITY AREA: SUCCULENT GARDEN

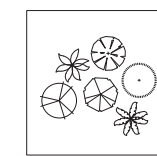
11.3 PLANTING PLAN



LEGEND

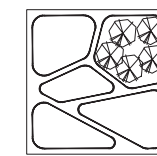
-  Group A - Delicate Low Specimen Planting
-  Group B - Low Planting
-  Group C - Medium Planting
-  Group D - Accent Planting
-  Group E - Grass Border Planting

11.4 PLANTING GROUPS



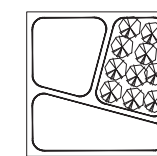
Group A

Individual delicate, low growing succulent specimen planting. Species are to be positioned closely together in small groups of 1-3 plants. Planting located in raised and protected areas, to bring the intricate, colourful and textured quality of these specimens closer to the viewer in a kaleidoscopic effect.



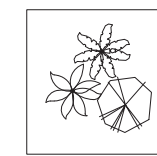
Group B

Individual robust, spreading and broad textured, low growing succulent planting. Species are to be clumped together in small groups of 3-5 plants. This group is to be located along the front edges of garden beds at ground level.



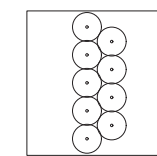
Group C

Planting consists of medium to high succulent plant species. This group is to be planted at close spacings to create a dense area of varying textured and coloured foliage. Species are to be clumped together in groups of 5-10 plants.



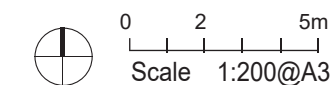
Group D

Planting consists of succulent accent species. Species are to be positioned in small groups of 1-3 plants. Accent plants are to be carefully located to terminate key sight lines within the garden.



Group E

Is a formal planted border to the gardens creating a transition between the Succulent Garden Rockery and the Avenue of Remembrance. Plants to be planted in formal staggered rows at close spacings to ensure no gaps are created.



PRIORITY AREA: SUCCULENT GARDEN

11.6 PLANTING PALETTE



Botanical Name	Common Name
GROUP A: DELICATE BORDER PLANTING	
<i>Aloe mitrifomis</i>	Mitre Aloe
<i>Delosperma 'Purple Buttons'</i>	Purple Ice Plant
<i>Peperomia asperula</i>	Peperomia
<i>Sedum album</i>	White Stonecrop
<i>Sedum allantoides 'Goldii'</i>	Goldii Stonecrop
<i>Sedum anglicum</i>	English Stonecrop
<i>Sedum 'Dragon's Blood'</i>	Dragon's Blood Stonecrop
<i>Sedum lineare 'Variegatum'</i>	Cream and Green Carpet
<i>Sedum rubrotinctum</i>	Jelly-beans
<i>Sempervivum 'Blue Boy'</i>	Hen and Chicks
<i>Sempervivum 'Limelight'</i>	Hen and Chicks
GROUP B: LOW PLANTING	
<i>Aeonium arboreum 'Velour'</i>	Aeonium
<i>Aeonium globuliflora 'Frosty'</i>	Aeonium
<i>Crassula exilis ssp. schmidtii</i>	Fairy Tongue
<i>Euphorbia wulfenii Shorty</i>	Mediterranean Spurge
<i>Kalanchoe thyrsiflora</i>	Flapjacks
<i>Limonium perezii</i>	Perez's Sea Lavender
<i>Sedum spurium 'Tricolor'</i>	Stonecrop
<i>Senecio amaniensis</i>	Senecio
<i>Senecio serpens</i>	Blue Chalk Sticks

PRIORITY AREA: SUCCULENT GARDEN



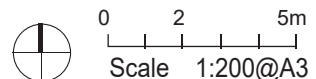
Botanical Name	Common Name
GROUP C: MEDIUM GROUP PLANTING	
Agave attenuata	Foxtail Agave
Aloe 'Hedgehog'	Spider Aloe
Aloe spinosissima	Spider Aloe
Aloe striata	Coral Aloe
Crassula 'Blue Waves'	Jade Plant
Crassula ovata 'Coral'	Jade Plant
Euphorbia wulfenii	Mediterranean Spurge
Sedum 'Autumn Fire'	Autumn Fire Stonecrop
Sedum 'Purple Emperor'	Purple Emperor Stonecrop
Senecio barbertonicus	Succulent Bush Senecio
GROUP D: ACCENTS	
Agave americana	Century Plant
Agave lophantha 'Quadricolor'	Century Plant
Agave striata	Narrow Leaf Century Plant
Aloe plicatilis	Fan Aloe
Dasyliirion wheeleri	Common Sotol
Senecio kleinia	Verode
Yucca elephantipes	Soft Tipped Yucca
GROUP E: GRASS BORDER PLANTING	
Lomandra longifolia	Spiney-headed Matt Rush

12.0 PRIORITY AREA: GARDEN OF TREES

12.1 CONCEPT PLAN

A garden full of colour, texture and seasonal change planted to create a seasonal calendar.

1. Tall rows of stepped evergreen hedges create an all year round green buffer along the boundary of the Botanic Gardens to screen adjacent properties and streets.
2. Medium sized evergreen trees add height to the all year round green buffer located along the boundary of the Botanic Gardens that screens adjacent properties and streets, and create a green backdrop to seasonal tree displays.
3. Medium sized mass planting areas (approx. 8m x 3m) of seasonal species create a patchwork of colour and texture. Planting is to be arranged with taller species behind and low species closer to the paths.
4. A strip of low colourful planting creates a seasonally changing edge to the knotted paths.
5. Seasonal tree planting create colourful displays of foliage and flowers. Species located to create a display that sweeps from east to west through the year - a seasonal calendar, refer to the Garden of Trees seasonal calendar.
6. New seats with back and arm rests are to be set on concrete pads, and oriented towards dense areas of planting. Concrete pads to be wider on one side to allow for wheelchairs and/or pram parking.
7. Low stone walls (300mm high) create elevated and formal edges to the central planters, lifting plants up to better display them while protecting edges from being trampled by visitors.
8. Low stone walls (300mm high) protect corners. Soil to be mounded up to top of wall. Cascading planting encouraged down the face of the wall.
9. Camellia garden displaying varieties of camellia's in large clumps of single species approx. 4m x 2m. Camellia garden surrounded by a low formal box hedge.
10. Deciduous tree planting in the Camellia Garden to be positioned close to knotted paths only to ensure maximum sunlight reaches adjacent gardens to the south of the Garden of Trees.



PRIORITY AREA: GARDEN OF TREES

12.3 CONCEPT SECTION



KEY PLAN



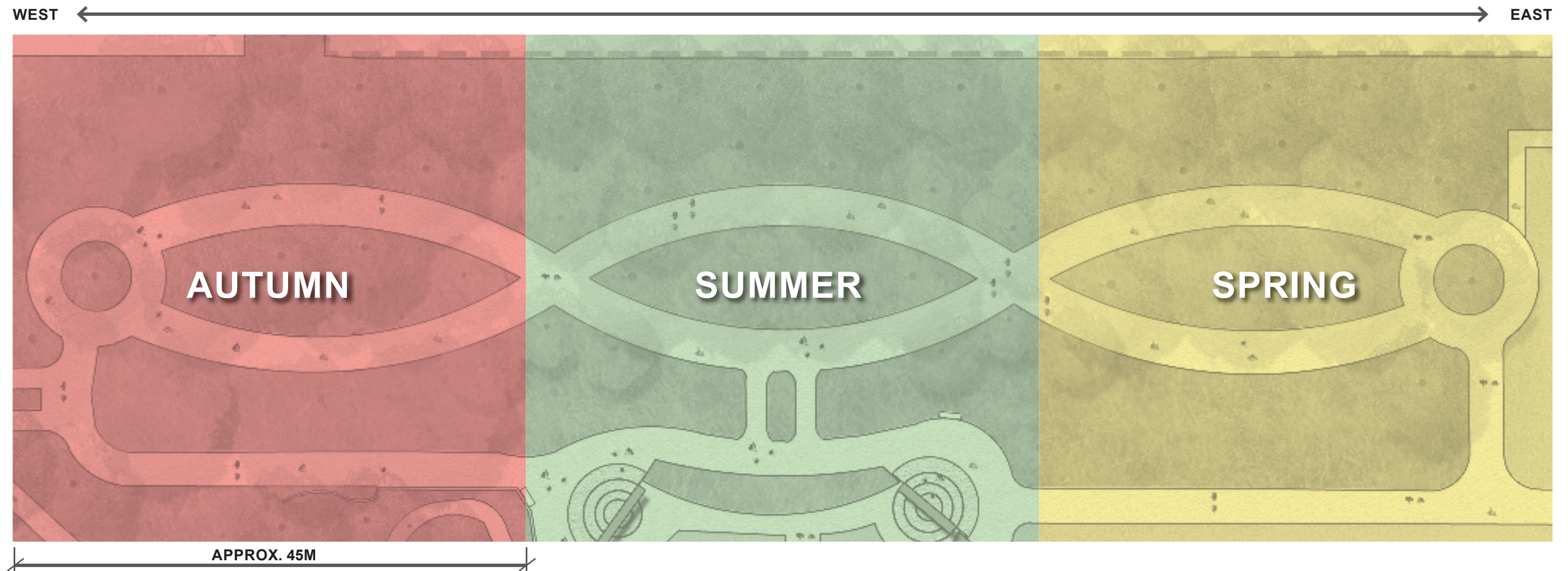
1. Tall evergreen hedges provide year round screening of adjacent properties and streets.
2. Medium sized evergreen trees add height to the green buffer screening adjacent houses from views within the Botanic Gardens and creating a green backdrop to seasonal displays.
3. Medium sized (approx. 8m long x 3m wide) mass planting of seasonal species create a patchwork of colour and texture. Planting is to be arranged with taller species behind and low species closer to the paths.
4. A strip of low colourful planting creates a seasonally changing edge to the knotted paths.
5. Seasonal tree planting create colourful seasonal displays of foliage and flowers.
6. Low stone walls (300mm high) protect corners. Soil to be raked up to top of wall..
7. Camellia garden displaying varieties of camellia's in large clumps of single species surrounded by a formal box hedge.

PRIORITY AREA: GARDEN OF TREES

12.4 PLANTING STRATEGY

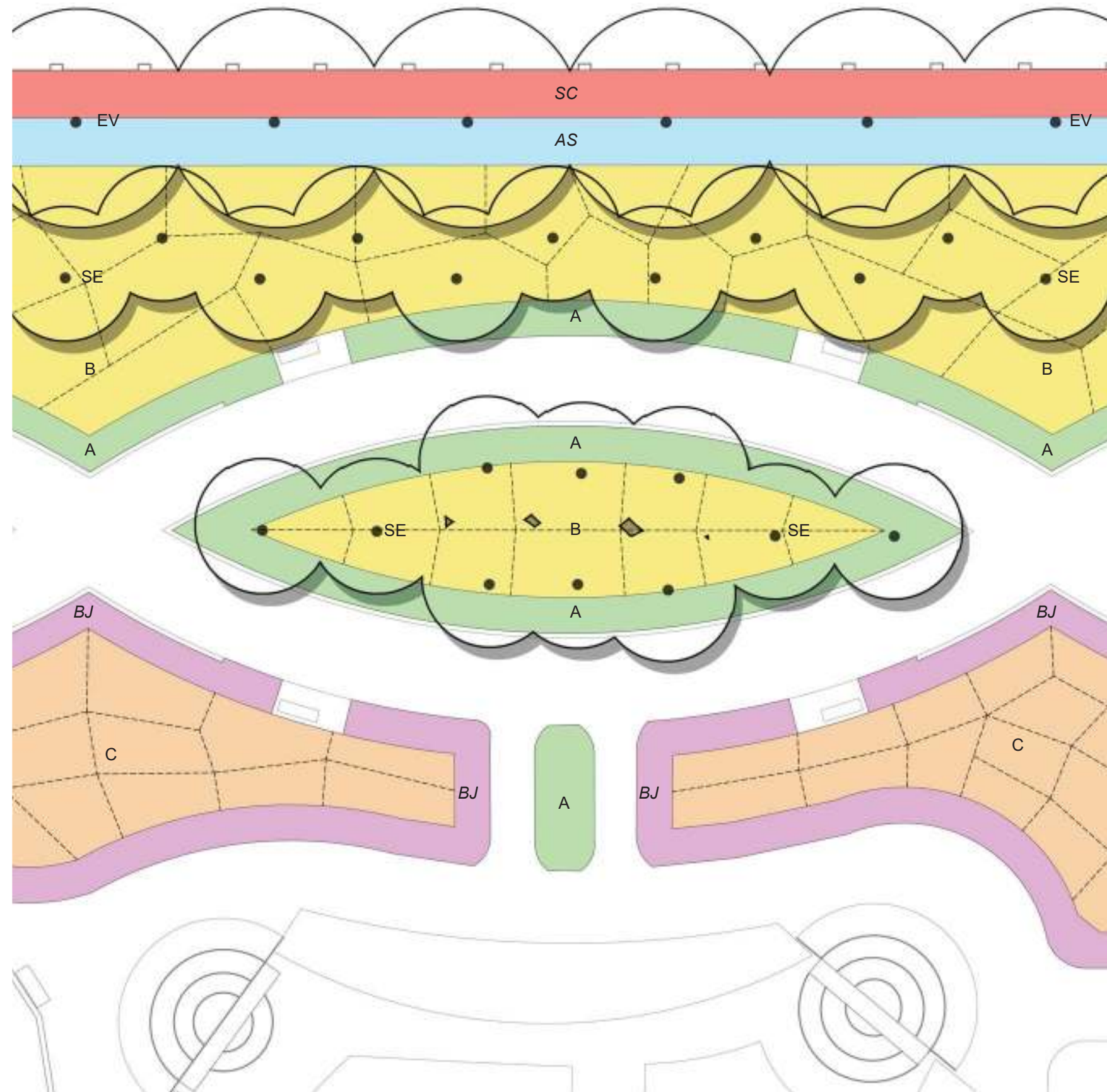
The Garden of trees plant species are to be arranged in accordance with the Seasonal Calendar below, to reflect and uphold the original concept for this Garden.

Species nominated in the Garden of Trees Planting Palette have been selected for their seasonal qualities throughout the year and should be located within the Garden as per the calendar below. The intention is that this Garden of Trees changes seasonally with a section per season always creating a display.









PRIORITY AREA: GARDEN OF TREES

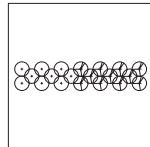
12.5 PLANTING PLAN

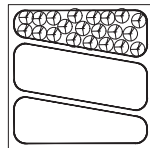


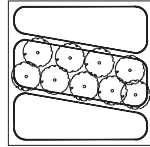
LEGEND

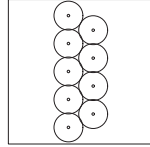
	Group A		Acmena smithii 'Minor' (AS)
	Group B		Buxus japonica (BJ)
	Group C	EV	Evergreen Tree Planting
	Syzygium 'Cascade' (SC)	SE	Seasonal Tree Planting

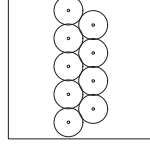
12.6 PLANTING GROUPS

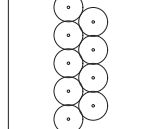
- 

Group A
Low, colourful seasonal planting border to the pathways. Single species mass planted in 1.5m wide strips. Plants to be planted in formal staggered rows at close spacings to ensure minimal gaps are created.
- 

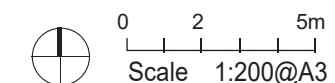
Group B
Consists of low to medium planting of seasonal interest. Species to be planted in large groups of single species (approx 8x4m). Low species to be located closer to path edges and taller species located behind to create a layered planting bed.
- 

Group C
Consists of various types of Camellia species planted in medium groups of single species (approx 4x2m). Low species to be located closer to path edges and taller species located in the centre of garden beds to create layered planting beds.
- 

SC (Syzygium 'Cascade')
Double row hedge formally clipped to 3m in height. This hedge is positioned to screen the neighbouring properties with dense evergreen foliage.
- 

AS (Acmena smithii 'Minor')
Double row hedge formally clipped to 2m in height. Positioned in front of a taller hedge creating a layered dense evergreen edge to screen neighbouring properties.
- 

BJ (Buxus japonica)
Double row hedge formally clipped into a box hedge border 500mm high.



PRIORITY AREA: GARDEN OF TREES

12.7 PLANTING PALETTE



Botanical Name	Common Name	Calendar
EVERGREEN TREES		
<i>Waterhousea floribunda</i>	Weeping Lilly Pilly	
<i>Tristaniopsis laurina</i> 'Luscious'	Water Gum	
SEASONAL TREES		
<i>Acer palmatum</i>	Japanese Maple	A
<i>Acer palmatum</i> 'Sango Kaku'	Coral Bark Maple	A
<i>Cercis canadensis</i> 'Forest Pansy'	Purple-leafed Eastern Redbud	P
<i>Fraxinus angustifolia</i> 'Raywood'	Claret Ash	A
<i>Fraxinus excelsior</i> 'Aurea'	Golden Ash	A
<i>Ginkgo biloba</i>	Maidenhair Tree	A
<i>Gleditsia triacanthos</i> var. <i>inermis</i> 'Sunburst'	Honey-locust	A
<i>Lagerstroemia indica</i> x <i>fauriei</i> 'Biloxi'	Crepe Myrtle	S
<i>Liriodendron tulipifera</i>	Tulip Tree	A
<i>Pistacia chinensis</i>	Chinese Pistache	A
<i>Prunus x blireana</i>	Flowering Plum	P
<i>Pyrus calleryana</i> 'Burgundy Snow'	Ornamental Pear	P
<i>Robinia pseudoacacia</i> 'Purple Robe'	Black Locust	P
<i>Zelkova serrata</i> 'Wireless'	Japanese Elm	A
GROUP A: BORDER PLANTING		
<i>Acacia cognata</i> 'Limelight'	Limelight Wattle	Y
<i>Ajuga reptans</i>	Bugle	P
<i>Arthropodium cirratum</i>	New Zealand Rock Lily	S
<i>Begonia</i> sp.	Begonia	Y
<i>Coleus</i> sp.	Painted Nettle	Y
<i>Dianella</i> 'Silver Streak'	Silver Streak Flax Lilly	S
<i>Gardenia augusta</i> 'Radicans'	Gardenia	S
<i>Heliotropium arborescens</i>	Cherry Pie	Y
<i>Hosta</i> 'Halcyon'	Plantain Lilly	S
<i>Imperata cylindrica</i> 'Rubra'	Japanese Blood Grass	S
<i>Juniperus horizontalis</i>	Junpier	Y
<i>Lavandula angustifolia</i> 'Munstead'	Lavender	S
<i>Leucophyta brownii</i>	Cushion Bush	S

Seasonal Calendar

- S Summer
- A Autumn
- P Spring
- Y Year Round

PRIORITY AREA: GARDEN OF TREES



Botanical Name	Common Name	Calendar
GROUP B: MEDIUM PLANTING		
<i>Acanthus mollis</i>	Bear's Breaches	P
<i>Correa alba</i>	White Correa	Y
<i>Echium candicans</i>	Pride of Madeira	S
<i>Hydrangea macrophylla</i>	French Hydrangea	S
<i>Miscanthus sinensis 'Gracillimus'</i>	Eulalia Grass	A
<i>Pachystachys lutea</i>	Golden Shrimp Plant	S
<i>Pentas lanceolata</i>	Egyptian Starcluster	Y
<i>Pennisetum alopecuroides 'Purple Lea'</i>	Fountain Grass	P
<i>Plectranthus argentatus 'Silver Shield'</i>	Silver Shield	A
<i>Euphorbia pulcherrima</i>	Poinsettia	S
<i>Skimmia japonica 'Rubella'</i>	Japanese Skimmia	P
<i>Teucrium fruticans</i>	Germander	S
<i>Zantedeschia rehmannii</i>	Pink Calla Lily	S
GROUP C: CAMELLIA GARDEN		
<i>Camellia japonica</i>	Common Camellia	P
<i>Camellia sasanqua</i>	Sasanqua Camellia	A
<i>Camellia reticulata</i>	Reticulata Camellia	P
<i>Camellia nitidissima</i>	Golden Camellia	P
SCREEN PLANTING 1		
<i>Syzygium 'Cascade'</i>	Weeping Lily Pilly	S
SCREEN PLANTING 2		
<i>Acmena smithii 'Minor'</i>	Dwarf Lily Pilly	P
BORDER HEDGE		
<i>Buxus microphylla</i>	Japanese Box	Y

Seasonal Calendar

- S Summer
- A Autumn
- P Spring
- Y Year Round

13.0 REFERENCES

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APPENDIX 1: SUMMARY OF KEY DESIGN INTENT FOR THE GARDENS

The following is a summary of the key design objectives and layout for each space as detailed in the *Duck River Parklands Project*, Written by E.W. Black

THE AUSTRALIAN GARDENS

Achieve as many Australian ecological situations as feasible and create diversity of Australian vegetation and flora

Billabongs

- Made up of a chain of 3 ponds
- Boarded peripherally by scrub woodland plantings of natives
- Edges of large grass areas planted with specimen Eucalypts

Australian Rainforest

- Thick canopy of foliage required, with a massive amount of vegetation to produce a moist, deep littered leaf, mouldy floor.
- Create impression of dark and deep forest by growing layers of leaves, vines, palms and ferns as well as Australian Rainforest trees
- Stream provided to complete concept and as part of the water circulation system.
- Concept based on the rainforest project at the Canberra Botanical Gardens (which has a special irrigation system)
- Large stones placed in relation to pathways

Open Air Woodland Theatre

- Was an area of garbage fill that was not drained – and therefore was marshy
- Clay mounds added to this area – fill used from local road work excavations
- Space for spontaneous cultural activities by people for their own enjoyment
- Area consist of three hills that creating a triangular theatre complex

- Large shrubs and small-medium trees planted randomly to create a woodland joining the hills

Native gardens

- Species arranged in Family name groupings contained in continuous planting beds
- Plant groupings should provide an attractive, interesting and educational display
- Only well represented Family groups will have separate beds (Proteaceae, Myrtaceae, Rutacea, Leguminosae, Labiatae)
- Area enclosed by windbreak and screening planting – for protection and surprise for visitors
- Take into account that main wildflower season is end of June
- Attract more bird life

Scrub Woodland

- Locally naturally occurring species to form windbreaks and boundaries to other areas and the site

Waterholes

- Part of site prior to the botanic gardens
- Clay soil is remarkably water tight
- Interesting ecology
- Additional waterholes added

THE OTHER GARDENS

Japanese Gardens

- After carrying out research on gardens of different nations it was realised that the traditional Japanese Garden and the Australian Garden were the only two national gardens having naturalness as the main theme
- Create surroundings that are simple and restrained and to suggest a basic closeness

to nature

- The general design is based on water falling on mountains and flowing westerly to the larger river to form the traditional Hill and Lake garden in conjunction with stroll pathways and passageway gardens
- Garden includes a combination of stone shapes, pathways, bridges, islands, pond edges, waterfalls, fences, walls, gates, etc
- A solid background of evergreens
- Special emphasis on tree planting
- Stroll garden with elements of interest and surprise
- Impression of tranquillity and stability

Garden of Trees

- 30m x 300m long
- Curved pathways create a chain of three islands
- Attractive landscape adhering to principles of composition, light, shade and colour
- Pathways have been curved to close in vistas, highlight separate trees and enclose the garden
- Planted from east to west with Spring and Summer flowering trees, and with trees and shrubs with Autumn foliage in that order to create a floral calendar
- Large scale Azalea planting on both sides of path
- Camellia walk proposed along the whole southern edge of the garden

Formal Areas

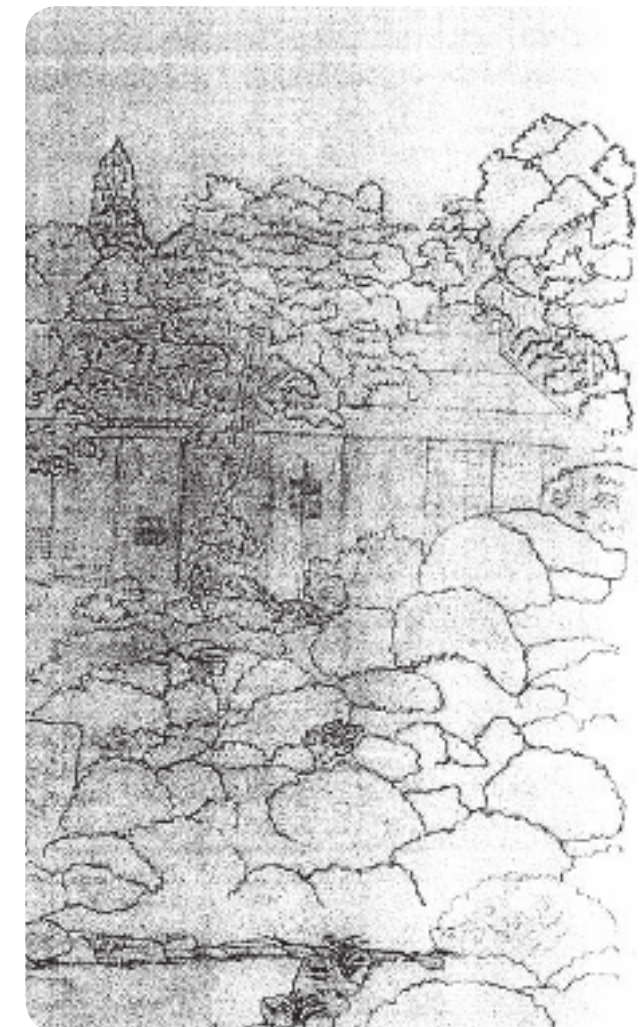
- Were to consist of ornamental fountains, formal ponds, hidden main entrance, pathways, sunken rose garden, perfumed garden, ornamental pond and bridge and pergola, turfing and seating

Avenue of Remembrance

- Became established in conjunction with a

public tree planting ceremony on September 9, 1973, with the planting of 139 trees

- Includes a 9m wide sewer easement
- Was intended to be extended to give access to Progress Park and the Municipal Golf Links
- Tree planting restricted to Tallowwood Species (Euc. Microcorys)
- It was intended that plantings will be extended in an avenue effect through the main Formal Area to merge with similar plantings in the car park and on the street side of the Japanese Mountains



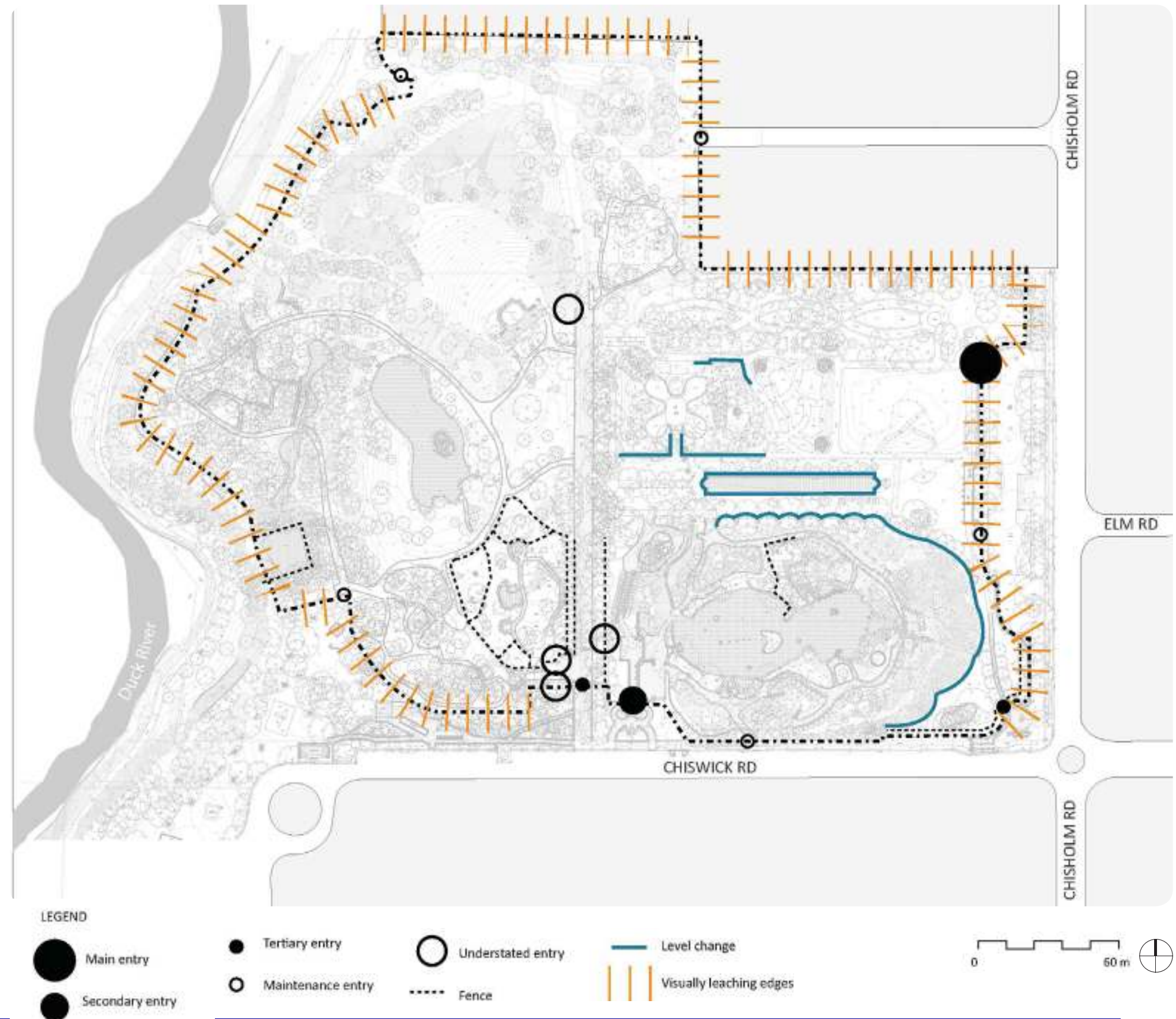
Concept Sketch of the Japanese Gardens by E.W. Black

APPENDIX 2: SITE ANALYSIS AND OPPORTUNITIES

ENTRIES + EDGES

ANALYSIS

- The entries to the Garden are not reflective of their priority. The main entry from Chisholm Road carpark is underwhelming, the secondary entry via the Japanese Garden is overshadowed by the grandeur and gated tertiary entry of the Avenue of Remembrance.
- The majority of the Gardens edges are visually permeable, drawing attention away from the gardens and diffusing the illusion of being in a dense garden away from the city. The functional boundary fence, roads, back of houses and surrounding degraded landscape areas are visible.
- An existing safety fence around the reservoir is highly visible and unattractive.
- Fencing on either side of the Avenue of Remembrance is highly visible and close to the tree line detracting from the grand proportions of the space.
- A double fence line has been created along the Avenue of Remembrance due to the need for increased security.



APPENDIX 2: SITE ANALYSIS AND OPPORTUNITIES

EDGES AND ENTRIES OPPORTUNITIES

- Redesign entries to reflect their priority and importance and improve arrival experiences, looking at scale, wayfinding and sightlines
- Create a layered vegetation screen around the gardens edges to enclose the space, contain views and focus attention on the gardens and planting
- Regrade the edges of the reservoir to meet safety standards, remove the fence and integrate the reservoir into the gardens as another water body
- Rationalise and screen the fencing along the Avenue of Remembrance, redirect sightlines away from the edges of the walk
- Focus and direct views beyond the edge of the Gardens. Consider visual links to Duck River, Sporting fields to the north and the picnic area to the south.

EXISTING SITE PHOTOS



Avenue of Remembrance gate



Boundary fence to Duck River



Street entry to Japanese Gardens



Chisholm Road boundary fence

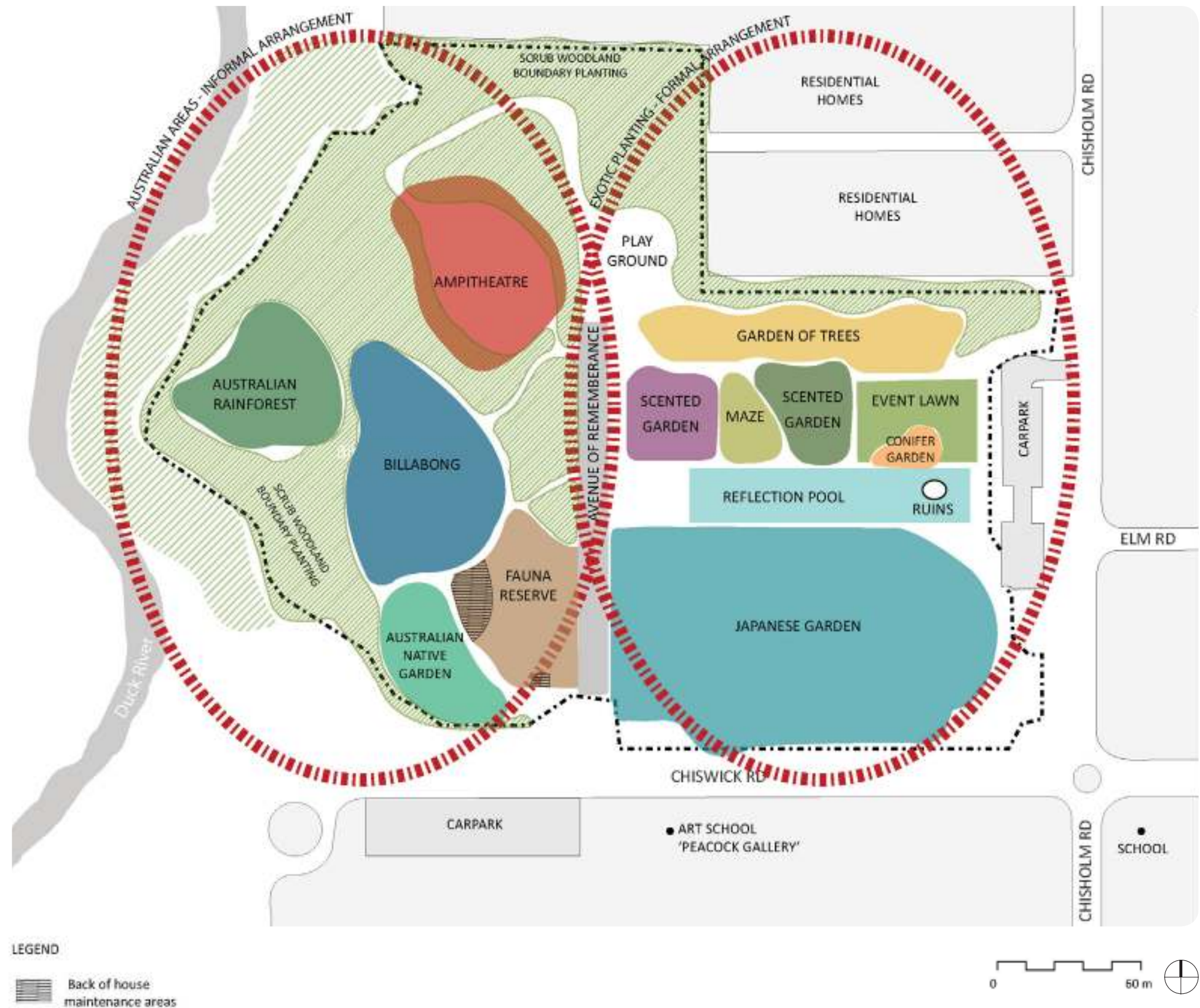
APPENDIX 2: SITE ANALYSIS AND OPPORTUNITIES

CHARACTER AREAS

ANALYSIS

- Boundaries between the plant communities of character zones are blurred, indistinct and unclear
- Some character zones plant communities are in poor condition with incorrect species having been inter-planted or invading the zone. In particular;
- Many of the trees within the Australian Rainforest area are inappropriate for rainforest environment
 - The seasonal garden of trees is dominated by Eucalypts
 - The planting around the formal Reflective Pool is asymmetrical
- Play space is outdated, has limited play value and has little aesthetic connection to the gardens
- Scrub woodland boundary planting areas have overtaken the edges of the Gardens and are taking over other character zones, in particular the Australian Rainforest, the Native Garden and the Garden of Trees
- The event lawn and end of the reflection pool lawn is broken up by planting and structures
- Fauna maintenance areas are in close proximity to entry areas
- Educational signage is sporadic and of differing styles throughout the gardens.
- Chisholm Road car park not really used as a car park but as a marshalling area during events
- Picnic areas located around Billabong

ANALYSIS DIAGRAM



APPENDIX 2: SITE ANALYSIS AND OPPORTUNITIES

CHARACTER AREAS OPPORTUNITIES

- Improve the definition between the character zones by strengthening their distinct plant communities
 - As per the original concept, group planting within Australian Native Garden into species families to have a better educational and aesthetical value
 - Strengthen and add new seasonal flowering trees species throughout Garden of Trees
 - Remove non rainforest trees from the rainforest and replant with layered understorey planting reflective of rainforests
 - Additional planting within Rose Garden to increase variety, layers and vegetation densities
 - Plant an additional row of Tallowwoods along northern edge of Reflection Pool to create a strong avenue and reinstate the original concept for this area
- Improve the definition between the character zones through signage and materials
- Opportunity to create new character zones and overlays in the gardens, including:
 - A succulent garden within the northern area of the site
 - An educational zone that could be located near the Billabong to help teach children and adults about bush tucker and Aboriginal land management technique
 - A larger conifer garden
 - A xerophyte garden
 - Marsh
 - Wetland
 - Rockery
 - Edible garden
- Potential for new natural play space within the gardens that provides education value and links to the principles of the Gardens
- Relocate conifer garden to increase the

size and flexibility of the events lawn and connectivity to the Reflection Pool

- Create a significant area / termination / focal point at the end of the Avenue of Remembrance
- Make Chisholm Road car park into a grand entry to the Gardens and a marshalling area for events
- Provide more educational elements into the Gardens, particularly on vegetation, bush tucker, geography and history

EXISTING SITE PHOTOS



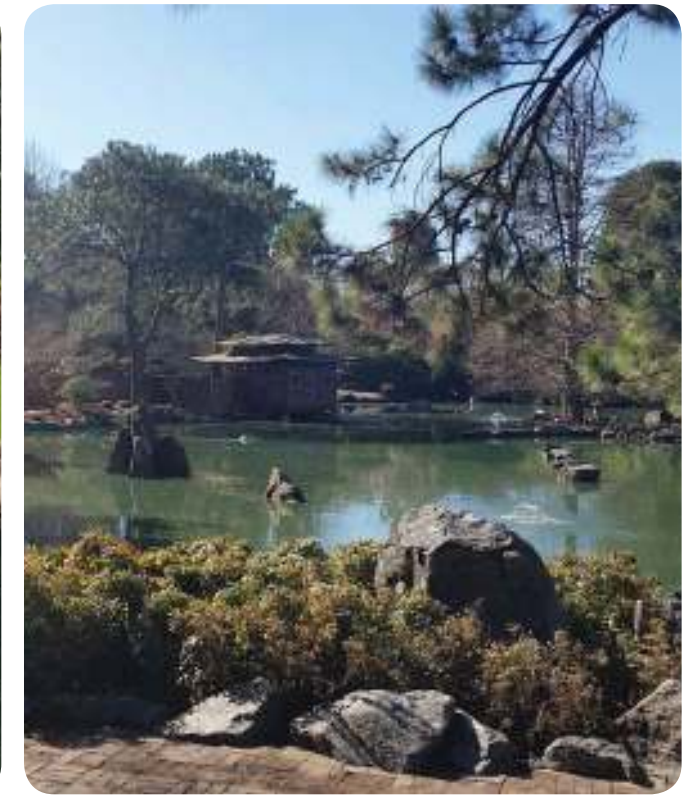
Amphitheatre



Rainforest



Reflection Pool



Japanese Garden



Australian Garden



Billabong

APPENDIX 2: SITE ANALYSIS AND OPPORTUNITIES

VEGETATION AND ECOLOGY

ANALYSIS

- The majority of the Australian Gardens, lacks layered planting, with large areas of understorey planting missing, in poor condition or sparse
- There is no understorey planting along the Avenue of Remembrance
- Sparse understorey planting throughout the Garden of Trees and along its northern boundary
- No understorey planting around cherry blossom trees and the new cherry blossom mounds in and around the Japanese Garden
- Layers of planting, consisting of groundcovers, shrubs and trees are provided in the sections of the Japanese garden, scented garden and maze
 - Variety of open lawn areas provided
 - Lawn areas about Chisholm Road boundary
 - Limited plant species in the gardens
 - Pockets of remnant vegetation and threatened species and vulnerable plant communities identified on site
- Along the western boundary of the gardens there are small pockets of indigenous plants *Melaleuca nodosa*, that have survived the mass earthworks that occurred when the gardens were constructed. This section has and will continue to be used for seed collection for future revegetation along Duck River.
- Draft Recovery Plans have been prepared by National Parks and Wildlife Service which identifies *Acacia pubescens* (Downy Wattle) and Cooks River Clay Plain Scrub Forest and *Wahlenbergia multicaulis* (Tadgell's Bluebell) within the Gardens. All are listed as vulnerable or endangered species or ecological community.

ANALYSIS DIAGRAM



APPENDIX 2: SITE ANALYSIS AND OPPORTUNITIES

VEGETATION AND ECOLOGY OPPORTUNITIES

- Improve and plant new understorey planting. Remove unsuitable or senescent tree planting to allow for soil improvements and create room and light to get understorey planting established
- Replant and improve understorey planting along the northern edge in the Garden of Trees, with screening to site boundary
- Add a thick planted edge along Chisholm Road to create a green edge to the open lawn areas
- Provide bird and native animal nesting boxes
- Plant species to encourage birds and native wildlife into the gardens
- Improve number and variety of plant species within the gardens
- Retain and protect areas of remnant vegetation, threatened species and vulnerable plant communities.
- Potential to utilise small pocket of *Melaleuca nodosa* for seed collection and future revegetation of the gardens

EXISTING SITE PHOTOS



Open lawn areas



Layered planting in the Maze



Layered planting in the Japanese Garden



Lack of understorey in the Garden of Trees



Cherry blossom mounds



Lack of understorey in the Rainforest

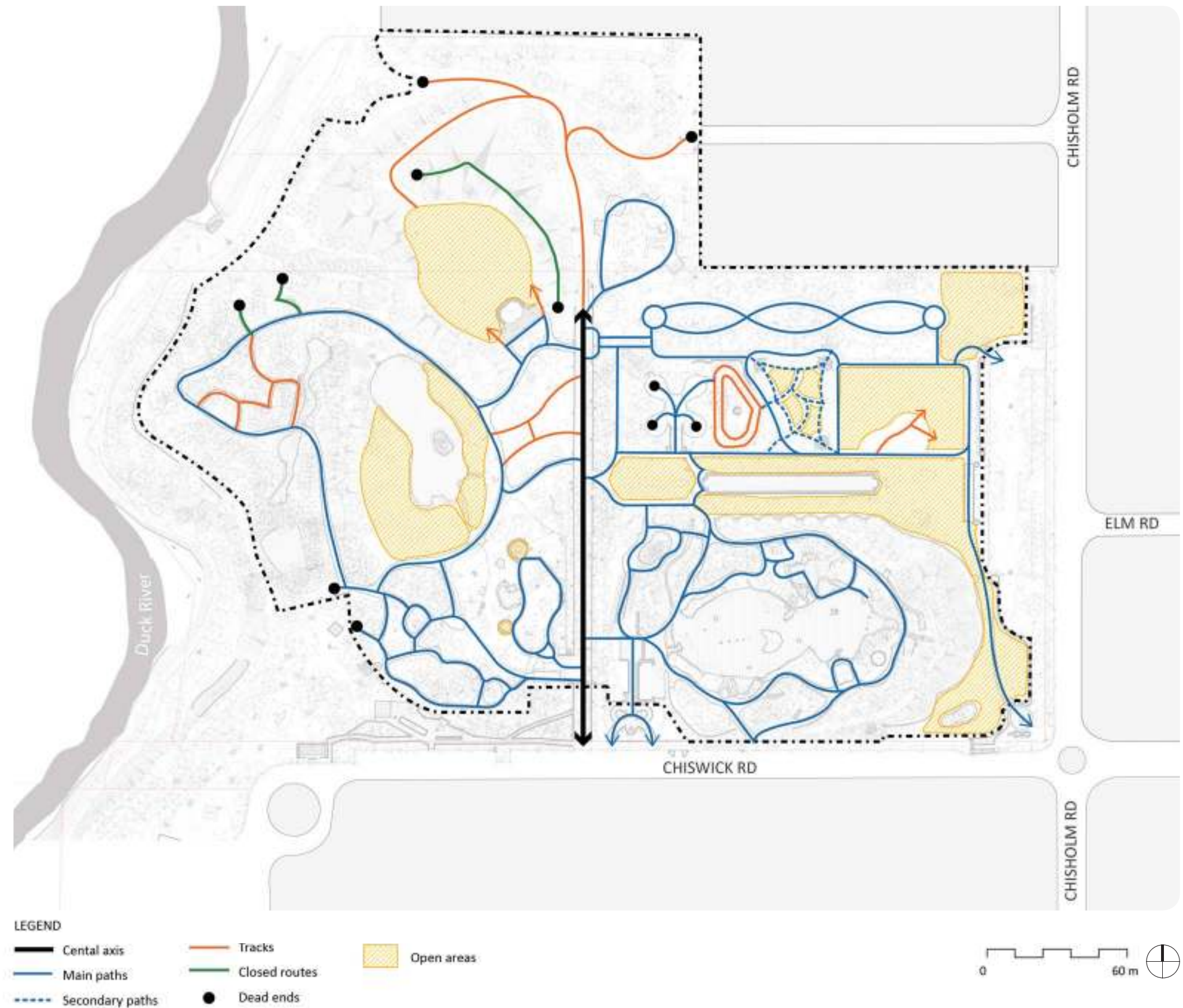
APPENDIX 2: SITE ANALYSIS AND OPPORTUNITIES

CIRCULATION

ANALYSIS

- Good number of paths and routes are provided throughout the gardens
- Generally paths are universally accessible
- A clear hierarchy of paths has been established through varying widths and materials
- The back lawn area along Chisholm Road is cut off from the Japanese Gardens with very restricted access points
- A number of entries off the Avenue of Remembrance are unclear, in particular the entry to the amphitheatre, the Native Australian Garden and the Japanese Garden
- Path to the amphitheatre directs people to the back of the utilities block before entering the amphitheatre
- Some signs are provided in the gardens, but on the whole wayfinding and character zone signage is very limited or non-existent
- A number of paths within the Australian Gardens terminate in dead ends
- Dirt paths in the Rainforest require high levels of maintenance and are not very clear
- The ridge walk around the amphitheatre is closed
- There is no connection between the Gardens and Duck River and the regional picnic area and proposed playground

ANALYSIS DIAGRAM



APPENDIX 2: SITE ANALYSIS AND OPPORTUNITIES

CIRCULATION OPPORTUNITIES

- Improve connections to spaces by making them more direct, welcoming and clear
- Adjust the entry to the amphitheatre to avoid the utilities block
- Create a link between the lawn along Chisolm Road and the Japanese garden, this could potentially be a link to a lookout point on the new mound
- Improved signage and wayfinding throughout the gardens
- Remove dead end paths or provide a focal point/terminus to make dead ends valid experiences
- Improve tracks within the rainforest by providing clear edges and routes
- Improve and reinstate the ridge walk around the amphitheatre
- Provide access to Duck River walk and the regional picnic and proposed play space

EXISTING SITE PHOTOS



Formal direct paths



Ridge walk



Dead end paths



Avenue of Remembrance

APPENDIX 2: SITE ANALYSIS AND OPPORTUNITIES

MATERIALS AND ELEMENTS

ANALYSIS

- Pergola at eastern edge of the gardens near the Reflection Pool is in poor condition and appears to have no utility
- Ruins adjacent to Reflection Pool seem misplaced and their purpose is unclear
- Arbours within the Rose Garden are very simple and lack character and planting
- Large shelter within the Scented Garden has limited day to day function
- Outdated picnic shelter structures within play area
- The back of the amenities block is highly visible and unattractive
- The location of the amenities block is not central to the existing program of the gardens
- The Fauna Reserve Entry structure and internal facilities are outdated, underutilised and does not provide a good starting or end point for the Fauna Reserve
- The Planted Pergola at the entry to the Australian Native Garden is not very welcoming dark, low and unclear
- The external finish to the water tanks along the Gardens boundary are old and unattractive
- Underwhelming and unclear entry structure to Japanese Garden from the Avenue of Remembrance
- Footbridge over the Rainforest River is in poor condition and provides an underwhelming experience
- The materials used in each character zone do not reflect the nature of that zone
- The majority of the asphalt paths are in poor condition, with visible patching, cracking, movement from tree roots and broken edges
- Concrete paths appear to be in good condition and of a good width
- The dirt tracks created in the Rainforest Area are very rough, unclear and have a number of exposed roots and pipes which are a trip hazard
- The edge to the reflection pool is stepped and in poor condition
- Seating is limited throughout the gardens
- Toilets near amphitheatre consist of 1 x male, 1 x female and 1 x DDA
- Additional toilets are brought in for events
- No lighting is provided in the Garden north of the Reflection Pool

ANALYSIS DIAGRAM



APPENDIX 2: SITE ANALYSIS AND OPPORTUNITIES

MATERIALS AND ELEMENTS OPPORTUNITIES

- Potential to remove pergola along eastern edge to open views across from reflective pool and create a stronger sight line
- Look at relocating the sundial
- Look at upgrading the Rose Garden arbour with structures that better reflect the character of this formal garden
- Potential to add group seating furniture elements within Scented Garden and under the shelter
- Look at screening the back of the amenities block either through planting or artwork
- Consider relocating the amenities block to a central location or close to gathering places
- Look at creating new entries off the Avenue of Remembrance that are open, light, clear, welcoming, educational and reflective in design of the character zones they represent
- Look at cladding or painting water tanks to integrate them into the Gardens
- Potential to replace old paths and use materiality to strengthen the character of specific areas as well as marking the transition between them. For example
 - Australian native garden to have stabilised deco gravel paths reflective of bush walking paths
 - Rainforest to have timber boardwalks and bridges
 - Rainforest tracks to be mulched with timber log edges
 - Ridge walks could have sandstone log steps
- Create a cleaner edge around the Reflective Pool by removing the stepped edge and reducing the number of materials
- Opportunity to include temporary or permanent art in the gardens
- Discontinue public use of the amphitheatre toilets and construct a new and larger toilet block
- Provide a clear open space that can be used for facilities during events

EXISTING SITE PHOTOS



Asphalt paths



Rainforest tracks



Brick paving



Arbour to Rose Garden



Entry structure to Fauna Park



Playground

APPENDIX 2: SITE ANALYSIS AND OPPORTUNITIES

TOPOGRAPHY AND SOILS

ANALYSIS

- The majority of the original Botanic Gardens precinct was mined for clay tile production early this century. The area was then used as a waste landfill site. The waste landfill site was subsequently filled with soils from other areas. In turn these soils were excavated to form the hills and lake systems that now exist in the Auburn Botanic Gardens.
- The Plan of Management for the site notes that there are eight different soil types within the Botanic Gardens, ranging from organic sands through to clays.
- Generally the site soils are poor, often displaying a low water holding capacity and/or water repellent.
- The gardens currently have a poor irrigation system that is under review and redesign
- Mounds create edges, define spaces and add interest to the gardens
- The topography in the northern section of the site visually enclose the Gardens
- Mounds have been created with imported clay which is exposed in many areas and has low water holding capacity
- Steep sections of mounds have eroded
- The amphitheatre lawn grades across its whole length
- Steep grades throughout the site result in little water penetration to mounds
- Edges to water bodies all grade inwards with smooth batters

ANALYSIS DIAGRAM



APPENDIX 2: SITE ANALYSIS AND OPPORTUNITIES

TOPOGRAPHY AND SOILS OPPORTUNITIES

- Re-grade the amphitheatre lawn with a level area and seating areas to increase its flexibility and functionality for events and celebrations
- Further utilise mounds by providing access and lookouts at high points to view the gardens and surrounds
- Potential to re-grade northern edge of the gardens to borrow views from the adjacent sporting fields
- Improve clay soils to support understorey planting
- Break up smooth slopes to mounds to create opportunities for planting and water absorption
- Regrade and landscape edges to some water bodies to make them unique and fit more within their character zone. e.g. Add a rocky edge to the Billabong

EXISTING SITE PHOTOS



Sloped amphitheatre



Eroded clay banks



Sloped edges to water bodies



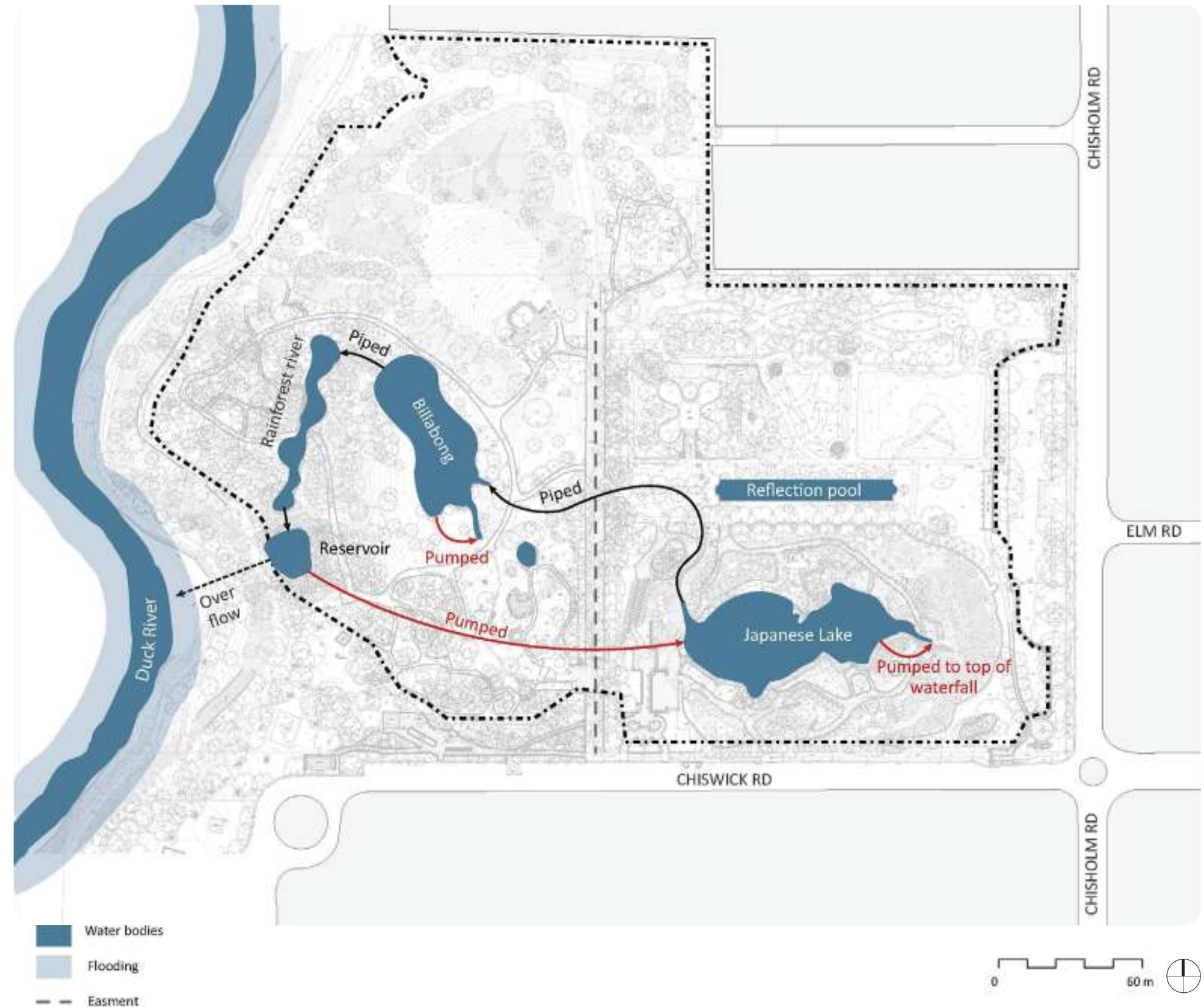
Planted mounds

APPENDIX 2: SITE ANALYSIS AND OPPORTUNITIES

HYDROLOGY AND DRAINAGE ANALYSIS

- Little to no irrigation system in place resulting in very dry soils and planting beds
- Water bodies throughout the site have a colour dye added to them
- Main water bodies are inter connected via pumps and piped systems
- Urban runoff and fertilisers pollute the water system in the gardens
- Edges to water features throughout the Australian Gardens are all very similar with smooth banks
- Easement located under the Avenue of Remembrance

ANALYSIS DIAGRAM



APPENDIX 2: SITE ANALYSIS AND OPPORTUNITIES

HYDROLOGY AND DRAINAGE OPPORTUNITIES

- Potential to visually connect the Australian Rainforest water system with the reservoir and Billabong to create a larger water body in the looped system
- Improve overall water quality in the gardens by removing coloured dye from all water bodies. Better water quality throughout the site will result in cleaner overflow discharging into the Duck River
- Look at incorporating planting in places to naturally clean the water
- Incorporate additional elements to water body edges and features to create more variety and interest. e.g. planting, rocks, pools, cascades, riffles
- Add boulders and enhance the edges of the inlet to the billabong to create the feeling of a rocky gully
- Locally regrade areas and widths of water bodies, to create a variety of water flow speeds
- Potential to improve overall irrigation system throughout the gardens

EXISTING SITE PHOTOS



Reflection pool



Rainforest river



Creek feeding into billabong



Japanese Lake