



4.1 Adelaide Botanic Garden
and Botanic Park



Location and Surrounding Land Use

Adelaide Botanic Garden is located on the edge of the city centre, at the junction of two creeks and the River Torrens. The Garden sits at the bottom of the First Creek catchment, the upper reaches of which begin in close proximity to the Mount Lofty Botanic Gardens.

The Garden is easily accessible from the commercial, retail and entertainment precincts in the north-east corner of the city. It is linked to the Torrens Linear Park system, and via Hackney Road and North Terrace, to main roads and public transport routes which lead to all parts of the metropolitan area.

The Adelaide Botanic Garden is part of the North Terrace Cultural Precinct, in close proximity to the State's other cultural institutions.

Royal Adelaide
Hospital



Plane Tree Drive
Zoo Entry



Hackney Road
Edge



Torrens River



Main North Terrace
Gate



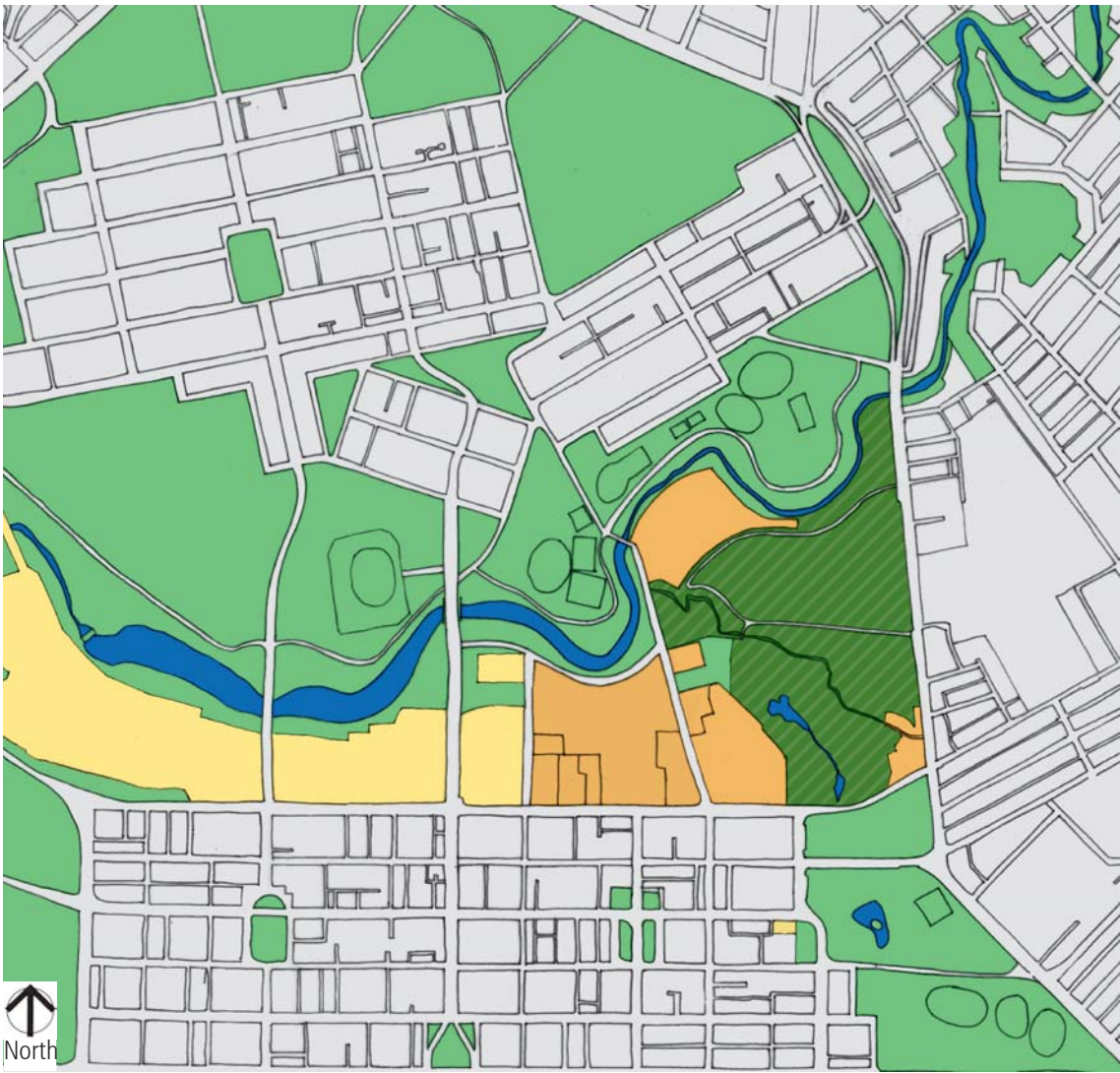
Frome Road
Botanic Park edge



Adelaide Botanic Garden & Botanic Park

LEGEND

Adelaide Botanic Garden and Botanic Park		City and Suburbs	
Adjacent Primary Cultural, Scientific, Health and Educational Institutions		Parklands	
Other nearby Civic, Cultural and Recreational Institutions		Waterways	



Planning Controls

The Adelaide Development Plan (consolidated 12 January 2006) provides zoning policies for the City of Adelaide to guide future development. The Adelaide Botanic Gardens is part of the Park Lands Zone of the Adelaide Development Plan and is specifically contained within the Botanic Park Policy Area (32).

The Park Lands Zone of the Development Plan contains Objectives and Principles of Development Control which must be read in conjunction with the specific provisions within the Botanic Park Policy Area, and provide a policy framework for the general management of the Park Lands.

The Desired Character for the Botanic Park Policy Area, as set out in the Development Plan, includes:

- (a) the open park and garden theme of Botanic Park;
- (b) a diversity of uses, such as the Zoological Gardens, Botanic Gardens, Botanic Park, and the National Wine Centre, all carefully managed to sensitively balance the interaction between the built, natural and landscaped environment;
- (c) minimal uses or activities which further alienate Park Lands from public usage;
- (d) a planting theme defined by a mix of exotic and Australian native plantings, lawns and garden beds, and wherever possible, the planting of vegetation of local provenance along the River Torrens/Karrawirra Parri;
- (e) First Creek modified with regraded banks;
- (f) a planting character that acknowledges the variation in landform and the Park Land feature provided by First Creek; and
- (g) attractions for opportunities for tourism, education, research and informal recreational enjoyment.

State Heritage listed places within the Adelaide Botanic Gardens includes:

East Lodge and Gates, Botanic Road;

Goodman Building and Tram Barn A (former MTT Depot), Hackney Road;

Main Entrance Gates, North Terrace;

Stone wall, Botanic Road;

Palm House Conservatory, North Terrace;

Former Lunatic Asylum Morgue, North Terrace;

Simpson Kiosk, North Terrace;

Rose Garden Fountain, North Terrace;

North Lodge, Plane Tree Drive;

Museum of Economic Botany, North Terrace

The only local heritage place listed within the Adelaide Botanic Gardens are the carriageway entrance gates in Botanic Park, Hackney Road.

The future management of the Adelaide Park Lands, including the Adelaide Botanic Gardens, is also subject to the recently passed Adelaide Park Lands Act 2005. This legislation will require the Adelaide Botanic Gardens to prepare management plans for its areas equivalent to those prepared by the Council for the Adelaide Park Lands under its care and control pursuant to the Local Government Act 1999.

The Adelaide City Council is currently in the process of developing the former carpark site on Frome Road, adjacent to the western edge of the Botanic Gardens, as parkland. This will enable the development of a new western entrance to the Adelaide Botanic Garden via this parkland site.

Adelaide Botanic Garden & Botanic Park



Topographic Structure

The site is dissected by two creek valleys and two ridges.

Within the context of the Adelaide Plains the site has a complex topographic structure.

The topography has impacted on the development of the garden, principally through the influence of the two creek lines and the main central ridge.

First Creek



Botanic Creek



Torrens River



Auracaria Ridge



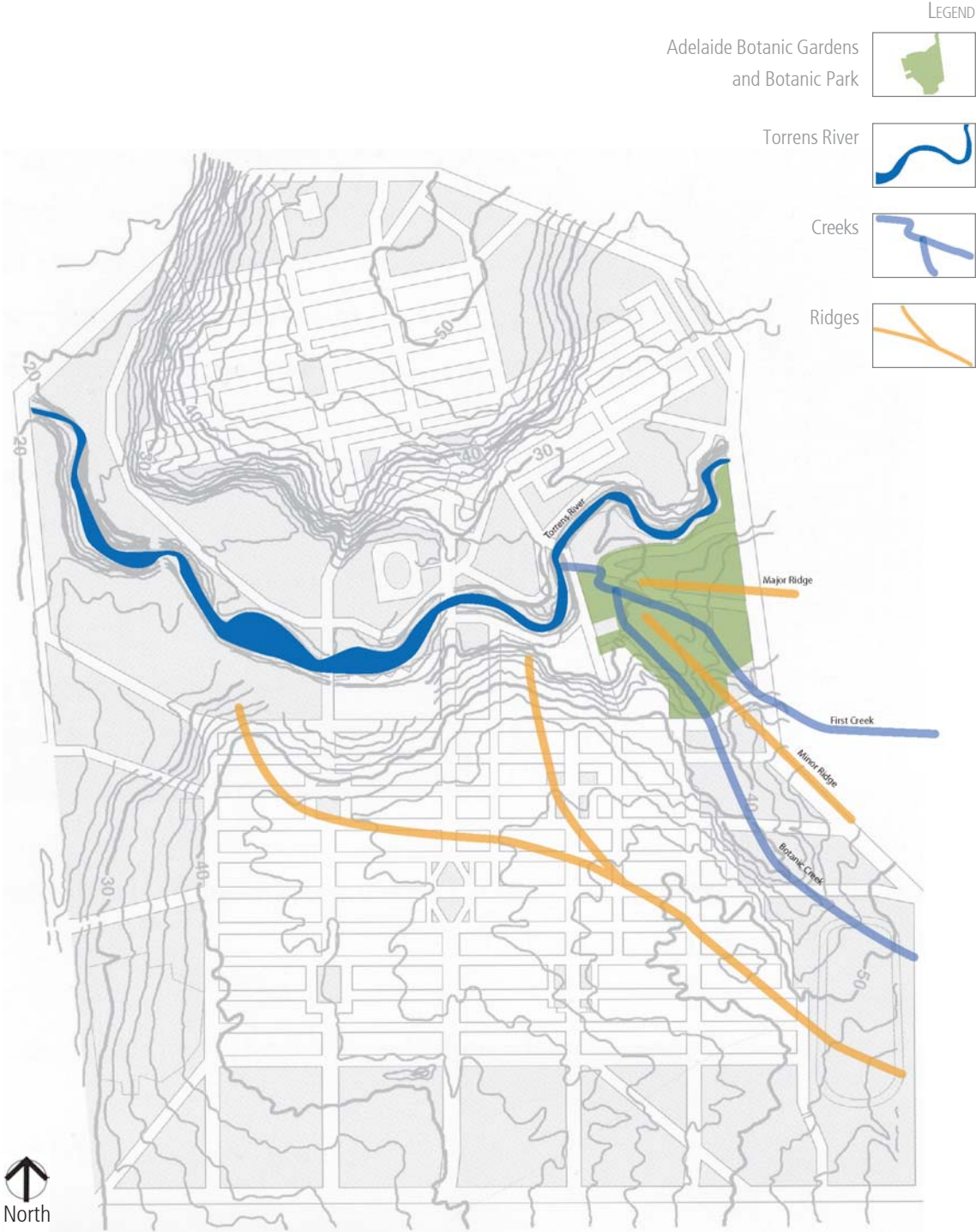
Botanic Park Ridge



Main Lake



Adelaide Botanic Garden & Botanic Park



Waterways

Flooding issues remain a primary concern of waterway management in the Gardens. Flooding impacts include:

- Excess flows in Botanic Creek reaching Main Lake and not being adequately discharged to First Creek
- Deposition of litter and debris after high water levels
- Scouring of banks and deposition of sediment, mainly along First Creek
- Safety concerns with high velocities and steep banks in well used areas of the Gardens.

Stormwater flowing through the Botanic Gardens carries large quantities of pollutants derived from the urban catchment upstream.

There are three main sources for water used in the Gardens: potable water use (for irrigation of the Gardens and building use), river water from the Torrens (for Botanic Park irrigation) and rainwater from the Museum of Economic Botany roof (for the Mediterranean Garden water feature). Up to 120ML of potable mains water is used for irrigation annually.

The existing creeks through the Gardens are characterised by concrete lining with steep sides, providing a very efficient pathway for flows, resulting in high flow velocities.

1.

Upper First Creek



2.

Lower First Creek



3.

The Dell



4.

Top Lake



5.

Botanic Creek



6.

Main Lake



Adelaide Botanic Garden & Botanic Park



Landscape Structure

The Garden has been the subject of two major plans, Francis (1855) and Schomburgk (1874), both of which have been highly modified over time.

The resultant garden layout is an aggregation of formal and informal elements with no dominant organising geometry.

The Garden structure is therefore a synthesis of topographic and garden design influences over 150 years.

The main elements are:

- The main ridge which divides the creek valleys
- A series of isolated axes which seldom terminate in a major focal point
- A series of distinct garden rooms with clearly defined edges
- Sinuous flowing gardens which predominantly follow the valley floors

Main Walk



Fig Tree Walk



Open Lawn Area



Economic Garden



Classground



Hackney Road
entry axis



Adelaide Botanic Garden & Botanic Park



Heritage Exceptional Significance

The Adelaide Botanic Garden Conservation Study has identified ten components of the Garden as having exceptional cultural significance - significant on a national level.

These components are:

1. Palm Garden (1870)
2. Boy and Serpent Fountain (1908)
3. Fig Tree Avenue (1866)
4. Palm House (1877)
5. Victoria House (1868)
(relating to Horticultural Practice,
Pond and House Walls)
6. Main Walk (1855)
7. Australian Forest (1868)
8. Bicentennial Conservatory (1988)
9. Museum of Economic Botany (1879)
10. Araucaria Avenue (1868)

Palm House



Australian Forest



Bicentennial
Conservatory



Museum of Ec.
Botany



Fig Tree Avenue



Main Walk



Adelaide Botanic Garden & Botanic Park



Heritage High Significance

The Adelaide Botanic Garden Conservation Study has identified twenty-nine components of the Garden as having high cultural significance - significant on a state-wide level.

These components are:

1. Western Wild Garden (1964)
2. Spatial form of Economic Garden (1872)
3. Simpson Kiosk (1906)
4. Madagascan Plant Collection
5. Western Pinetum Remnant (1870s)
6. Main Lake (1855)
7. Nelumbo Pond (1859)
8. Francis Lawn (1857)
9. Botanic Creek (1856)
10. Former Trellis Walk (c. 1861)
11. North Terrace Gates (1880)
12. North Terrace Wall
13. Plane Tree Drive Northern Entrance Gates
14. Plane Tree Drive
15. Botanic Park (1874)
16. North Lodge (1866)
17. Spatial form of Class Ground (1867)
18. Plane Tree Circle
19. Spatial form of the Mediterranean Garden (former Italianate Garden)
20. Former 'tram-barn' building (1910)
21. Goodman Building (1909)
22. Morgue (1882)
23. Spatial form of Dahlia Garden
24. Tradition of Bridges
25. Yarrabee House (1865)
26. Mallee Garden (1953)
27. Eastern Lodge and Gates (1865)
28. Top Lake (1855)
29. Bailey Lawn (1924)

Simpson Kiosk



Western Wild
Garden



Goodman
Building



East Lodge



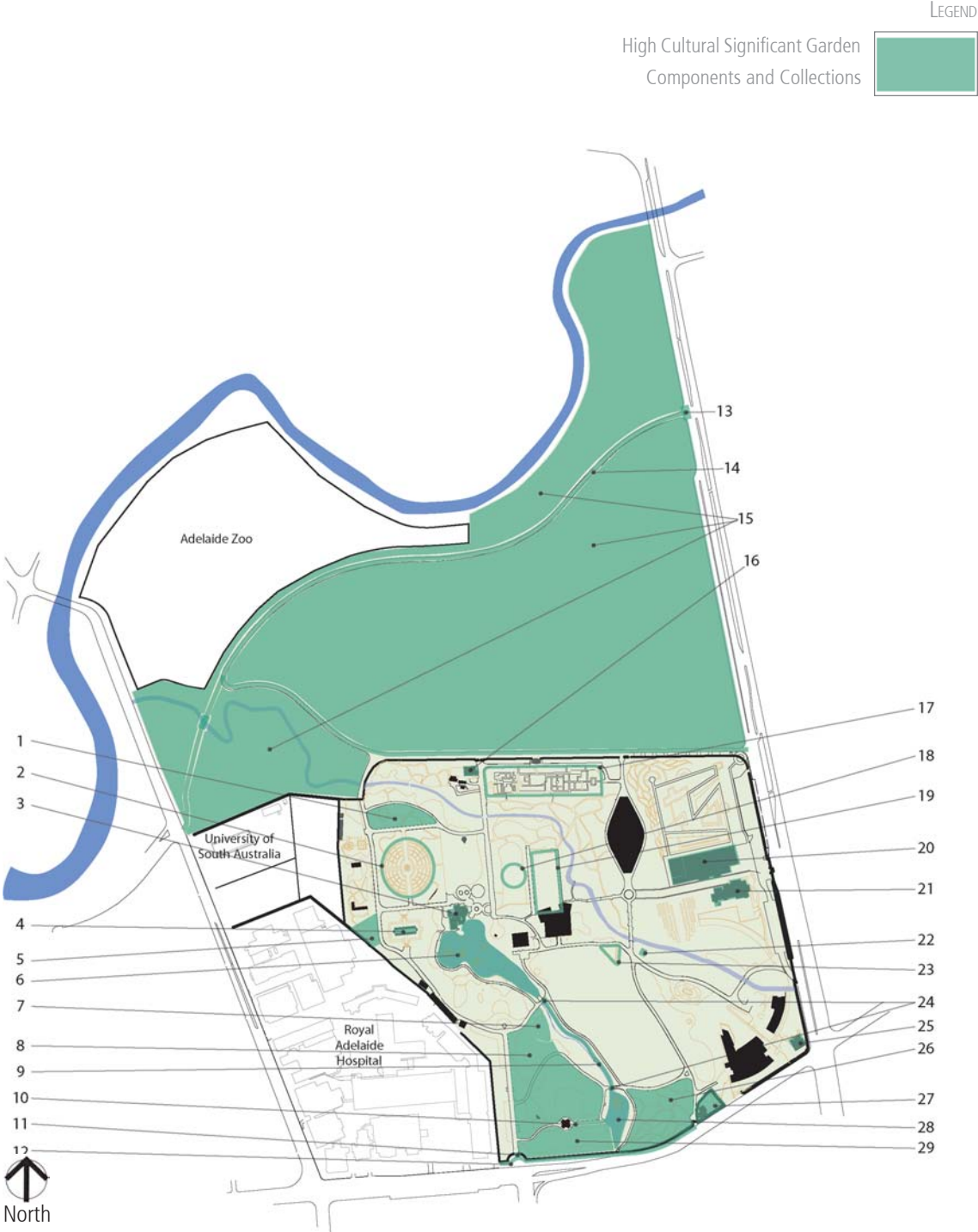
Dahlia Garden



Mallee Garden



Adelaide Botanic Garden & Botanic Park



Movement - Pedestrians and Cyclists

There are three main entrances to the Garden.
Major destinations are predominantly in the centre of the Garden, while the path system is dispersive.
Main paths have broad bitumen or brick pavements.
Narrow saw dust paths in intimate spaces are a feature of the Garden.

Pedestrian/cycle paths along the Torrens River and across Botanic Park provide access to the Gardens and the city.
There is inadequate disabled access to the Gardens from Plane Tree Drive, and there is no footpath along the west side of Hackney Road between Plane Tree Drive and the Torrens River.

Commuters regularly short cut across the Gardens.
The proposed Western Entrance provides potential for a fourth major entrance to the Garden.

Some buildings and garden features have inadequate accessibility for visitors with physical disabilities, while some path surface materials limit access particularly for those using mobility aids. Some elements of the garden furniture such as drinking fountains and rubbish bins are not located within easy access. Wayfinding within the Garden for disabled visitors could be greatly assisted by improvements to the locations and graphic representations of the Garden's signage systems.

Primary
Pedestrian
Path



Minor
Pedestrian
Path



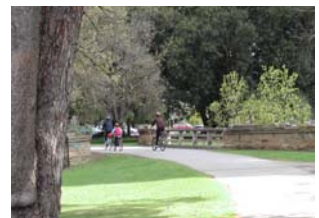
North Lodge Entry



Botanic Park Path



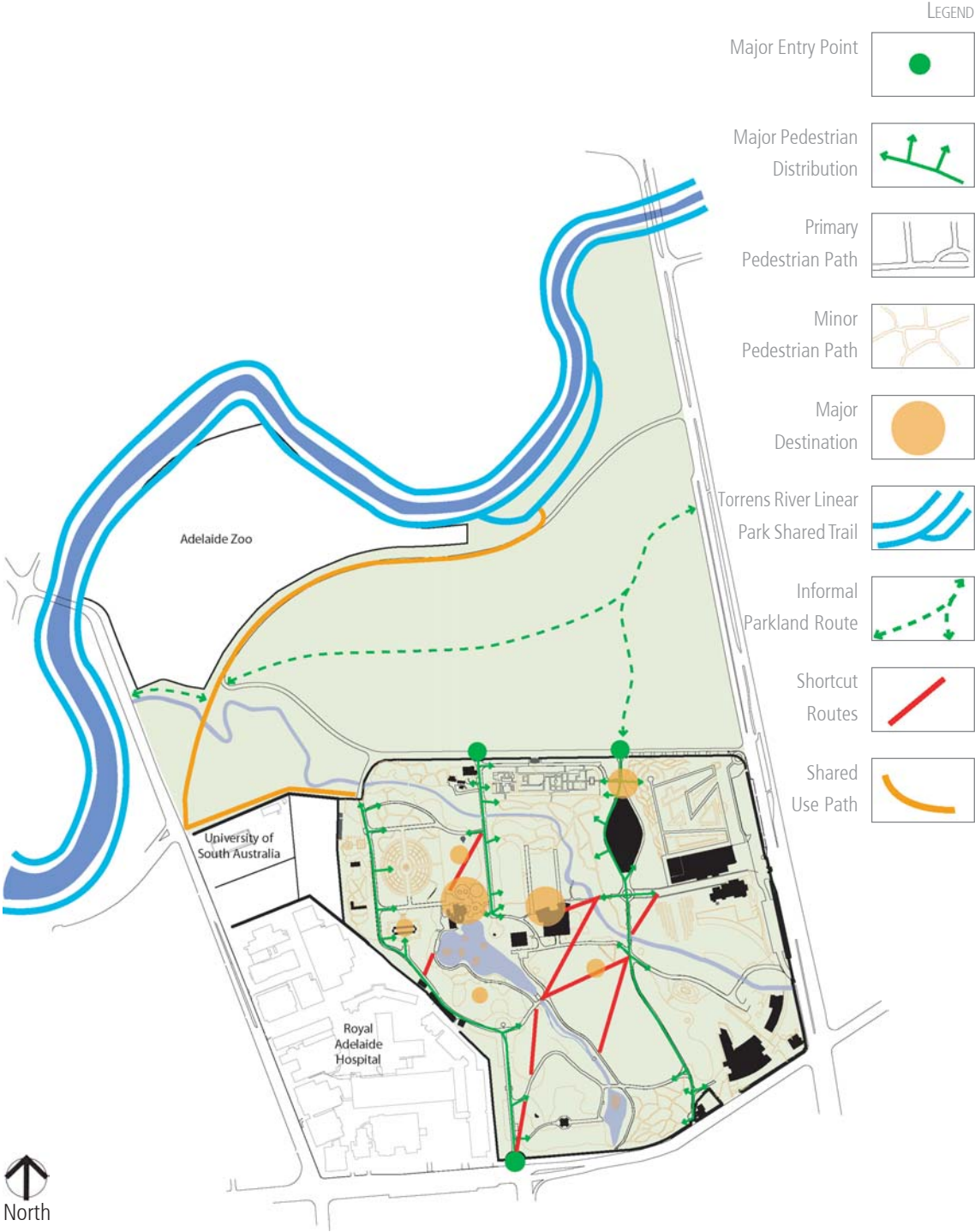
Botanic Park
Shared Use Path



Torrens River
Linear Trail



Adelaide Botanic Garden & Botanic Park



Movement - Vehicles

The Garden has a simple and unobtrusive internal road system that provides good access to key locations within the Garden for staff vehicles, services vehicles and emergency service agencies. Development of the Gardens’ Business Continuity and Emergency Response Plan ensures coordinated communication and access arrangements with emergency services.

There is an adequate supply of car parking in the immediate vicinity of the Garden and Botanic Park. Improvement to vehicle drop-off and direct pedestrian access to entries for special users such as physically disabled visitors, school groups and wedding parties are required, and excess vehicle speed is an issue in Plane Tree Drive.

Supplier and contractor deliveries are currently discouraged between the hours of 10am to 4pm. Vehicle movements during major events in the Garden and Park need to be tightly controlled to avoid disruption to visitors. National Wine Centre visitors currently have unrestricted access to the Garden at night creating security and liability risks.

Plane Tree Drive



Plane Tree Drive
parking



Hackney Road
parking



Service vehicle
access



Trade vehicle
entrance



Plane Tree Drive
parking at Zoo












Adelaide Botanic Garden & Botanic Park

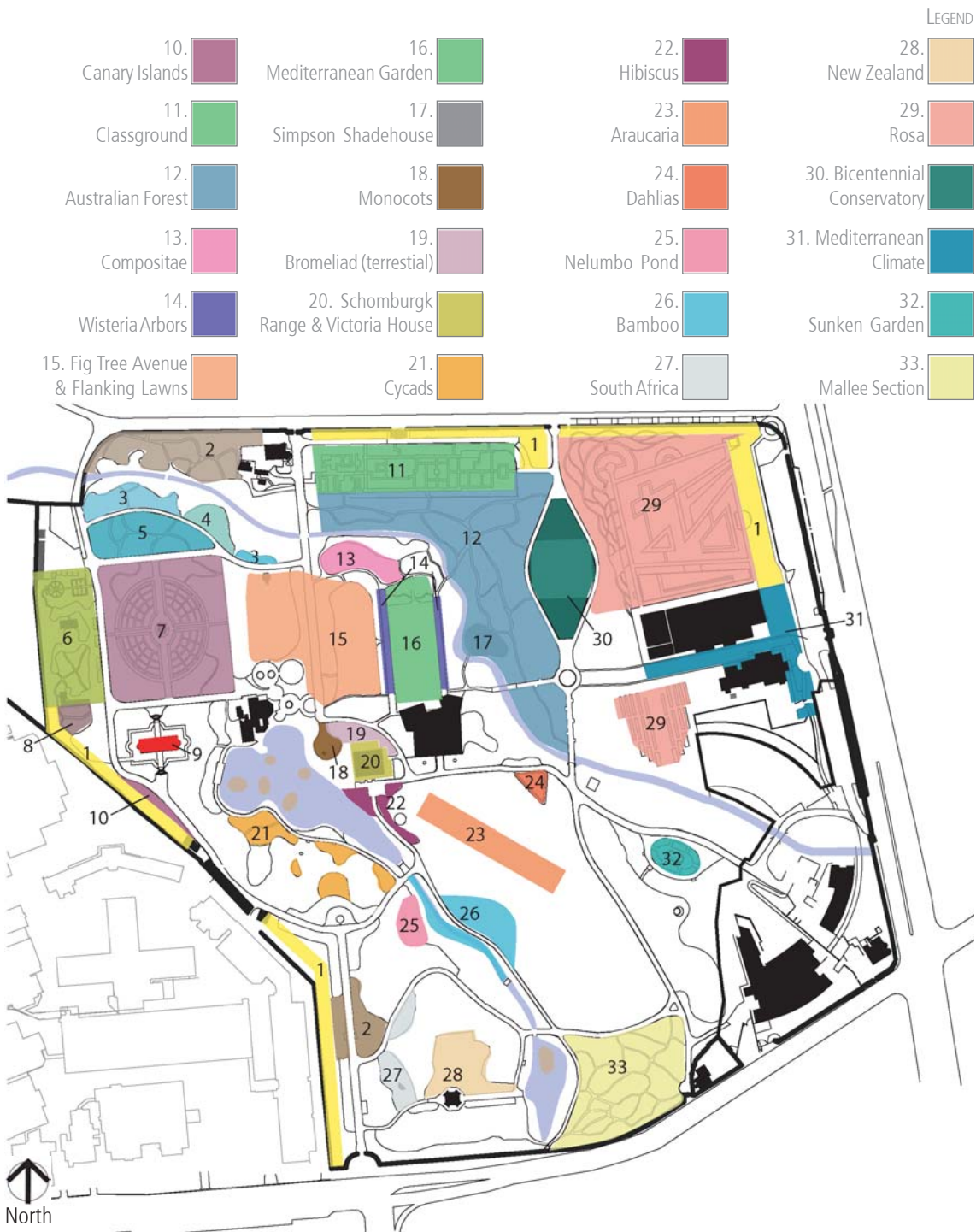


Collections

The majority of the Garden’s collections are taxonomic collections, such as roses, palms, cycads and cacti. The Garden also contains a number of important historic and cultural collections located in significant landmark spaces. These include the Classground, the Economic Garden, the Fig Tree Avenue and the Wisteria arbours.

- 1.  Screening Plants
- 2.  Palms
- 3.  Solanaceae
- 4.  Acanthaceae
- 5.  Ground Covers
- 6.  Western Garden
- 7.  Economic Garden
- 8.  Cacti & Succulent Garden
- 9.  Madagascar

Adelaide Botanic Garden & Botanic Park



4.2 Mount Lofty Botanic Garden



Location and Surrounding Land Use

Mount Lofty Botanic Garden is located at the top of the catchment of Cox Creek, a tributary of the Onkaparinga River, within a tiny geo-climatic zone within South Australia with relatively high rainfall and low temperatures.

The Garden is situated close to Mount Lofty Summit, Cleland Wildlife Park, Mount Lofty House and to conservation reserves including Cleland and Eurilla Conservation Parks.

The Garden is easily accessible by car and can be accessed by bus.

Bush Edge



East Boundary



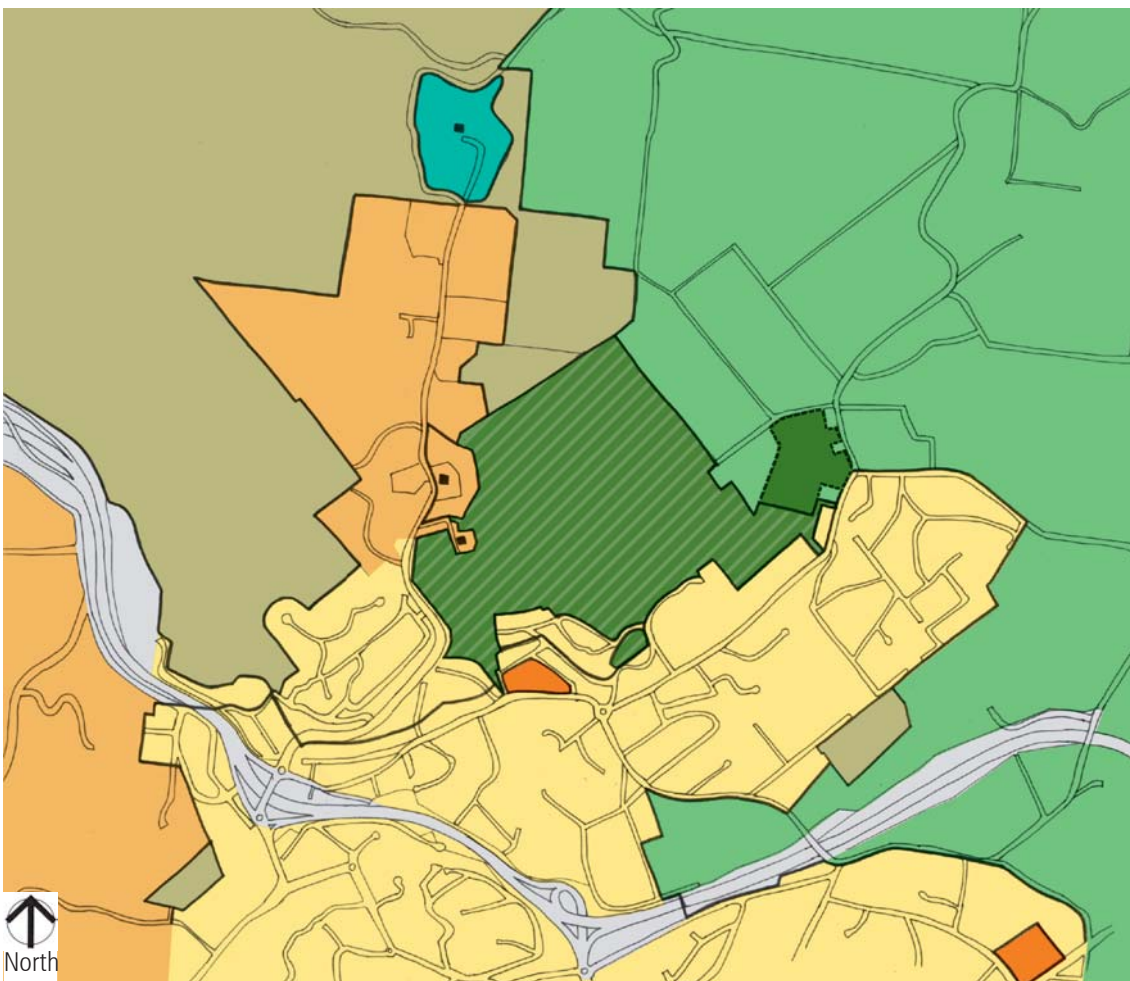
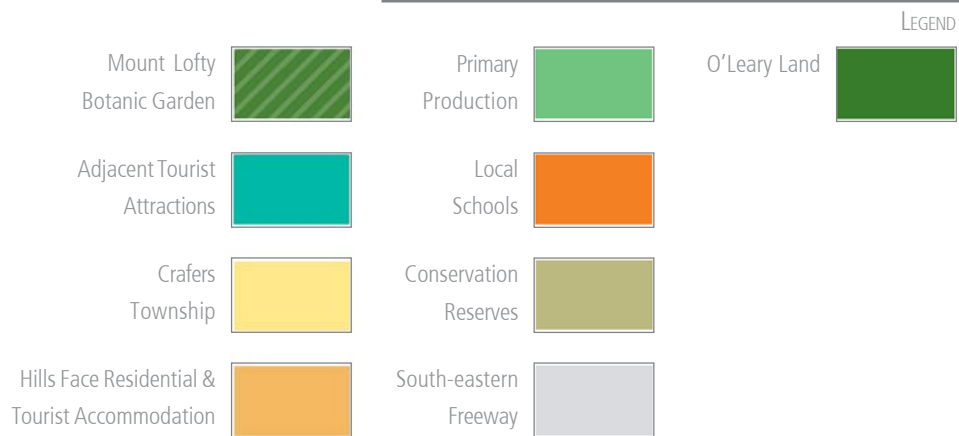
Mount Lofty House



Farmland Edge



Mount Lofty Botanic Garden



Planning Controls

Mount Lofty Botanic Garden enjoys Public Purpose Zoning in the Adelaide Hills Development Plan. Within this Zoning, areas are identified with specific policies; the Garden falling within a Conservation Policy area. The Adelaide Hills Council has completed a review of its Development Plan pursuant to Section 30 of the Development Act and is proceeding to prepare amendments to policies. Currently, a Townships and Urban Areas Plan Amendment Report and a Heritage Plan Amendment Report are being prepared. However, no changes to the Conservation Policy Area or the Public Purpose Zone are proposed.

There are four objectives for the Public Purpose Zone. The Zone is intended to accommodate public or private development which is of a social benefit to the community and sensitive to the natural environment (Objective 1). Development is to be of a high architectural standard, designed and landscaped to enhance the locality's amenity (Objective 3) and to be of a scale compatible with existing buildings and surrounding areas (Objective 2). Objective 4 is for the provision of cycle, walking and horse riding paths within an integrated system of open spaces linking adjoining areas.

Development controls for the Adelaide Hills Public Purpose Zone include:

LAND USE:

Education facilities, community centres, recreation reserves, conservation park tourist facilities, research facilities and facilities for the aged may be appropriate in certain parts of the zone. Any development must meet environmental standards associated with catchment management and the maintenance of water quality within the Adelaide Hills area. Stormwater provisions encourage detention areas and on-site re-use.

BUILDING SETBACK

Setbacks are specified in the Council Wide Principles of Development Control (PDC) 24 and 25 requiring development to be a minimum of 2 metres from side and rear boundaries and 8 metres from front boundaries. Further guidance is also provided in PDC 3 (d) of the zone which states that development should be set well back from public roads, particularly when the allotment is on the high side of the road. Further, PDC 14 states that the distance by which development is set back from a road should be related to the effectiveness of the screening of views of the building from the road by existing vegetation, natural landforms or other natural features.

TRANSPORTATION

The movement and arrangement of car parking should be provided in a safe manner, with minimal hard paved surfaces, with unobtrusively located car parks designed to minimise drainage channels or watercourses.

Within a conservation Policy area, more specific objectives are nominated, and include the following:

OBJECTIVE 1

The preservation and enhancement of the character, aesthetic appearance, scenic beauty and amenity in order to:

- (a) provide recreation areas, particularly passive recreation areas
- (b) provide a buffer area
- (c) provide for native flora and fauna habitats

(d) protect areas of scientific, archaeological or cultural significance; and

(e) provide suitable areas to facilitate the expansion of ancillary uses.

OBJECTIVE 2

Conservation and regeneration of native vegetation and fauna is enhanced through the control of development.

OBJECTIVE 3

The visual amenity of the natural landscape character is not eroded by development.

OBJECTIVE 4

A Policy Area accommodating primarily district and regional open space for a range of public activities including passive recreational land uses in an open and natural landscape setting where structures are not a dominant feature of the landscape.

OBJECTIVE 5

The development in appropriate locations of recreation, tourist, education and research activities which do not detrimentally affect fauna, flora or other features of the natural environment.

Consequently, any actions identified by the Master Plan are cognisant of the above aspirations provided by the Development Plan, which seeks to reinforce the public and natural amenity of land within the Public Purpose Zone, and the conservation objectives for the policy area in which the park is situated.

Mount Lofty Botanic Garden

Topographic Structure

The Garden sits predominately within a spur of the Mount Lofty Ranges main ridge which forms an amphitheatre-like space opening to the north-east.

A series of gullies run east-west and north-south off the spur, into the amphitheatre space.

The amphitheatre landform and the gullies which descend into the Garden are the major determinants of the spatial experience and landscape character of the Garden.

Valley



Lower valley



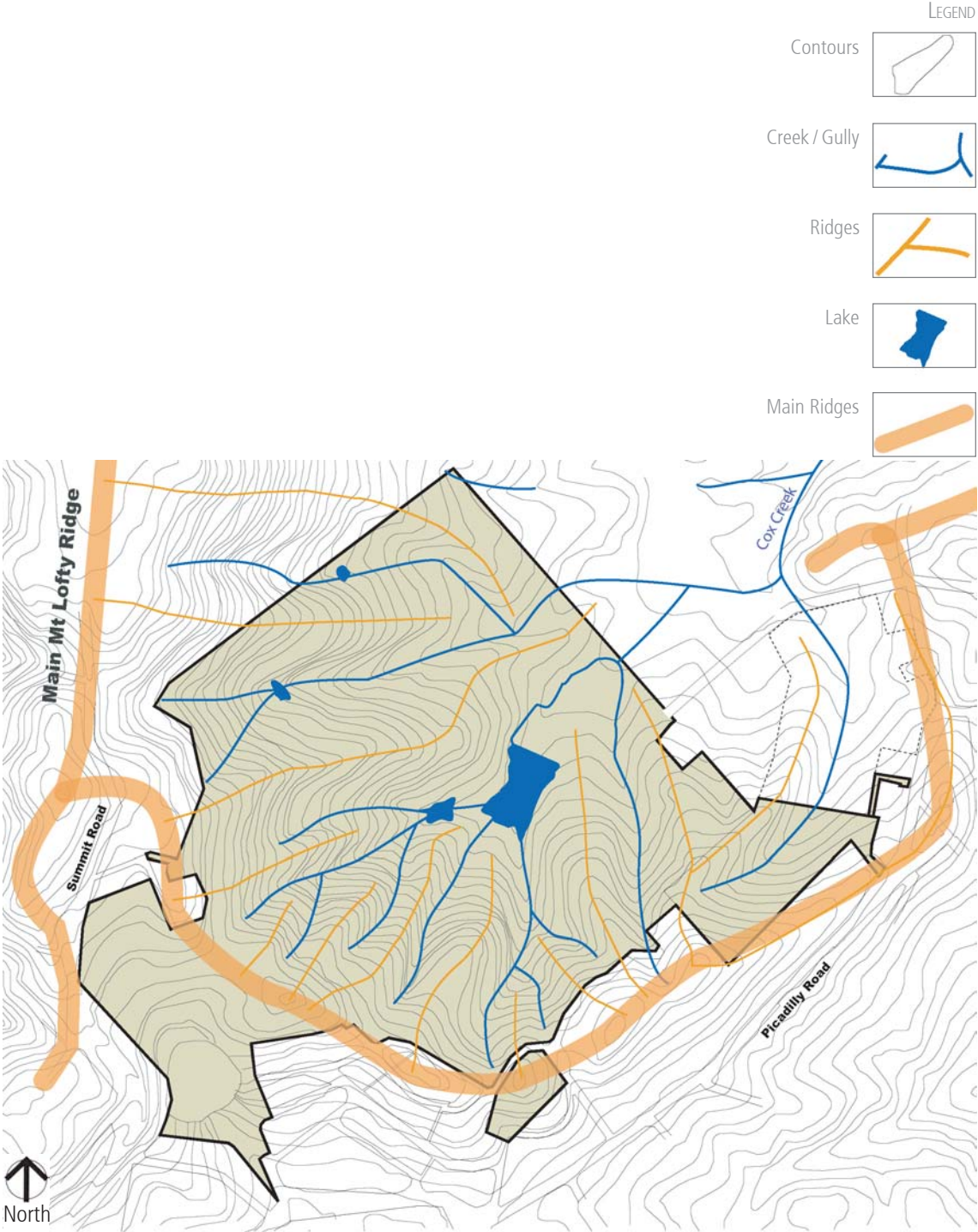
Ridge and Gully



Enclosed Gully



Mount Lofty Botanic Garden



Waterways

The waterways at Mount Lofty Botanic Gardens are in good health and exhibit no apparent water quality issues.

With relatively minor works, improvements can be made to control stream bed and bank erosion, protect water quality in the main lake and treat run-off from car parking areas to reduce pollutants.

The streams and channels passing through the lower garden arboretum lawns are prone to flooding during winter causing the lawns to become water logged.

1.

Main Lake



2.

Duck Pond



3.

Lower Garden
Drainageway



4.

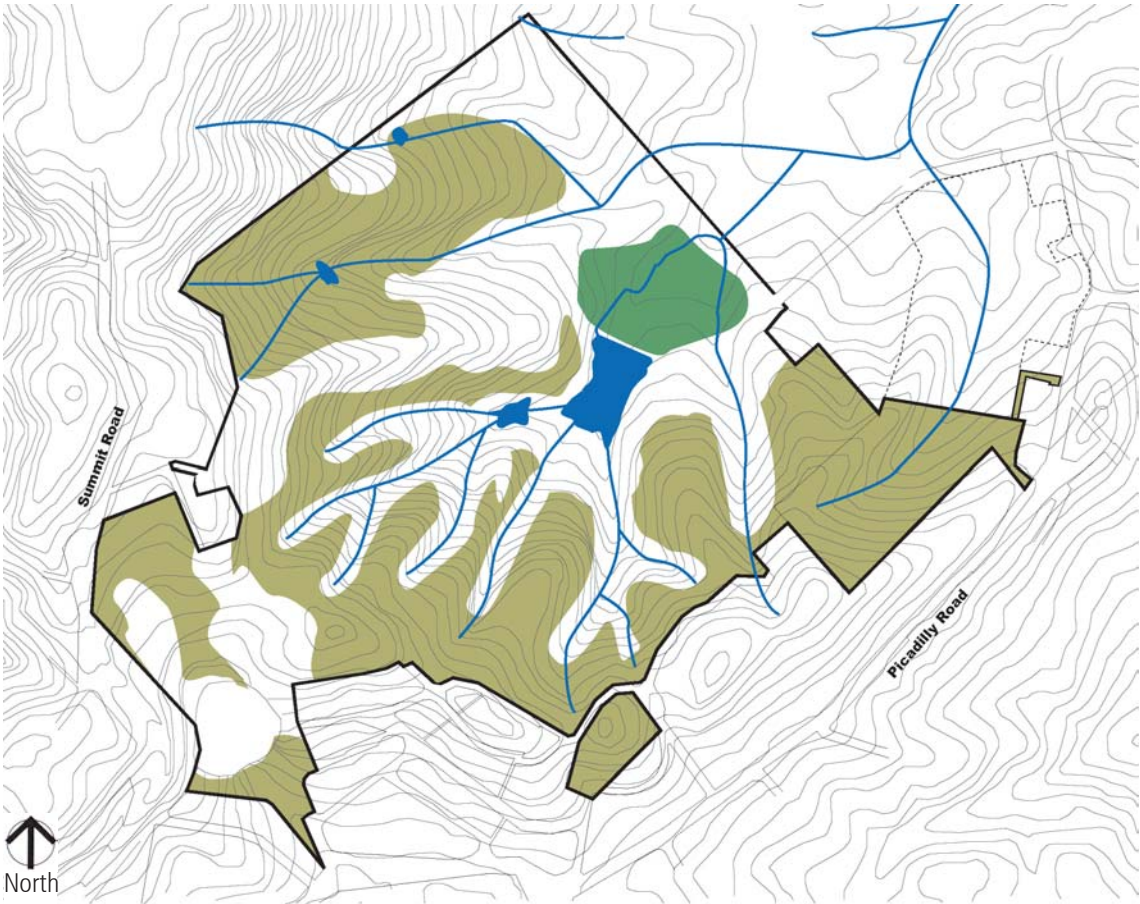
Bog Garden



Mount Lofty Botanic Garden

LEGEND

- Native Forest
- Lakes and Dams
- Creeks and Drainageways
- Low Lying Seasonally Wet



Landscape Structure

A sequence of indigenous forest and exotic garden elements dominate the vegetation pattern of the Garden.

Generally garden collections are in valleys with remnant forest on the ridges.

An arboretum is situated on the north slopes and the lower section of the garden.

Remnant indigenous forest was valued by Allan Correy and incorporated into his plan.

Woodland



South American
Gully



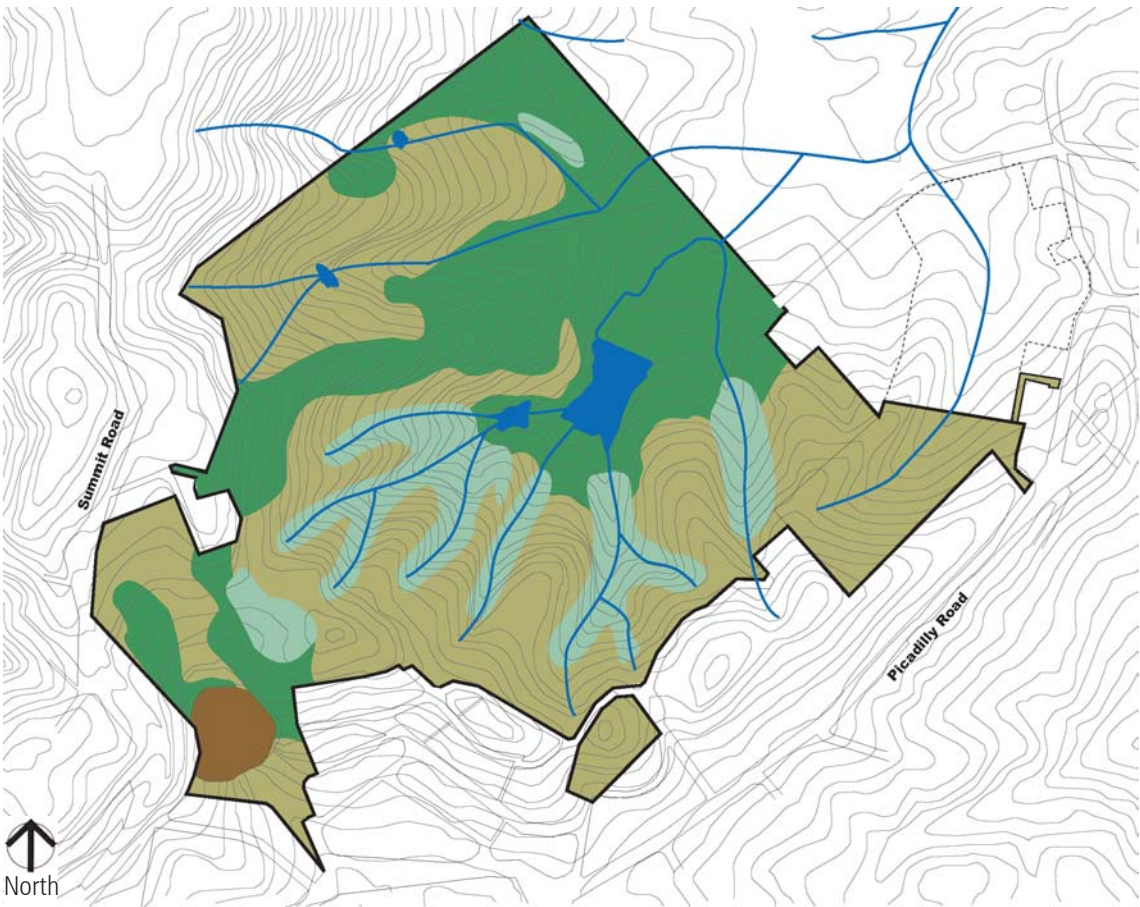
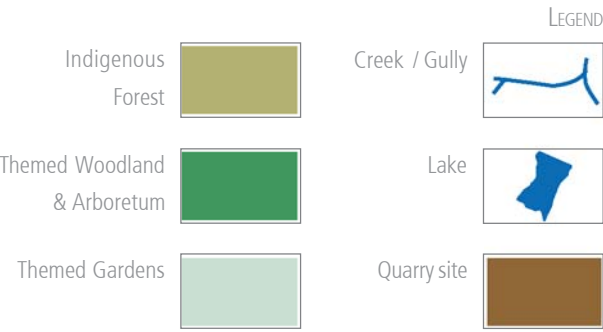
Stringybark Forest



East Africa Gully



Mount Lofty Botanic Garden



Heritage

The Mount Lofty Botanic Garden Conservation Study has identified four components of the Garden as having high cultural significance and three components as having low cultural significance.

These components are:

High Significance

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

Low Significance

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

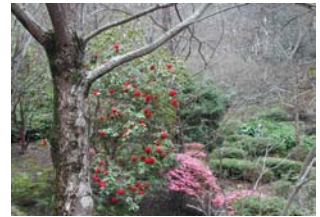
Magnolia



Ferns



Rhododendron

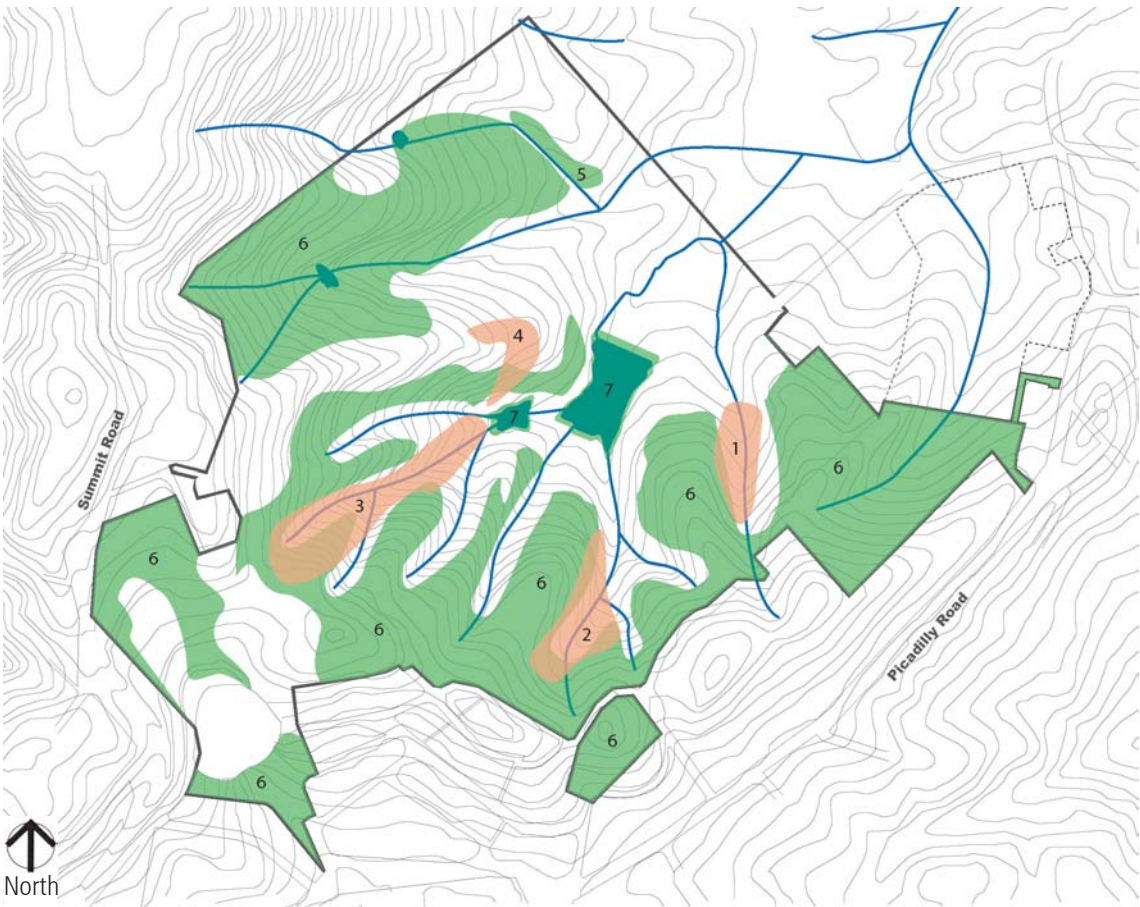
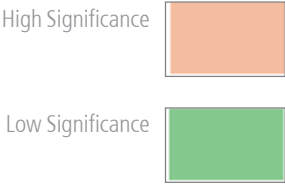


Acer



Mount Lofty Botanic Garden

LEGEND



Movement Pedestrians and Cyclists

Two path systems currently exist: contour paths also used by maintenance vehicles, and steep valley paths within garden collections. Each offers a distinctly different experience of the Garden. People tend to walk within small areas near the upper and lower car parks.

Due to the steep slopes disabled access is severely restricted. Access to certain visitor facilities and garden infrastructure is largely inappropriate for people with physical disabilities. Provision of a dedicated all-access trail, and improvements to access to carparking areas, toilets and garden furniture would greatly assist access for physically disabled visitors.

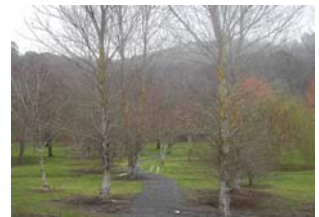
Contour Path



Gully Path




Lower Arboretum
Path

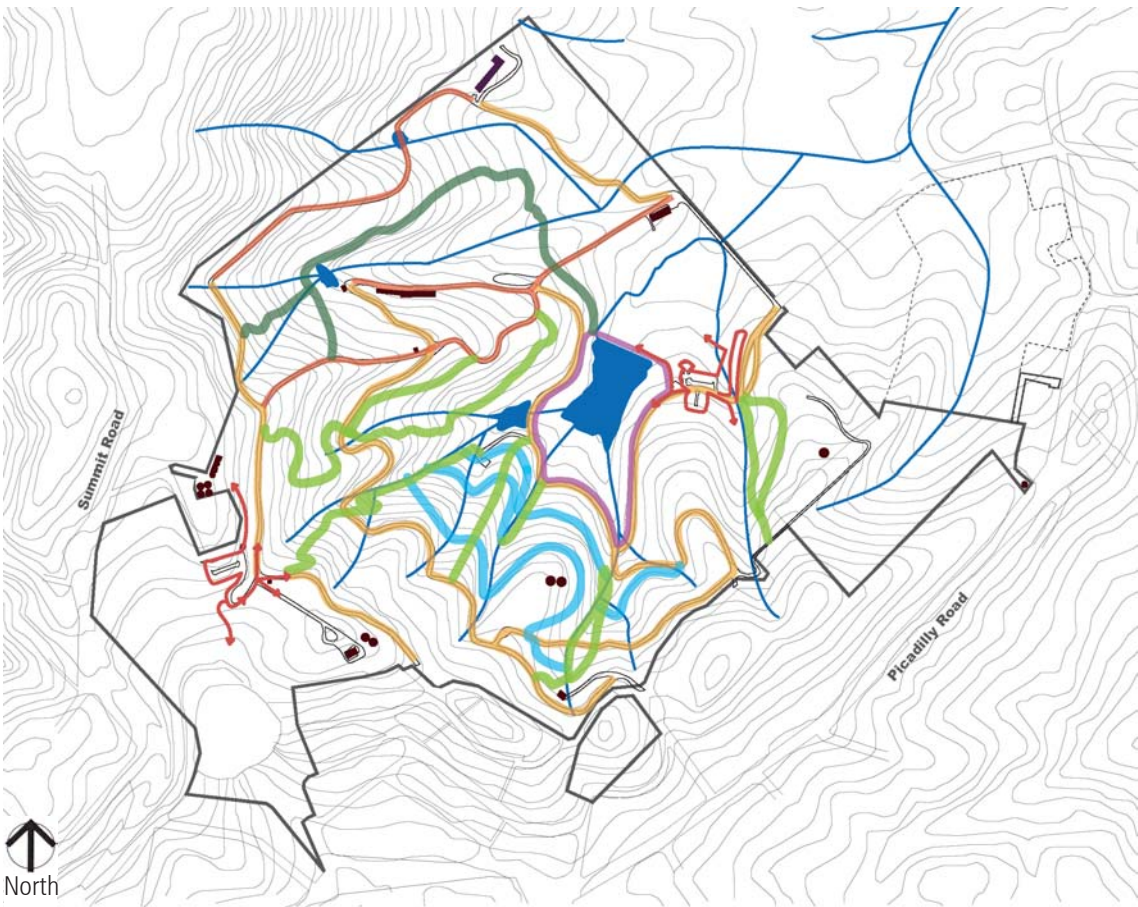


Shared Trails



Mount Lofty Botanic Garden

LEGEND			
Steep Ridge & Gully Walks		Nature Trail	
Shared Vehicle / Pedestrian Contour Paths		Lake Perimeter Walk	
Shared Vehicle / Pedestrian Links along Ridges		Routes from Carparks	
		Contour Path Walks	



Movement Vehicles

The Garden has a road system servicing the upper, lower and middle sections of the site, providing wide ranging access for staff vehicles and emergency services.

Some narrow sections of roads require pedestrians to leave the bitumen as vehicles pass, while sharp corners and vegetation impede sight lines in some locations.

Two public carpark areas are located at the upper and lower entrances to the Garden. Volumes of traffic strain the road and carpark system on peak visitation days such as Mothers Day.

The proposed use of the staff carpark during major events will require a two-way road and appropriate signage at the lower entrance.

Lower carpark



Upper carpark



Narrow Garden road











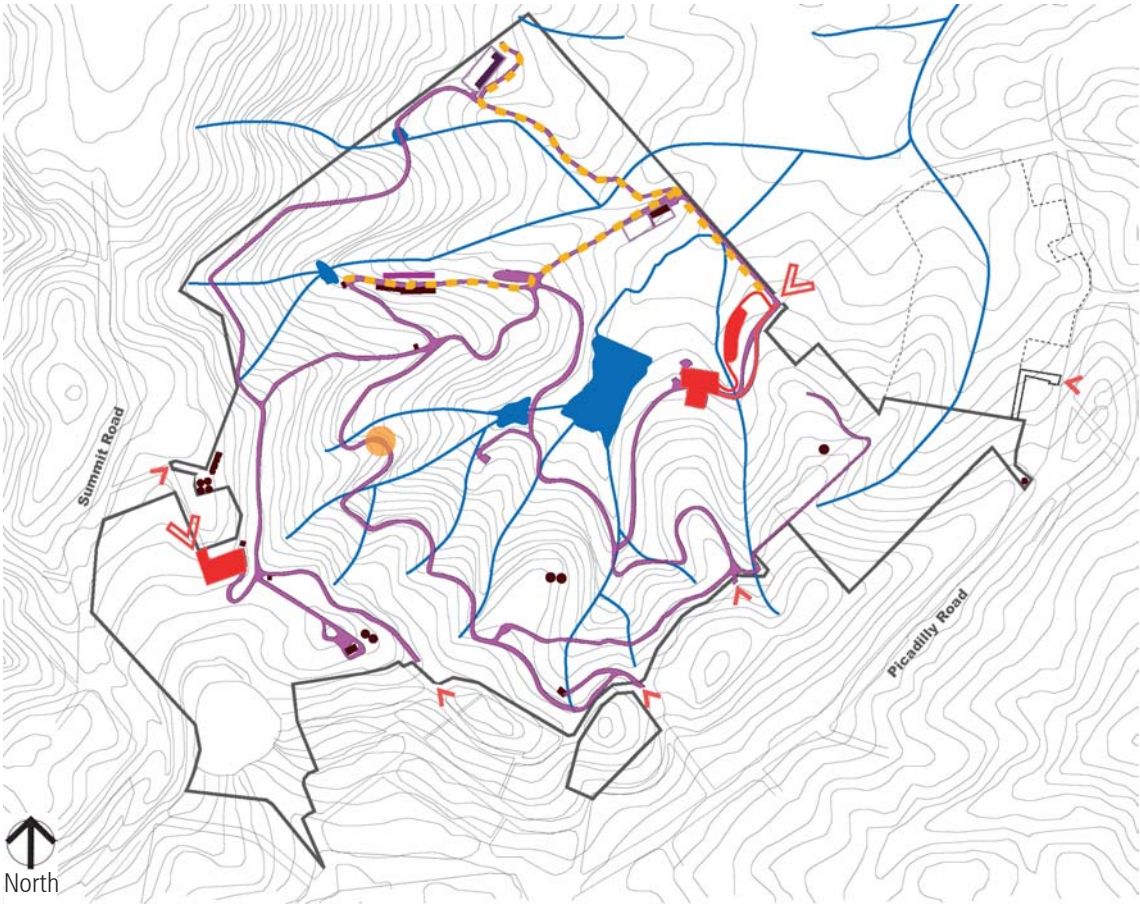
Staff carpark



Mount Lofty Botanic Garden

LEGEND

Maintenance vehicle & Major Pedestrian paths		Major Entry Points	
Tanks		Public Car Parks	
Buildings		Staff and Service access	
Sharp corners & vegetation impede sight lines		Pedestrian Path Entries	



North

Collections

Each of the seven natural gullies across the Garden contains a separate and distinct plant collection, albeit with relatively diffused borders.

Each collection, based in part on the original Allan Correy Masterplan, displays flora defined by geographical or taxonomic categories.

Other areas of the Gardens, particularly the lower sections, such as the Arboretum, the Woodland Garden and the Bog Garden have been planted with a more gardenesque character based on European and American landscape design rather than scientific, taxonomic categorisation.

Syringa



Species Rosa



Dwarf conifers



Ferns



Mount Lofty Botanic Garden

