Mount Annan Botanic Garden
Site Master Plan

prepared by

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in association with
Environmetrics

for the
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Site Management Plan
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The Site Master Plan for Mount Annan Botanic Garden is issued in three volumes. This volume, Volume One, contains the Site Management Plan, Volume Two contains the Site Development Plan and Volume Three contains the Appendices to the Site Master Plan.

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Heritage Report  
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Natural Systems Management Report  
prepared by Ian Perkins Consultancy Services

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Executive Summary

Mount Annan Botanic Garden in Sydney’s south-west was opened as a Bicentennial project in 1988 as the native plant Garden of the Royal Botanic Gardens Sydney. Since its opening, Mount Annan Botanic Garden has developed a prominent position in the public domain as a regional botanic garden in a park-like setting in south-western Sydney. The Garden is now well-established as an integral part of the Royal Botanic Gardens Sydney, displaying an extensive living collection of Australian plants in the largest Botanic Garden in Australia.

After over a decade of operation it is an appropriate time to review the range of activities and management practices of the Garden. Traditionally focussed on a scientific approach, there has been a notable realignment of the strategic direction of the Royal Botanic Gardens. The importance of botanic gardens as tranquil places of reflection and leisure, as repositories of valuable plants and specimens and as centres for research, will always remain. However, these functions need to be reinterpreted in the light of changing times and new responsibilities, such as the growing emphasis on the need to conserve biodiversity, and preserving endangered plants and their related habitats. These changes signal important new roles for the Gardens, and are central to the realignment of the strategic direction of the organisation.

In December 1999, the Royal Botanic Gardens commissioned Spackman and Mossop in association with Environmetrics to prepare a Site Master Plan for Mount Annan Botanic Garden, enabling a strategic review of the Garden’s direction and range of functions.

The Site Master Plan is a strategic document, incorporating a Site Management Plan and a Site Development Plan, which provide a framework for the site’s renewal and redevelopment, whilst protecting the inherent values of the Garden. As such, this document enables Mount Annan Botanic Garden to redefine its role as a contemporary garden, and seek to balance the objectives of a scientific organisation with the needs of the local and broader community.
The Site Management Plan identifies a number of values for the Garden which are important to protect and enhance as part of a long-term plan for the site. These values include scientific, environmental, educational, cultural heritage, social, recreational, aesthetic and commercial potential. Key issues and opportunities and constraints for the Garden have also been identified, and their impact on current and future uses of the site explored.

A vision statement for the Garden has been developed, which identifies activities and characteristics which will make Mount Annan Botanic Garden distinctive and unique at local, national and international levels.

A series of strategic objectives, programs and associated actions have been developed, as well as a Strategic Performance Evaluation Plan with indicators for key strategic outcomes and overall management, providing a basis for future development and management of the Garden.

The Site Development Plan presents a series of site planning principles, masterplanning concepts and a physical site plan, providing an illustrative image of the recommendations prepared for the Garden. The Site Development Plan provides a basis for implementing the Site Management Plan by defining the areas and/or elements of the Garden to be protected and enhanced, proposed land uses and activities and associated facilities.

The Site Master Plan for Mount Annan Botanic Garden provides a visionary direction for the strategic future of the Garden and a blueprint for the full range of activities the Garden can fulfil.
About this study
The Royal Botanic Gardens context

The Royal Botanic Gardens Sydney have a long and rich history, associated with scientific research, development, horticultural displays and highly valued open space. In 1988, the Royal Botanic Gardens officially opened two Bicentennial projects in outer Sydney: Mount Annan Botanic Garden in Sydney’s south-west as the native plant Garden, and Mount Tomah in the Blue Mountains as the cool climate Garden, to complement the Sydney Botanic Garden’s sub-tropical living collections and central city location.

At the beginning of the new millennium, The Royal Botanic Gardens is commissioning Site Master Plans for its three sites, being the Sydney Gardens and The Domain, Mount Tomah Botanic Gardens and Mount Annan Botanic Garden. These Site Master Plans will enable a strategic review of the direction and range of functions in each of the Gardens, as well as a review of the institution as a whole.

This report presents the Site Master Plan for Mount Annan Botanic Garden.

Since its opening, Mount Annan Botanic Garden has developed a prominent position in the public domain as a regional botanic garden in a park-like setting in south-western Sydney. The Garden is now well-established as the native plant garden of the Royal Botanic Gardens Sydney, and is the largest Botanic Garden in Australia. After over a decade of operation it is an appropriate time to review the range of activities and management practices of the Garden.

The broad aims of the Site Master Plan for Mount Annan Botanic Garden are to take account of the significant changes occurring in the community at large, both locally and regionally, and to ensure appropriate links with the strategic direction of the Royal Botanic Gardens. This strategic direction is guided by the Royal Botanic Gardens and Domain Act and Corporate Plan, which provides a strategic framework for decision making.

Figure 1
Location of the 3 Royal Botanic Gardens sites
Study processes and products

The role of this document

The Site Master Plan is a strategic document, incorporating a Site Management Plan and a Site Development Plan, which will provide the framework for the site's renewal and redevelopment, whilst protecting the inherent values of the Garden. As such, the document will enable Mount Annan Botanic Garden to redefine its role as a contemporary garden, and seek to balance the objectives of a scientific organisation with the needs of the local and broader community.

The Site Master Plan for Mount Annan Botanic Garden will not only be a physical plan of the site, but a blueprint providing a visionary direction for the full range of activities which the Garden can fulfil.

The Site Master Plan will develop:
- a set of recommendations and strategic actions to guide Garden policies, future Garden development and Garden management operations,
- a physical site plan, providing an illustrative image of the recommendations prepared for the Garden, and
- a strategic framework for the renewal and redevelopment needed to adapt the Garden for future and contemporary use.

As shown in figure 2, the Site Master Plan incorporates a Site Management Plan Report and a Site Development Plan.

The Site Management Plan Report is a document with a number of functions. Firstly, it is a strategic document which considers all issues affecting the Garden over several decades. Secondly, it contains a thorough analysis and assessment of all values, issues, opportunities and constraints pertaining to the Garden. Thirdly, it provides a Strategic Performance Evaluation Plan, with actions for key strategic areas and overall management, providing a basis for annual reporting and measures of accountability for the Garden.

The Site Development Plan will provide an illustrative image of the recommendations prepared for the Garden based on the values and issues assessment. The Site Development Plan will provide a basis for implementing the Site Management Plan by defining the areas and/or elements of the Garden to be protected and
enhanced, proposed land uses and activities and associated facilities.

Reviews of each of the documents illustrated in figure 2 will be undertaken by the Royal Botanic Gardens Project Control Group, The Project Reference Group and the Royal Botanic Gardens and Domain Trust.

**Project consultations**

The development of the Site Master Plan presents significant challenges, especially in defining the relationship between the Garden and the community. The consultation process aims to establish greater community awareness and appreciation of the Mount Annan Botanic Garden, and ensure that the broader community realises ownership of management and development strategies for the Garden.

To date, consultation has been undertaken with the public (through focus groups, on-site surveys and public meetings), a range of key stakeholders, Garden neighbours, local Aboriginal groups and interested groups and individuals. This consultation process will ensure that the Mount Annan Botanic Garden Site Master Plan is responsive to the needs and aspirations of the local and regional community both now, and well into the future.

Consultation with Garden staff has also been an important part of this process, and included on-site meetings and presentations with staff from both Mount Annan Botanic Garden and the Royal Botanic Gardens Sydney, as well as Staff newsletters which were issued through the duration of the project. A thorough understanding of operations and Garden staff issues ensures that management and development strategies proposed in the Site Master Plan will be embraced by staff, and achievable ‘on the ground’.

In addition, an Industry Peer Seminar was held in March 2000, enabling a strategic review of the direction of the Site Master Plan. This seminar involved a number of public open space and asset managers, garden designers and botanic gardens stakeholders, physical and cultural planners as well as representatives from the Royal Botanic Gardens and the consultant project study team.
The Garden and its functions
Locality

Covering an area of 416 hectares, Mount Annan Botanic Garden is located in south-western Sydney, adjacent to the Hume Highway and north-east of the Nepean River. The Garden is located on the southern edge of Sydney, adjacent to the Hume Highway, approximately 60 kilometres from the Sydney CBD, at the southern edge of the Cumberland Plain.
The Garden is bounded to the north by Narellan Road, to the east by the Hume Highway, to the south by the Main Southern Rail Line and to the west by future residential development in South Mount Annan.

The Scenic Protection Area of the Campbelltown Central Hills lies north of the Garden, beyond Narellan Road. The Central Hills were identified in 1968 as an important area of sparsely developed land which contributes to the general visual setting of an urban area, and only limited development is permitted within these lands. Along with the Garden, the ridgeline forms a buffer along the western edge of the City of Campbelltown, and represents the Local Government boundary between the Councils of Campbelltown and Camden. Tim’s Garden Centre, a large and successful retail nursery, is located just across Mount Annan Drive opposite the Garden.

To the east, the Hume Highway, the main route between Sydney and Canberra, lies along the Garden’s boundary for approximately 2.3 kilometres. Beyond the highway is the University of Western Sydney, Macarthur Campus, the Campbelltown College of the South Western Sydney Institute of TAFE, and the City of Campbelltown.

The boundary to the south-west is a spur line from the the Main Southern Railway, and further south is the historic estate of ‘Glenlee’, of which the site of Mount Annan Botanic Garden was once part.

The Glenlee Coal Washery and the Jacks Gully Waste Management and Recycling Centre are adjacent to the Garden in the south-west. The Waste Management Centre will remain operational for at least the next 20 years.

To the west, residential development in South Mount Annan will meet the edge of the Garden and significantly increase the Garden’s local catchment. It will also complete the change of land use and character of the lands adjoining the Garden’s western boundary, from rural to residential. William Howe Regional Park, a 43 hectare site recently gazetted by the National Parks and Wildlife Service, is sited on the western edge of the residential development of South Mount Annan.

The Nepean River and the Macarthur property ‘Camden Park’ are
also to the south-west. Proposals for an odour buffer for Jack’s Gully Waste Management and Recycling Centre, and the Spring Farm Bush Corridor have the potential to re-establish a vegetative connection between the River, William Howe Regional Park and the Garden.

The Garden’s eastern ridgeline marks the boundary of two water catchment areas, and also demarcates the boundary between the Camden and Campbelltown local government areas. East of the ridgeline, the catchment drains to the Georges River, and west to the Nepean River.

Site history

Geology and Geography

The Mount Annan district forms part of the alluvial floodplain that begins where the Nepean River emerges from the gorge (at the second F5 Freeway crossing). Hawkesbury sandstone is one of the defining features of the Sydney metropolitan area and the Mount Annan district is further defined by ancient shale deposits, which have resulted in a unique vegetation community. Both the sandstone and shale geologies are believed to be the result of ancient rivers which fed the vast inland floodplain that would eventually become Sydney Harbour. Approximately 230 million years ago, when these geological deposits were being formed, the Cumberland Plain was a world of leafy swamps inhabited by the world’s first dinosaurs, mammals, ginkgoes and pine trees (the mid-Triassic period). Sydney lay as far inland as Broken Hill is today and was surrounded by the eastern highlands of New Zealand and New Caledonia. Still part of the massive southern super-continent of Gondwana, the entire land mass lay considerably to the south of its present position and was still firmly attached to Antarctica; indeed it was the ancient Antarctic rivers which deposited the minute grains of sand which formed Sydney’s base.

A river the size of the Ganges, flowed north along the east coast of Australia with its headwaters in the Antarctic. By the time it reached the present day location of Sydney, its velocity had slowed until it was too feeble to transport anything larger than a grain of sand. These grains of sand were buried deep in the earth’s crust and compressed and heated to form the sandstone we know today. Around 150 million years ago, (the late Jurassic period) the
Antarctic river stopped flowing and the district was watered by streams with their headwaters in what are now New Zealand and New Caledonia. As these rivers flowed past Sydney on their journey to the inland sea at the heart of the continent, they cut into the sandstone forming channels (some of which are still occupied by watercourses today).

These westward flowing rivers were also interrupted when New Zealand and New Caledonia finally separated from the great landmass of Gondwana during a series of rifts which occurred throughout the Jurassic period. These rifts caused a series of bulges or steps that can still be seen along the coast and along the Lapstone Escarpment, where the Blue Mountains emerge from the Cumberland Plain. The result of these processes was the flow reversal of the Hawkesbury-Nepean River system (which had previously flowed from south to west across the flood plain before joining the Macquarie River). Gradual settling of the coastal block resulted in the submerging of the plain with the old Dividing Range throwing into comparative elevation the adjoining block, which became the present Great Divide.

Those portions of the river which remained on the coastal block retained their meandering form on the floodplain whilst the remaining portions, located on the inland block, responded to these geological changes by cutting down through the residual shales of the former floodplain into the harder material of the Hawkesbury sandstone, creating the gorge landscapes which we see today.

The evolving landscape

The history of the Mount Annan area is a story of an evolving landscape, one which has been subject to many dramatic events affecting its geography, climate, and the flora and fauna which inhibit it. Over the last 150 million years the area has evolved from a dark and humid region clothed in fern and conifer forests to a brightly lit, warm region of banksias and eucalypts; the sharp scent of gum leaves has been part of the Australian landscape for at least 50 million years. In evolutionary terms, human occupation of this area is but a tiny segment of the site’s history, but the speed at
which change has occurred since occupation is unrivalled.

First human occupation is believed to have occurred around 40,000 years ago and the use of fire-stick farming by the Dharawal (and their ancestors) contributed to the spread of grasslands and open woodlands which greeted European explorers 200 years ago.

**Aboriginal occupation**

Preparation of the Local Aboriginal History

The analysis and assessment phases of the Mount Annan Botanic Garden Site Master Plan identified a considerable amount of information relating to the local Aboriginal history of the area. To further clarify the local Aboriginal history as part of the Site Master Plan, meetings with local Aboriginal groups were undertaken to gain a further understanding of the local Aboriginal history of the area, as well as an understanding of contemporary Aboriginal issues. These findings were then presented in the Mount Annan Botanic Garden Local Aboriginal History summary report, which documents the local Aboriginal history of the area, based on information drawn from the consultations with local Aboriginal groups, together with the historical research undertaken by Architectural History Services for the Mount Annan Botanic Garden Site Master Plan.

**Local Aboriginal history**

This region has a long history of Aboriginal occupation. The groups were drawn to this region as a result of the proximity of the Nepean River and its plentiful supply of food and water.

A number of clans or tribes lived throughout Western Sydney, although they all belonged to the overall group of people known as the Dharug, a name used by Aboriginal people for those living along the Hawkesbury River in the north, west into the mountains, south to the Cox’s River, and east onto the Cumberland Plains. They were bounded to the west by the Wiradjuri, to the mountainous south-west by the Gundungarra, to the south-east by the D’harawal and to the east and north-east by the Caddi and Kurangaii. Although the majority of subclans throughout the Cumberland Plain were of the Dharug and spoke the Dharug language, the Dharawal, who inhabited the Mount Annan region, spoke a distinct language (Dharawal or Thurrawal), of which two distinct dialects have been recorded.
The D’harawal people

The D’harawal peoples were basically divided into two separate groups: the Sweet (or Fresh) Water Peoples and the Salt Water Peoples. The Salt Water D’harawals occupied the lands from the Kurnell Peninsula and Botany Bay, south to Shoalhaven; and from the coast to the Illawarra escarpment. The Sweet Water D’harawals occupied those lands where ‘the rivers run the wrong way’ and include the Nepean, Wollondilly, Georges, Cataract and Nattai catchments.

The Dharawal enjoyed a diverse diet and had an intimate knowledge of edible plants and when and where they could be found. Some of these plants were potentially poisonous, but the Dharawal knew how to treat them in order to make them edible. The most important of these was the "Burrawang (Macrozamia), a palm like plant producing clusters of seeds with a tough leathery red covering. Macrozamia seeds are highly toxic and to render them edible, the Dharawal would pound them, place them in running water for up to two weeks to wash away the toxin and then pound them again. The resulting flour was baked into flat cakes that were safe to eat and formed a staple of their diet. Banksias, grevillea and melaleuca all provided nectar that was either sucked directly from the flower or soaked in water to make a sweet drink called "bool." Their main source of protein appears to have been small marsupials, such as wallabies and possums, and occasionally fresh water mullet from the rivers and creeks.

Orchids and lilies with edible tubers were also plentiful around Mount Annan, as was the native "yam", another dietary staple. A number of other edible roots were also consumed, as well as leaves and berries. Plants were an important medicinal source and also provided material for making string and rope, such as "kurrajong" made from the bark of the hibiscus and native figs. The bark from paperbark trees was used to wrap babies and native bees wax was used as an adhesive. Both grasstree resin and beeswax were used to attach hatchet heads to handles and barbs to fishing and hunting spears. A variety of different woods were used for the manufacture of tools and weapons including eucalypts and grasstrees.
It was the Sweet Water D’harawals who occupied the Camden and Campbelltown areas, and consisted of some forty or fifty clans, each numbering in the vicinity of thirty to sixty individuals. The name given by the Sweet Water D’harawals to the Camden area around the Nepean River, later to be known to the European settlers as the ‘Cowpastures,’ was ‘Yandel’ora’, which means Land of Peace Between Peoples. The Lyrebird is the totem of the D’harawal people and even today is a symbol of peace and conciliation.

The D’harawal people set aside ‘Yandel’ora’ as a special place and it became an important Aboriginal meeting place because every generation all the nations from as far north as Maroochydore, to as far south as Melbourne met to determine laws, settle disputes and arrange marriages. About every four years smaller meetings were held to settle disputes between D’harawals and their immediate neighbours. The area known as the summit of Mount Annan, became the chief law-making place, and the leaders of each tribe would gather on the summit once every generation and the laws would be established.

The ‘Yandel’ora’ area was a special place where Aboriginal groups would come together to peacefully resolve disputes. Those who entered ‘Yandel’ora with problems were not to leave until they had been resolved, and all weapons must be laid down upon arrival and throughout the duration of stay in the area.

The visiting groups would be allocated an area to camp within ‘Yandel’ora and would stay for weeks and sometimes months. Trees were marked to demarcate ‘lands within lands’ for different groups, and plants and seeds were brought in from the home lands to grow for the duration of their stay. This has resulted in disjunct plant communities across the region.

By the time Europeans arrived in 1788, the Aboriginal people of Western Sydney had developed a complex yet homologous culture. The original tribes had diversified to the point where more than 600 distinct languages were spoken throughout the region and they had developed a range of technologies for fishing, hunting, gathering, animal husbandry and agriculture (through yam plantings and fire-stick farming). They had a well established
totemic religion that had changed very little (if at all) in 40,000 years of settlement and was based on a simple tradition of story telling. Historians now estimate that the Aboriginal population of Australia, at the time of European contact, was between 1 and 2 million; how many of these people inhabited the Cumberland Plain is not known, although they were without a doubt, more numerous than the new arrivals.

The Clash of Cultures

In 1790, Frances Barallier, an English explorer came through the area, and recorded in his journal that he saw 100,000 blacks gathered together. It is possible that this meeting rapidly spread colonial diseases such as small pox and measles throughout Yandel’ora, which had devastating effects on the Aboriginal populations of the area.

The Dharawal people left tangible evidence of their first encounter with European settlement. Six months after the arrival of the First Fleet, two bulls and four cows (then the colony’s only source of fresh meat) disappeared from the settlement at Port Jackson. The cattle wandered south, crossing the Cooks and Nepean Rivers before establishing themselves on good grazing ground in the Menangle-Camden district. The Dharawal saw these strange creatures and drew them on the wall of a sandstone shelter nearby. The Dharawal clearly depicted the characteristics of the bulls, which dominate the cave and the sense of their terror towards these new animals is also evident.

There had been no reports of violence between the Dharawal and the few Europeans settled around Mount Annan before 1810, but intensive European occupation of Minto and Macquarie’s newly declared Districts of Airds and Appin occurred over the following decade. Conflict was inevitable between such vastly different cultures and the severe droughts of 1814-16 exacerbated the situation.

Although battles were fought throughout the Campbelltown area, the Dharawal were more often observers than participants, but few Europeans were able to distinguish between particular groups of Aboriginal people; by 1816 the Europeans considered all the Cowpastures Tribes to be hostile. The majority of combatants were tribes from the mountains and southern highlands, including the Gundungerra, who were more aggressive than the D’harawal.
The Appin Massacre of 1816 is widely regarded as the annihilation of the Aboriginal people of Campbelltown and Camden. Yet evidence suggests that the D’harawal did not play an aggressive role in the conflict. Other sources indicate that the D’harawal population was quite small by 1816, as many had succumbed to smallpox, influenza and other introduced diseases which had a profound effect on their lives well before the armed conflicts took place.

After the 1816 conflicts, the D’harawal remained south of the Nepean River in the Cowpastures district (including Mount Annan) under the tacit protection of the Macarthur family. In March 1818 James Meehan marked out some land on the Macarthur’s Camden estate for D’harawal (and others) that wanted live there under Macarthur’s protection. A portion of the Camden estate was always known as ‘Budbury’s Paddock.’

The D’harawal numbers were further depleted by the 1820 influenza epidemic and between 1835 and 1845 the official number of Aborigines in the Campbelltown District fell from 20 to none, although it is clear from later records that a number of D’harawal did survive. However, the removal of their traditional hunting grounds for pastoral land and the dispersion of their tribe in the years following the conflict resulted in few D’harawal actually remaining in the district. Although coroborees were held at Camden in the 1850s, the gatherings comprised a number of tribes (including the remaining D’harawal) and it was clear that the Europeans were now the dominant ‘tribe’.

Figure 14
D’harawal at Camden Park
Photograph
W. Hertzer c.1850
source: Macleay Museum
European settlement

The initial expansion of the colonial settlement in the early 1800s occurred in the Hawkesbury-Nepean River district. The river has always occupied an important position in the history of New South Wales and the development of Sydney. In colonial times, the importance of the Camden and Campbelltown area was as a decentralised settlement centre and as a gateway to the southern highlands.

The earliest use of the Mount Annan district by farmers was for cattle grazing. This was perhaps inspired by the wild cattle which strayed from the first fleet settlements and grazed near the Nepean River at the turn of the eighteenth century, leading the district to be called ‘The Cowpastures’, a term still used today. Grazing was generally mixed with cereal cropping, orcharding and a little dairying, and typified land usage in the district in the early nineteenth century.

In 1818 Governor Macquarie granted 3000 acres of land in the Airds district to William Howe, a Scottish free settler. On this land Howe established the Glenlee estate, comprised of a homestead and adjoining lands. Howe established a successful dairy farm at Glenlee, and the property was also noted for its extensive orchards, which could be clearly seen from the summit of nearby Mount Sugarloaf and Mount Annan.

The lush grasses of the alluvial plain made excellent grazing for dairy cattle. Several butter factories were established along Menangle Road and most of the district’s milk came from the Menangle and Mount Annan dairy farms. Dairying was perhaps the most commercially successful of the many farming efforts that took place in the district and it was not until the implementation of the Metropolitan Water Supply scheme on the Nepean River and its tributaries that this changed.

The building of water supply dams in the Metropolitan Catchment Area had a marked effect on the pastoral activities of the area. The dams and water supply canal, (known as the Upper Canal) diverted...
water from the river causing local lagoons and swamps to dry up. The water supply canal was opened in 1888 on resumed land and remains a major contributor to Sydney’s fresh water supply. The canal runs through the centre of the Garden, and with its aqueduct, is an important landscape feature both from within the Garden and in the broader surrounding district.

Following the implementation of the Metropolitan Water Supply Scheme, the once lush grasses and rich soils became parched and arid. Gradually, from the 1920s onwards, the landscape altered from one of rich pastures to bleached grasses largely barren of livestock.

The Glenlee estate site underwent all of these land use changes throughout its long history. Evidence still remains of the once successful dairying industry but there are few, if any, discernible traces of earlier uses. African Olive was introduced to the area by settlers in the early twentieth century and used as a hedging plant to divide meadows in a traditional English style. The olive has persisted in the area, further spread by bird drop and competing with native vegetation, and is now a weed that requires careful site management. These attempts to recreate an English landscape in the Antipodes are an important cultural element and the African Olive could be seen as one of the few surviving reminders of earlier cultural plantings.

The establishment of the gardens has disturbed some natural habitats whilst conserving others and there is high potential for archaeological and palaeontological investigation in undisturbed areas; the potential for recovery of artefacts associated with Aboriginal occupation and the prehistoric evolution of the site is high and need to be investigated further.
Figure 20
Aerial photograph of the site and surrounds in 1970, showing the prominent cleared hilltops (incl. Mount Annan) predominant rural land uses on lower areas and the Nepean River.

- Nepean River
- Dairies and poultry farming
- Glenlee Coal Washery
- Agricultural land
- Site of Mount Annan Botanic Garden
- Sydney Water Supply Canal
- Agricultural land
The establishment of the Garden

Following the purchase of the Glenlee Estate by the State Planning Authority in 1968, management of the estate passed to the Macarthur Regional Development Board in the early 1970s and was designated by the (then) Department of Planning as a Scenic Protection Zone in 1975. In 1984 part of the estate was made available for the development of a botanic garden and in 1986 the Royal Botanic Gardens with assistance from the Department of Public Works and Services, began to develop the Gardens, as a State of NSW Project, funded by Bicentennial Projects. Mount Annan Botanic Garden was officially opened in 1988 as part of Sydney’s Bicentennial celebrations.

For many years the Royal Botanic Gardens had aimed to develop a Native Plant Garden and Arboretum. The site available was chosen for its physical size, climate, topographical variation, internal and external vistas and valuable stands of remnant vegetation. Importantly, the site was varied climatically and geologically from the other Gardens’ sites in Sydney and at Mount Tomah, which would allow a unique living collection to be developed.

From the outset, the Garden was intended as a research facility and showcase for Australian native plants. Mount Annan Botanic Garden is designed to display a living collection of Australian native plants and is Australia’s largest botanic Garden devoted entirely to native flora. It is a leading research institute which has pioneered work on a number of native species including the Waratah, Wollemi Pine and Flannel Flower and its significance to Australian botanical research and collection is exceptional.

The Management of Mount Annan Botanic Garden

The Royal Botanic Gardens is an agency of the State Government of NSW, under the Minister for the Environment. The Royal Botanic Gardens and Domain Trust provides strategic guidance to the organisation, and with the Royal Botanic Gardens Executive Committee provide corporate governance across all four of the Royal Botanic Gardens sites. The Director, Botanic Gardens and Public Programs oversees the management of the three sites, and a Garden Curator/Manager is individually appointed to each of the three sites.
The physical site

Site characteristics

The Garden is set on 416 hectares, containing a major north-south enclosed valley, with associated eastern and western slopes, creating a variety of landscape types. Historically used for dairy farming and agriculture, the site contains large grassed areas with remnant pockets of native woodland and large infestations of African Olive (Olea europaea ssp. africana). Several farm dams remain on the site and serve as a reminder of past land uses.

The summit of Mount Annan, at 192m AHD, is the highest point in the locality. The Dolerite Hill and Sundial Hill, and the eastern ridgeline are similarly elevated, and provide significant views over the Garden and out across the region, east to the Sydney CBD, west to the Blue Mountains escarpment and south to the Nepean Riverine corridor and escarpment beyond.

The site is geologically part of the Wianamatta Group, comprising Bringelly Shale formation with sandstone on Mount Annan and along the eastern ridge. The western ridge contains a volcanic cap which forms a distinctive knoll, and is known as The Dolerite Hill. Local alluvial deposits are located along Annan Creek in the north of the site.

Site soils are mainly derived from Wianamatta shales, and their development is affected by slope. On higher slopes, soils are brown clay loams over light to heavy clays. These soils exhibit slow to poor drainage properties due to high clay content and are subject to erosion and land slip. On lower slopes, soils are brown silty clay loams overlying sandy to medium heavy clay, which exhibit impeded drainage properties and are subject to high erosion risk. Alluvial soils occur along Annan Creek in the north of the site.

South-western Sydney is the driest section of the Sydney basin, and has a climate more extreme than that on the coast. During summer, more than two days in every five reach temperatures in excess of thirty degrees celsius; frosts may occur from May to September, peaking during July and August when frosts can be expected on two days out of five. Summer winds are variable but are mostly from the eastern sector, with north-easterlies predominating; the prevailing winter wind is a persistent south-westerly. Annual rainfall is low (less than 700mm), with variable rainfall distribution throughout the year, the most reliable falls occurring in January and February.
Site configuration

The main entrance to the Garden is from Mount Annan Drive, a residential street off Narellan Road. From the entry, two one-way loop roads approximately five kilometres long connect the northern and southern areas of the site, and meet in the centre of the Garden.

The Terrace Garden is one of the Garden’s major horticultural developments and covers approximately 4.5 hectares in the centre of the site. The Terrace Garden contains representatives of Australia’s native plant species, arranged in a linear sequence representing an interpretation of their position in the evolution of the plant kingdom. The hillside has been modified extensively to help emulate the different soil and climatic conditions required by the diverse array of plants. The Terrace Garden was an ambitious undertaking that is still not complete but is nonetheless a highly valued resource within the Garden for educational programs and native plant enthusiasts.

The ornamental lakes and event lawns of Lakeside are used for passive recreation as well as providing a venue for cultural activities, displays and other special events. The Education Centre, Visitor Centre, Gardens Shop, Cafe and childrens playground are located around a central loop road in the centre of the Garden.

The northern section of the site is less developed than the central and southern areas. The large scale plantings of the Eucalyptus arboretum and Woodland Picnic Area are located along
Figure 26
Topographical analysis of the site

Mount Annan summit
192m AHD
Cunningham Drive in the northern area, and adjoin conservation areas of the Cumberland Plain Woodland remnants.

The southern portion of the site is more developed, and is the most intensively used area of the Garden. The theme gardens include the Wattle Garden, the Bottlebrush Garden and the Banksia Garden. Situated at nodal points along Caley Drive, the theme gardens are very popular for picnics and BBQs.

The Nursery, Seed Bank and administration buildings are located just north of the central loop near the middle of the site.

As a result of the Garden’s size and layout, vehicular transport is the primary means of visitor movement, a relatively unique feature in Australian botanic gardens. Approximately twenty kilometres of walking tracks are incorporated into the Garden, connecting areas of special interest.

The Sydney Water Supply Canal runs through the centre of the site, and supplies irrigation water to the Garden. The canal delivers water to Prospect Reservoir from the Avon and Cordeaux rivers and is entirely gravity fed. Recognised as a heritage item, the canal is managed by the Sydney Catchment Authority, who also own a parcel of land adjoining Narellan Road and the canal, used as an administrative depot.
Site constraints

The site is currently divided by a number of service easements, including Integral Energy and Transgrid electricity easements and two AGL Sydney to Moombah gas lines. These easements have a strong visual impact, particularly in the open valleys.

Certain areas of the site are particularly susceptible to erosion due to the steepness of the slopes and the erodible nature of the soils. This is evident on the southern slopes of the Mount Annan summit and the area east of the central ridgeline.

Several areas of the site are subject to severe weed infestation, principally from species such as African Olive, Rhodes grass and Chilean Needlegrass. There is also a potential that some native plant species (non-locally indigenous) used within the Gardens may become invasive to some areas of remnant native vegetation.

There are a number of feral animal species within the Garden, including rats, mice, rabbits, hares and foxes, which pose threats to native flora and fauna populations within the Garden.

The Garden is also subject to odour, noise and dust pollution in some areas as a result of adjacent landuses including the Glenlee Coal Washery and the Jacks Gully Waste Management and Recycling Centre. These problems mainly occur in the south and south-western areas of the site.
Above: Figure 29
Service easements and utilities within the Garden

Below: Figure 30
The central valley, looking west
Garden Visitation and Use Patterns

The community research undertaken by Environmetrics as part of the Site Master Plan comprised five components:

- **Background research**
  This research reviewed a number of studies, including the previous experience of Environmetrics in carrying out community and visitor research for parks and gardens, the Environmetrics Venue Monitor, which collects data on Sydneysiders’ leisure participation, and visitor studies undertaken by Mount Annan Botanic Garden. Also reviewed were the pre-feasibility study for the Centre for Urban Horticulture, (Centre for Tourism and Hospitality Research, 1999), a Tourism Action Plan for Greater Western Sydney (Macsearch Limited, 1995), findings from visioning sessions undertaken with Mount Annan staff in 1997 (Manidis Roberts, 1997) and findings from the SUPER Group (Sydneysiders’ Use of Parks and Gardens).

- **Qualitative focus groups with randomly selected members of targeted communities,**

- **Quantitative on-site survey of visitors,**

- **An Industry leaders seminar,** and

- **An on-site community workshop.**

**Visitor profile summaries**

In 1999/2000, approximately 94,000 people visited Mount Annan Botanic Garden (Mount Annan Botanic Garden, 2000). Visitor data collected by Mount Annan Botanic Garden in 1999 revealed that the Garden’s visitation drew heavily from the local catchment area, as depicted in figure 32, opposite. Around 50% of visitors came from the outer Sydney region. Weekends tended to attract a greater percentage of visitors from parts of Sydney other than the local area, particularly the Western region at 19%.

In Winter 1993 only 13% of the Sydney population had ever visited the Garden. In 1995 this increased to just 14%. However, by the end of 1998 this figure had risen to 27%, which suggests that network penetration of Mount Annan Botanic Garden into the Sydney market has almost doubled over the past five years and now roughly a quarter of the Sydney population have ever visited the Garden (Environmetrics’ Venue Monitor, 1998).
Figure 33
General visitation map
source: Environmetrics Mount Annan
visitor study March 99- June 99
The on-site surveys undertaken for the Site Master Plan in January and February 2000 revealed the adult visitor age profile:

- 18-25 years 4%
- 25-40 years 49%
- 41-55 years 31%
- 55+ years 16%

The above figures indicate that almost half of Garden visitors were between 25 and 40 years of age. From interviewer observations, many of these visitor groups were with children.

Reasons for visiting

Previous parks and gardens studies have shown that Mount Annan Botanic Garden is particularly attractive as a venue for picnics and barbeques. In 1998 more visitors to the Garden participated in picnics or BBQs than all other major parks, apart from Western Sydney Regional Park. The focus group and on-site surveys conducted by Environmetrics in February 2000 substantiated this finding with picnickers being the main respondents who visited Mount Annan Botanic Garden.

The surveys detailed that over two-thirds of respondents visited the Garden for a picnic with family or friends. Local visitors tended to visit the Garden for exercise more than other visitors. 15% of visitors had botanical or horticultural motivations for visiting the Garden. Only 3% of visitors interviewed on Australia Day went to the Garden specifically for the inaugural Australia Day celebrations. Reasons for visiting are summarised below:

- Lunch / picnic-family or friends 67%
- See Botanic Garden in general 15%
- Exercise 6%
- Party 3%
- Australia Day events 2%
- See the maze 2%
- Go for a drive 1%
- Play on grass with kids 1%
The on-site surveys also revealed that once in the Garden, 77% of visitors drove to get around, 61% walked, 4% cycled, and 1% jogged.

Visitors tended to spend many hours at Mount Annan Botanic Garden. Two-thirds of visitors (64%) stayed in the Garden for at least three hours. Almost half of all visitors (41%) stayed in the Gardens for up to three hours, 23% stayed for five hours or more. Only 1% of visitors stayed for less than one hour.

**Places visited in the Garden**

Results from the on-site surveys identified the most visited areas of the Garden as follows:

- Theme Gardens 63%
- Toilet facilities 40%
- Cafe 19%
- Shop and visitor centre 17%
- Picnic/BBQ facilities 17%
- Childrens playground 16%
- Garden and lawn areas 16% by the Central Lake
- Terrace Garden 13%
- Walk through Woodland 6%
- Maze 5%
- Sundial 4%
- Other 7%

(Please note, percentages listed above are taken from the sample of visitors from the on-site surveys, and people identified all of the areas they had visited, therefore the sample does not equal 100%)

Figure 36
The Maize maze is very popular for younger Garden visitors

Figure 37
Walks near Lake Nadungamba and the bird hide
Visitor responses

Results from the on-site surveys provided an insight into some of the visitor values of Mount Annan Botanic Garden. These are briefly described.

- The focus on Australian native plants was perceived as a major strength of the Garden
- The Garden was highly valued for its role in providing ‘green lungs’ for the densely populated south-western Sydney region
- As a botanic garden, Mount Annan Botanic Garden is respected for its role in the display, research and preservation of plants. The Garden’s affiliation with the Royal Botanic Gardens Sydney also contributes to this perception.
- The informal and relaxed environment of the Garden creates an attractive setting for its current use as a recreational site for family outings and informal gatherings. The facilities provided in the Garden for tranquil recreation were strongly appreciated by current visitors.

Visitors also made some general comments on aspects of the Garden they believed could be improved, which have been documented as follows.

- The majority of respondents to both the focus groups and the on-site survey thought that the Garden should be better known in both the local and wider community. Users regarded the Garden as a wonderful facility that deserved to be better known and used.
- Many on-site and group respondents realised that they did not know about some of the existing features of the Garden. They hoped that communication strategies and events programs would extend the knowledge of current visitors to the Garden.
- Many visitors did not know what is in the Garden and where things are located. These problems with wayfinding contributed to orientation and circulation difficulties and may discourage visitors from visiting different parts of the site.
- The research indicated that visitors were interested in the stories, connections and contexts which underlie both natural environments and designed gardens. This desire for contextual information could be met by innovative opportunities for interpretation and interaction with Garden staff.

Figure 38
Pedestrian paths bordered by Araucaria sp. connect the Sundial Hill with the summit of Mount Annan
Mount Annan Botanic Garden has a number of characteristics that are valued for their role or potential role in making the Garden unique and important. The following section identified these values, to be retained and strengthened.
Relative values of the Garden

The consultation and analysis phases of the project have identified a number of values of Mount Annan Botanic Garden. These values and their significance are summarised in the following table and discussed further in this section. The significance of a value may relate to its rarity, the associations it has with significant events, people or places, its contribution to an important strategy or its attraction to a large number of people.

<table>
<thead>
<tr>
<th>Relative values of the Garden</th>
<th>reasons for significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>scientific values</td>
<td>• horticultural research and development programs</td>
</tr>
<tr>
<td></td>
<td>• botanical collections and displays</td>
</tr>
<tr>
<td></td>
<td>• part of the Royal Botanic Gardens Sydney</td>
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<tr>
<td>environmental values</td>
<td>• endangered ecological communities and threatened species on site</td>
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<td></td>
<td>• active role in in-situ and ex-site conservation programs</td>
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<td></td>
<td>• active role in regional conservation</td>
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<td></td>
<td>• provision of fauna habitat</td>
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<td></td>
<td>• ‘green lungs’ for south-western Sydney</td>
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<tr>
<td>educational values</td>
<td>• ‘plant encyclopedia’</td>
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<tr>
<td></td>
<td>• interesting and informative tours</td>
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<td></td>
<td>• provides resource for environmental education to community, schools and institutions</td>
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<td></td>
<td>• horticultural education</td>
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<tr>
<td>cultural heritage values</td>
<td>• Garden is a resource for future generations</td>
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<tr>
<td></td>
<td>• contemporary ‘Australian identity’</td>
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<td></td>
<td>• local Aboriginal history</td>
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<td></td>
<td>• association with early European settlement in the area</td>
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<tr>
<td>social values</td>
<td>• provision and protection of a large piece of public land</td>
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<tr>
<td></td>
<td>• focus for community events</td>
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<tr>
<td></td>
<td>• focus for family gatherings and interaction</td>
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<tr>
<td>recreational values</td>
<td>• used as a large parkland for large group celebrations</td>
</tr>
<tr>
<td></td>
<td>• many recreation opportunities</td>
</tr>
<tr>
<td></td>
<td>• size of the Garden provides a sense of space and freedom</td>
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<tr>
<td>aesthetic values</td>
<td>• diversity of landscape settings</td>
</tr>
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<td></td>
<td>• beauty of structured displays and grassed areas</td>
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<td></td>
<td>• naturalistic informality, large parklike setting</td>
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<td></td>
<td>• perceived as a “bushland island”</td>
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<td></td>
<td>• potential for leadership in Australian garden design</td>
</tr>
<tr>
<td>commercial values</td>
<td>• existing cafe, gardens shop and entry fees, and the potential for expansion of these facilities</td>
</tr>
<tr>
<td></td>
<td>• horticultural opportunities for commercial partnerships and activities (e.g. Wollemi Pine)</td>
</tr>
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Figure 39
Relative values

Mount Annan Botanic Garden
Site Master Plan
Site Management Plan
37
Key values of Mount Annan Botanic Garden

The consultation undertaken with the community, stakeholders, Garden staff and interested groups and individuals for this project canvassed a wide range of values for Mount Annan Botanic Garden. These values are not considered to be static, as they continue to develop over time, with the growth of the Garden and increasing community awareness.

The main themes of these values statements are listed below. They fall into nine categories.

**Scientific values**

- There is value in the horticultural research and development undertaken at Mount Annan Botanic Garden, particularly in more publicly-known projects such as the Wollemi Pine;
- There is scientific value in the botanical displays of native plants at the Garden and in the unique resource these displays provide;
- The Garden is understood to play an ongoing and increasingly important role in the development of vegetation management strategies and conservation works;
- There is value in the association between the Royal Botanic Gardens Sydney and Mount Annan Botanic Garden, both understood as reputable scientific organisations.

**Environmental values**

- The Garden contains threatened plant species and a number of endangered ecological communities, including remnant Cumberland Plain Woodland, Sydney River Flat Forest and Western Sydney Dry Rainforest communities;
- The Garden is seen to actively conserve and manage these remnant ecological communities;
- The Garden provides habitat for a diversity of fauna;
- The Garden plays a major role in the provision of regional flora and fauna habitat corridors;
- There is much potential for the Garden to be actively involved in the principles of Environmentally Sustainable Development;
- The large size and natural settings of the Garden provides ‘green lungs’ for south-western Sydney, which will increase in importance as the surrounding areas develop.
**educational values**

- The ‘plant encyclopedia’ and the interpretive signage displayed in the Garden is seen as an important educational resource;
- The tours offered in the Garden are valued as interesting and informative;
- There is value in the environmental awareness and understanding the Garden provides to the community, including schools and institutions;
- There is value in the horticultural education offered by the Garden, especially in improving the quality of urban environments;
- There is potential for the Garden to become an important educative resource for authoritative bodies, displaying best practice techniques for research and development, and conservation and land management.

**cultural heritage values**

- The community values the longevity of the Garden, that it has a long life span and will be a resource for future generations;
- The Garden has a contemporary ‘Australian identity’, highly valued by the community;
- Activities in the Garden such as Arbor Day allow the community be a part of the continuing growth of the Garden;
- The local Aboriginal history draws connections between the Garden and the history of the D’harawal people of the area;
- There are important associations between the Garden and the early settlement of the area, such as the history of the Cowpastures area, and its early European exploration by figures such as George Caley and Watkin Tench;
- There are also important associations with the historic Glenlee Estate, of which the Garden was once part, early land uses in the area such as agriculture and dairying, and early European figures such as William Howe and John and Elizabeth Macarthur;
- Although not strictly part of the Garden, the Sydney Water Supply Canal, its importance to the development of Western Sydney and stories of its construction and significance as an historic engineering project have cultural heritage value.
• The protection of a significant area of public land held in public ownership is highly valued;

• There is much community pride and appreciation in the provision of the Garden, a major facility in an area generally lacking in quality open space;

• There is value in the protection of this large area of open space in an area undergoing rapid and ongoing urban development;

• The community values the Garden as a focus for community events such as the Mount Annan Challenge Walk;

• The Garden is highly valued as a place for family gatherings and interaction;

• The Garden is highly valued as a special place for contemporary cultural expression and events, festivities, arts and protest;

• The Garden is valued for broad environmental and health issues, being perceived as the ‘green lungs’ of western Sydney.

• The Garden is used as a large parkland for recreation purposes, and is often the venue of choice for large group celebrations;

• The size of the Garden provides an area large enough to walk through and explore;

• There are many informal recreation opportunities available in the Garden, including picnics, walking, and other unstructured activities;

• There are opportunities for both solitary activities and recreation as well as group activities.
• The large scale of Mount Annan Botanic Garden is an increasingly valued aspect of the site;

• The Garden displays a diversity of landscape settings, from structured horticultural displays through to remnant woodland communities and native grasslands;

• The Garden is perceived as a ‘bushland island’, offering a green refuge in a highly developed urban area;

• There is much value in the beauty of structured horticultural display and grassed areas, showcasing the highest standards in plant presentation and management;

• There is value in the uniqueness of Mount Annan Botanic Garden, in its large scale park-like setting;

• The naturalistic informality of the Garden is a reminder of the rural Camden and Campbelltown landscape, creating a sense of the countryside and contact with nature in an urban area;

• There is value in the topographical connections to the Campbelltown Scenic Hills, the Nepean River Valley and the Georges River;

• There are important views into and out of the Garden, and these views link regional high points, including Mount Annan.

• There is commercial value in the existing cafe facilities, catering facilities, Gardens Shop, and entry fees, and the potential for expansion of these commercial facilities;

• A range of commercial opportunities relating to the horticulture and scientific functions of the Garden have the potential to be developed, in partnership with other organisations.
The Royal Botanic Gardens are responsible for realising the objectives for which this land was dedicated to the public. As custodians of the site, they are charged with protecting the values of the site, responding to community expectations and ensuring the Garden reaches its full potential. In achieving this, the Royal Botanic Gardens faces a range of important issues and strategic decisions which must be addressed.

These considerations range from the broad and strategic, to more detailed and site specific.

The key considerations include:

#1 The growth of the Garden

#2 The presence of the Garden

#3 The physical site

#4 Living collections

#5 Right of access

#6 Natural systems

#7 Recreation opportunities

#8 Adjoining landuses

#9 Establishing co-operative partnerships

#10 Site management

#11 Commercial activities
In the eleven years since Mount Annan Botanic Garden was opened to the public, it has developed a prominent position in the public domain as a botanic garden in a parklike setting. Having established itself as an integral part of the Royal Botanic Gardens Sydney, and an increasingly popular destination for people from a wide catchment across Sydney, it is an appropriate time to review the direction and range of functions of the Garden. There are a number of strategic decisions that are part of that review process.

Traditionally focussed on a scientific approach, there has been a notable realignment of the strategic direction of the Royal Botanic Gardens. The importance of botanic gardens as tranquil places of reflection and leisure, as repositories of valuable plants and specimens and as centres for research, will always remain. However, these functions need to be reinterpreted in the light of changing times and new responsibilities, such as the growing emphasis on the need to conserve biodiversity, and preserving endangered plants and their related habitats. These changes signal important new roles for the Gardens, and are central to the realignment of the strategic direction of the organisation.

In addition, as a NSW Government organisation, the Royal Botanic Gardens recognises the Government's commitment that the public sector should become more accountable and efficient, and should better understand the expectations of stakeholders and the community in general.

The Royal Botanic Gardens Corporate Plan 2000 is responsive to these changes, and signals a new strategic direction for the Royal Botanic Gardens. The Plan encourages a more active and outward-looking approach, emphasising the importance of community awareness, appreciation, ownership and outreach (‘beyond the Garden walls’), the importance of managing significant public open spaces, as well as the scientific and educative roles of a Botanic Garden. These strategic changes must be incorporated into any future plans for Mount Annan Botanic Garden.
<table>
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<tbody>
<tr>
<td>the roles and activities of the Garden</td>
<td>Over the last decade Mount Annan Botanic Garden has endeavoured to develop a balanced approach to its role in both the Australian and Sydney metropolitan context. However, research has shown that the Garden is predominantly used as a large park, with activities centred on picnics and BBQs. The Site Master Plan must analyse past and current roles and activities and determine the future direction for the Garden, encouraging the growth of the Garden and strengthening its importance as a major botanic facility in western Sydney.</td>
</tr>
<tr>
<td>balancing customer needs</td>
<td>In line with the strategic direction of the Royal Botanic Gardens, Mount Annan Botanic Garden must balance customer needs with the core values of a botanic garden ie. achieving balance between scientific and public open space uses. The continuing challenge for Mount Annan Botanic Garden is to continue to attract interest in the range of activities and functions it offers without compromising its core values.</td>
</tr>
<tr>
<td>raising the Garden’s industry profile</td>
<td>An important issue for the future is the need to build the national and international reputation of Mount Annan Botanic Garden through its highly regarded scientific and research activities.</td>
</tr>
<tr>
<td>raising profile for visitation</td>
<td>The current profile and visitation of the Garden is predominantly local. A strategic plan for the Garden’s future will need to remain loyal to these local users, whilst promoting an increase in overall profile and visitation levels, drawing from local, regional and state catchments. There is also significant potential for the Garden to become an important tourism destination for both domestic and international tourists. Increased visitation must not adversely affect the Garden’s intrinsic site functions and values. There is potential for alternative forms of visitation through a comprehensive web site where vast and varied forms of information about the Garden, plants, ecology, biodiversity conservation and sustainable practices can be accessed. Virtual visitors tread the lightest!</td>
</tr>
</tbody>
</table>
Mount Annan Botanic Garden must develop an identity that embraces the natural, social and cultural heritage of the site. A balance must then be struck in resolving this identity against the values and policies of the Royal Botanic Gardens. Mount Annan Botanic Garden must play an active role in the Royal Botanic Gardens network, but also needs to develop a sense of identity and a range of functions specific to the social and cultural fabric of western Sydney to ensure its long term viability and success.

Mount Annan Botanic Garden needs to assert its position in south-western Sydney, which will aid the increase of the Garden’s profile in wider catchments. At present, the Garden has limited presence from the adjacent Hume Highway (the main route to Canberra) or from Narellan Road, a important connector route to Camden. There is much potential to heighten the Garden’s profile in south-western Sydney as part of a long term strategic vision, utilising the approach roads and the eastern ridgeline of the Garden.

The Garden’s ‘gateway location’ in south-western and greater Sydney has potential to be promoted as part of a tourist route in the region, to increase the profile of the Garden for both domestic and international tourists.

The limited distinctive landscape and architectural features and signage along or adjacent to these roads render the Garden inconspicuous and often compete with other establishments such as Tim’s Garden Centre, which is generally confusing to the public. As a result, there are potential visitors in the local and regional catchments who are not aware that the Garden exists or what facilities it may offer.

The existing Garden entry is local in scale and character and inappropriate for a long term vision for the Garden, which will require an entry with a real sense of arrival and grandeur. The Site Master Plan will consider relocating the Garden entry to Narellan Road, where the potential for heightened profile and regional access is greatest. The existing entry off Mount Annan Drive could continue to function as a service entry point and as a back-up entry for large events.
The original Master Plan for the Garden has provided a strong basis from which development can continue. However, there are a number of issues related to the physical form and layout of the Garden which will need to be addressed during the development of the Site Master Plan.

Current Garden circulation patterns present a number of problems for the overall experience of the Garden as well as the exposure of visitor facilities. Many visitors move directly to the theme gardens in the south, bypassing the majority of the site, including the Cafe, Gardens Shop and Visitor Centre. The relocation of the Garden’s entry will provide the opportunity to structure circulation patterns across the whole of the site, ensuring that main routes are responsive to the location of visitor facilities.

The physical size and location of the existing visitor facilities limit their capacity for visitor exposure and commercial growth. A new entry point provides the opportunity to relocate visitor facilities to an appropriate and aesthetic location, where their exposure can be maximised.

The Terrace Garden was a feature of the original Master Plan, and was a very complex and expensive feature to construct. Currently, the Terrace Garden consumes a considerable proportion of the Garden’s financial and staffing resources, but is generally not understood or appreciated by visitors. The evolutionary message is not well understood, there is a lack of hierarchy in the Terrace’s paths, and access for persons of limited mobility is restricted.

The Terrace Garden is however, recognised as a most valuable resource for guided walks, education and interpretation. The Site Master Plan needs to consider the future viability of the Terrace Garden and test a range of concepts across a wide spectrum of change to determine the future of this facility.

A detailed interpretation strategy must also be developed for the Terrace Garden to ensure that the evolutionary message is clear and exciting to interpret and understand. There is much potential to expand the Terrace’s message to include other historical messages (such as the development of local geologies and resulting vegetation patterns) to enhance the taxonomic displays. Movement paths through the Terrace must be reconsidered to aid the messages.

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</table>
The Theme Gardens are the most intensively used areas of the Garden, highly valued by local user groups for unstructured recreation, including picnics and BBQs. The theme gardens fulfill the recreational demands of the Garden well, and successfully focus these activities in the southern areas of the Garden. However, there are a number of maintenance issues related to pruning, pest, and weed control, which will need to be considered for the long-term success of these areas.

The northern half of the Garden is generally less developed than the southern section. Consequently, this provides opportunities to develop areas for specific visitor facilities which are not provided elsewhere without impacting on the highly valued areas in the Garden.

The conservation areas are a critical element for the protection of remnant vegetation communities, as well as defining local and regional identity and relevance. Conservation areas within the Garden need to be reassessed, and in some cases, expanded. Within the Conservation areas, there are many opportunities to demonstrate and interpret ecological communities and the interrelationships between plants and animals.

These areas are generally well-sited in the centre of the Garden and provide satisfactory facilities for the current operations, with some limited potential for expansion in the future if required.

The Nursery and Seedbank play important roles in the supply of plant materials for the Garden’s living collections. It is important that the maintenance of these facilities is undertaken in a manner that minimises their impact on other values of the site.

It is important to note the potential of the conservation roles of the Nursery and Seedbank in the future of the Garden. These areas currently play an active role in conservation programs both in-situ and ex-situ, and there are opportunities to increase these roles. The Seedbank at Mount Annan Botanic Garden is important in Australia through its dedication to the conservation of threatened species of native plants. There are...
<table>
<thead>
<tr>
<th>Topic</th>
<th>Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>carparking</td>
<td>The Garden has limited carparking capacity which will need to increase in line with visitation levels. There is potential to expand the carpark as well as providing overflow carparking for peak visitation periods and major Garden events.</td>
</tr>
<tr>
<td>visitor orientation</td>
<td>There are general problems amongst Garden visitors with overall orientation and location of visitor facilities. Inadequate and sometimes confusing signage contributes to this problem, and needs to be reconsidered as part of a larger circulation strategy to improve visitor orientation.</td>
</tr>
<tr>
<td>living collections</td>
<td>The comprehensive living collections of Australian native plant species established to date are an invaluable resource and include a number of species never before grown in cultivation. These collections are a natural living heritage of national significance, and must be protected and managed accordingly.</td>
</tr>
<tr>
<td>protecting the Garden’s assets and heritage</td>
<td></td>
</tr>
<tr>
<td>Garden thematics</td>
<td>The original Mount Annan Botanic Garden Site Development Plan details the aim to develop a Native Botanic Garden and Arboretum in which to display the rich Australian flora, and to build up a scientifically documented living collection of plants from all parts of this continent. Mount Annan’s role as a specifically native Garden has provided a unique focus, however the ‘nation wide’ aims of the living collections raises questions of relevance to the Garden’s location and position in an Australian Botanic Gardens network. The Site Master Plan provides the opportunity to re-evaluate the Garden’s thematics and the focus of its living collections. Consultations and analysis undertaken to date suggest opportunities to reconfigure the Garden thematics as part of a plan for the Garden’s future. Consideration could be given to the development of living collections which not only present to the community the outstanding diversity and richness of Australia’s flora, focussing on western Sydney and/or NSW species, but also aim to present the intricate interrelationships with Australian ecosystems.</td>
</tr>
<tr>
<td>Topic</td>
<td>Issues</td>
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<tr>
<td>-------</td>
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</tr>
<tr>
<td>right of access</td>
<td>For some people, including some current non-users, access to the Garden is restricted. Equity of access is fundamental to the long-term success of the Garden, and must be considered as an integral part of the Site Master Plan. The distance of the Garden from central Sydney and the heavily populated areas around it also limit the attractiveness of the Garden to many visitors.</td>
</tr>
<tr>
<td>public transport connections</td>
<td>Public transport to the Mount Annan Botanic Garden is poor. Irregular and infrequent bus services run from Campbelltown Station, and passengers are dropped off at the perimeter of the Garden. The long-term vision for the Garden would include strong road and rail public transport connections, which will be achievable in line with increased residential populations in the area.</td>
</tr>
<tr>
<td>moving around the Garden</td>
<td>The Garden is primarily designed for vehicular transportation, which makes it unique in the group of Australian botanic gardens. However, for visitors without cars, the location and physical size of the site means there are few real alternatives for experiencing the Garden. Other forms of transportation need to be considered. A strong bicycle network, well-connected to regional path systems, would make the Garden highly accessible to cyclists. The consideration of a ‘people-mover’ form of transport within the Garden would improve access options for both visitors without cars, seniors and those of limited mobility. Path grades and surfaces are often unsuitable for both pram and wheelchair access, and overall access for people with limited mobility is restricted. The sealing of secondary path systems within the Garden would increase access options for these user groups.</td>
</tr>
</tbody>
</table>
Significant population growth is anticipated in the immediate catchment areas around the Garden. To encourage local ownership and appreciation of the Garden, local pedestrian and cycle linkages need to be established into the newly-developed residential areas to the west.

Community consultation undertaken for the Site Master Plan showed that people are willing to pay a fee for entry to Mount Annan Botanic Garden, as they appreciated that the facilities and overall experience available justified the cost. However, the recent increase in entry fees to the Garden may result in a fall in visitation levels, as a per person charge will increase costs significantly for some users in the lower socio-economic groups of south-western Sydney. In the long term, entry fees may be more widely accepted if Garden visitors have a clear understanding of where the fees are being spent, and see Garden growth and new facilities as a result of their contribution.

Reduced entry costs or a season pass linked to the ‘Friends of the Gardens’ scheme for frequent visitors (particularly from the immediate residential areas), may need to be considered in order to resolve some of the entry fee issues, as well as an entry arrangement for those people wishing to use only the cafe and/or garden shop facilities. Alternatively, visitors spending a certain amount at either the cafe or the gardens shop may be eligible to have their entrance fee refunded.
Mount Annan Botanic Garden has a range of natural systems which have their own intrinsic value as well as contributing to the character and recreational opportunity of the Garden. These systems, their environments and ecosystems (such as dry sclerophyll forest and native grasslands) are also important to the Australian identity of the Garden. These natural systems need to be effectively managed, and considered part of the broader ‘living heritage’ of the Garden.

The Garden sits across the limits of two watersheds and as such has a responsibility to ensure Total Catchment Principles are applied to everyday Garden management practices. There is potential for the interpretation of these management strategies using ridgeline walks across the eastern ridgeline, which is the top of the catchment.

There are several areas of remnant vegetation within the Garden, which are important for their role in species conservation and faunal habitat. Some of these remnants provide habitat for a listed threatened plant species (Pimelea spicata) and are also important regional corridors, forming part of a larger floral and faunal system that links to the Nepean River. The ongoing protection, management and monitoring of these areas is crucial to their survival and ongoing regeneration.

A number of endangered ecological communities exist within the Garden, which are of state significance and need to be adequately managed and conserved. These communities include Cumberland Plain Woodland, Sydney River Flat Forest and Western Sydney Dry Rainforest on the summit of Mount Annan. The condition and location of any future development for Mount Annan Botanic Garden must be assessed in terms of the effect on these vegetation remnants.

There are large areas of native grasslands on the site which provide a diverse range of native species and an important form of habitat, as well as contributing to the rural, open character of the Garden. As user levels in the Garden increase, management techniques will be required to ensure the renewal of the grasses, which may include spelling of the grasses for several periods of the year, and also fire management strategies. There is also potential to build on existing Garden practice and develop techniques for the harvesting...
Prior to European settlement and the subsequent clearing of large areas of indigenous vegetation, the Mount Annan district once contained a diverse fauna community. A variety of native fauna (including macropods, snakes, bird and insect life) still remain within the Garden. In addition, many animals use the Garden as part of a regional corridor, connecting back to the Nepean River. The fauna on site have been regularly monitored since the Garden’s inception. The Royal Botanic Gardens have undertaken detailed monitoring of the birdlife, and the Ecology Department of the University of Western Sydney have prepared a number of surveys of the Garden’s fauna. Although much data exists, it needs to be compiled and incorporated into a Fauna Management Plan for the site to ensure that management actions do not conflict with fauna habitat.

It is important to note that many native birds and animals are returning to the site as indigenous vegetation is re-established and protected. This is particularly evident with birdlife in the Garden, as the maturation of nectar and fruit-bearing plants coupled with establishment of aquatic plants has encouraged the return of many native species.

There have been a number of WIRES releases in the Garden over the last decade, and the long-term implications of these releases need to be considered as part of the future plan for the Garden.

As mentioned, the Garden is subject to a number of exotic flora and fauna species, such as rats, mice, rabbits, hares and foxes, and large infestations of woody weeds (African Olive and exotic grasses such as Chilean Needle grass). These constitute pest and weed problems, and pose threats to the native flora and fauna populations within the Garden. From an environmental management perspective comprehensive staged pest and weed management strategies will be important for the future of the Garden’s natural systems.
There are many opportunities at Mount Annan Botanic Garden to deliver an important message based on the complexity of Australian ecosystems, and the interrelationships between humans, plants and animals and the earth. These messages could be interpreted at both the micro and macro scales, and may include information on water quality, supply and management; native plant species and their applications; remnant vegetation communities and their importance; native fauna; and the impacts and benefits of fire in the Australian landscape.

For Mount Annan Botanic Garden to fulfil its role as a leading Australian Botanic Garden, it must provide a variety of experiences that satisfy a broad range of user groups, as well as unique attractions that are not available at other botanic gardens. In determining appropriate roles and activities for the Garden, it is imperative to consider the values of the site, and develop roles and activities that will not conflict with any of these values.

The future roles and activities for the Garden must be based on the core attributes of a botanic garden, the site’s landscape, and its heritage, and integrate these new functions without displacing existing recreation uses or opportunities. Equally as important are the locations for these new functions.

The potential exists to link Mount Annan Botanic Garden to other local and regional open space, such as William Howe Regional Park and the Nepean River corridor, utilising proposed linkages such as the Spring Farm Bush Corridor and the Jacks Gully Waste Management and Recycling Centre.

The effect of increasing the attractiveness of the Garden to visitors may result in the reduction of the quality of the experience as well as the possible impact on the Garden’s core values. Careful consideration of these potential impacts should be a part of any decision making process when assessing new activities and/or facilities.
The successful future development of Mount Annan Botanic Garden will require a proactive management approach by the Royal Botanic Gardens, to establish ongoing relationships between Mount Annan Botanic Garden managers, Local Government, other landowners, stakeholders and the community. The nature of the surrounding area, and the current and proposed levels of development make these managerial relationships imperative for the long term success of the Garden.

All lands adjacent to the Garden have a direct relationship to the Garden in their edge condition. The treatment and ongoing management of this interface will continue to be an issue for the Garden, with the Hume Highway, Narellan Road and proposed residential areas which may eventually surround the Garden on three sides.

Ongoing liaison with Garden neighbours such as the Glenlee Coal Washery, Jacks Gully Waste Management and Recycling Centre and the National Parks and Wildlife Service will also be important.

The Garden, as a relatively young facility, located near the centre of the fastest growing area of the nation, has many opportunities to align its growth with that of the development in the area.

By establishing co-operative partnerships with State and Local Government authorities and other institutions, strategic alliances can be formed which will help to promote the Garden as an integral botanic, cultural and open space facility in NSW, firmly anchored in south-western Sydney.

These alliances, particularly with neighbouring organisations, will encourage interpretative facilities within the Garden which look ‘over the boundary’ and give regional information on history, land management, land use, waste management, water quality, supply, control and collection, and regional flora and fauna.

There are also many opportunities to establish with local and regional cultural and community facilities such as the Campbelltown Art Gallery, local Aboriginal groups and youth services.
There are also many opportunities for Mount Annan Botanic Garden to provide expertise and advice on the management of significant landscapes, and display best practice management techniques for areas beyond the Garden. For example the development of appropriate techniques for management of service easements, road and rail corridors, remnant vegetation corridors, and water catchments. The Garden could also become actively involved in the links between Environmentally Sustainable Development, its applications and Government policies, through the core business of the Royal Botanic Gardens.

One of the important aims of this study process is to provide a Site Master Plan with a vision for Mount Annan Botanic Garden which is achievable, embraced by Garden staff and easily accessible to all.

There are a number of site management issues that must be addressed in the Plan in terms of environmental site management and enhanced sustainability practices such as water usage and recycling.

The site is currently impacted by a number of service easements and it will be important to protect the Garden from further encroachment from utilities and service easements.

The Garden’s water supply from the Canal is not assured in the long term and alternatives need to be considered. Some areas of the Garden are limited in their development potential due to a lack of water. The Site Master Plan needs to investigate the potential for water supply to the Garden from the Camden effluent re-use scheme, particularly for distribution to the area of the Garden east of the central ridgeline.

The opportunities for water harvesting and storage on the site is also important and requires investigation.

The Plan will also need to identify alternative and increased funding opportunities for the Garden.
Mount Annan Botanic Garden has a definite commercial potential, for visitor and community facilities and also industry leadership, advise and expertise. The harnessing of this commercial potential is critical to the Garden’s viability and financial stability.

Strategic planning for the future of the Garden needs to acknowledge the potential of the unique expertise and facilities the Garden possesses, and the potential for these to add viability to the operation and increase the profile of the Garden nationally and internationally. This will involve identifying the opportunities for the requisite skills and credibility of the Garden and its staff to be considered for the development of advisory services to both the community and government/non-government organisations.

The pre-feasibility study for a Home Garden Advisory Centre (University of Western Sydney 1999) suggested there is a demand for the supply of gardening information, and potential to create a sustainable competitive advantage in developing a Home Garden Advisory Centre in the context of Mount Annan Botanic Garden. The study concluded that the Centre appears to be capable of functioning both as a product (service) meeting the needs of home gardeners locally and at large, and would generate significant economic and social benefits both as a tourism and an educational facility.

While the pre-feasibility study suggests that the proposed Centre has the potential to be commercially viable, a precise concept, and a detailed feasibility study need to be developed to estimate patronage/visitation levels, and projection of revenues and costs. This feasibility study will allow the commercial potential of the Home Garden Advisory Centre at Mount Annan Botanic Garden to be fully identified.

Within the site, it is also important to consider the potential for the establishment of appropriate leases for visitor facilities and services.
The Site Master Plan is a strategic document, which establishes a visionary direction for Mount Annan Botanic Garden for the range of directions and activities the Garden can fulfil.

In developing a blueprint, a physical plan and a vision for Mount Annan Botanic Garden, the Site Management Plan depicts a progressive analysis to be undertaken in determining appropriate management actions and future development for the Garden.

This analysis consists of six steps:

Understanding the strategic framework for the Royal Botanic Gardens
Identifying the Garden’s customers, services and products
Establishing the direction of the Garden’s values
Identifying strategic goals for the Garden
Identifying strategic drivers for the Garden
Developing assessment criteria for the Garden’s future management actions and development proposals
The vision, mission and value statements below form part of the Royal Botanic Garden’s 2000-2002 Corporate Strategic Plan, and clearly set out the strategic direction for the organisation.

The development of a strategic framework specific to Mount Annan Botanic Garden will guide the future direction of the Garden and the development of its unique identity under the umbrella of the Royal Botanic Gardens Corporate Plan.

**The mission of the Royal Botanic Gardens:**
To **inspire** the appreciation and conservation of **plants**.

**The vision of the Royal Botanic Gardens:**
That the community, Government and our peers recognise the Royal Botanic Gardens as a centre of excellence in:
- management of public open space of high cultural, heritage and aesthetic significance
- plant biodiversity and conservation programs and research
- horticultural research
- education, information and outreach programs for the wider community in botany and horticulture
- horticulture practice, display and training.

Through these, to **achieve** recognition as one of the **great** botanic gardens of the world.

**The Royal Botanic Gardens are committed to:**
- botanical knowledge and learning
- plant conservation
- heritage conservation
- horticultural excellence
- environmental responsibility
- community and visitor satisfaction
- staff skill, satisfaction and dedication
- ethical management
- cost effectiveness
- land custodianship
Identifying the Garden’s customers, services and products

In order to define the direction for Mount Annan Botanic Garden, a simple analysis of the Garden’s customers, services and products has been illustrated in the following diagram.

Figure 40
Customers, services and products of Mount Annan Botanic Garden
An introduction to the relative values of Mount Annan Botanic Garden has been given in figure 38. In achieving the goals on the previous page, the table below identifies the desired level of significance for each of the Garden’s values.

<table>
<thead>
<tr>
<th>Direction of values for the Garden</th>
<th>actions required to achieve desired levels of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>scientific values</td>
<td>• maintain existing quality standards and enhance future opportunities for growth</td>
</tr>
<tr>
<td>environmental values</td>
<td>• conserve and restore endangered ecological communities</td>
</tr>
<tr>
<td></td>
<td>• become industry leaders in management of Australian ecosystems and display Best Practice land management techniques and environmentally sustainable development principles</td>
</tr>
<tr>
<td>educational values</td>
<td>• offer Garden users a wealth of discovery, knowledge and empowerment</td>
</tr>
<tr>
<td></td>
<td>• inspire an appreciation of Australian native plants and cultural development</td>
</tr>
<tr>
<td>cultural heritage values</td>
<td>• protect the Garden for future generations</td>
</tr>
<tr>
<td></td>
<td>• embrace the Australian identity captured in the Garden</td>
</tr>
<tr>
<td></td>
<td>• inspire an appreciation of European and Aboriginal cultural heritage</td>
</tr>
<tr>
<td>social values</td>
<td>• achieve community identity and ownership of the Garden</td>
</tr>
<tr>
<td></td>
<td>• maintain and enhance the opportunities for fun, social interaction and wellbeing</td>
</tr>
<tr>
<td>recreational values</td>
<td>• maintain and enhance the Garden’s provision of a diversity of recreation opportunities in a fun and spacious area</td>
</tr>
<tr>
<td>aesthetic values</td>
<td>• maintain and enhance the beauty and diversity of the Garden through standards of excellence</td>
</tr>
<tr>
<td>commercial values</td>
<td>• ensure the efficiency and viability of the Garden’s commercial operations and enhance future opportunities for growth</td>
</tr>
</tbody>
</table>

Figure 41
Existing and future values for the Garden
Identifying specific goals for Mount Annan Botanic Garden

In developing a vision for Mount Annan Botanic Garden, a number of specific goals have been identified. These goals must be reflected in a strategic vision for the Garden’s future, and allow the Garden to achieve its potential viability through international and national industry profiles and tourism and visitation levels.

The strategic plan for Mount Annan Botanic Garden will realise the vision, mission and values of the Royal Botanic Garden through the adoption of the following goals. In this way, the Trust’s messages of PLANET PLANTS PEOPLE PLACE can be fully realised at Mount Annan Botanic Garden.

**scientific goals**
- diversity of scientific disciplines
- standards of excellence
- credibility
- public awareness and appreciation
- industry leaders

**environmental goals**
- conservation
- ecology
- land management leaders
- inspire about Australia’s unique ecosystems
- best practice
- environmentally sustainable development

**social goals**
- fun
- relationship development
- social interaction
- community identity
- ownership
- outreach
- wellbeing
- recuperation

**educational goals**
- discovery
- knowledge
- empowerment
- inspiration and appreciation of Australian native plants
- inspiration and appreciation Australian cultural development

**aesthetic goals**
- quality and integrity of design
- beauty
- maintain diversity
- preservation of regional landscapes
- standards of excellence

**recreational goals**
- fun
- space
- diversity of activities
- health

**cultural heritage goals**
- Australian identity
- generational legacy
- appreciation of European and Aboriginal cultural heritage

**commercial goals**
- visitation
- financial security
- efficiency
- viability
- affordability

**management goals**
- staff morale
- meaning
- empowerment
- ownership
Strategic drivers for Mount Annan Botanic Garden

The following strategic drivers represent priority actions for Mount Annan Botanic Garden. These strategic drivers must be implemented in order to achieve the identified goals for the Garden.

- Showcase the diversity of Australian plants with a focus on NSW species
- Actively promote conservation and appreciation of Australian ecosystems
- Engage the community of south-western Sydney and reinforce their value of the Garden, and its contribution, beyond the Garden boundaries
- Educate the community about plant, animal and human interrelationships
- Encourage recognition as industry leaders in the research and development of Australian, and predominately NSW native plants
- Provide an intergenerational legacy for recreation and cultural expression, including festivities and the arts
- Provide opportunities to understand, interpret and appreciate the cultural heritage of the area
- Manage the Garden in accordance with the principles of ecological sustainability and exhibit standards of excellence in site design, management and maintenance
- Establish the Garden as a recognised tourism destination for both domestic and international tourists
Assessment criteria for future Garden management and development

A number of assessment criteria have been identified for all management actions and future development proposals at Mount Annan Botanic Garden.

These criteria provide a checklist to ascertain the strategic suitability of any future plan for Garden.

Management actions and/or development proposals MUST:

- be botanically, horticulturally, and/or ecologically based, and therefore be consistent with the core attributes of a Botanic Garden

- respond to the changing needs of Garden customers and the community, therefore contribute to community appreciation and ownership of Mount Annan Botanic Garden

- represent an iconic development or action, and therefore contribute to the development of a strong identity for Mount Annan Botanic Garden

- actively express a total environmental and cultural message and/or theme, and successfully sell these messages as part of an identity for Mount Annan Botanic Garden

- positively address the public awareness and appreciation of the Garden, therefore work to heighten the profile of the Garden

- be promoting an activity or use which is multi-dimensional, therefore increasing the diversity of activities available in the Garden

- promote educational or interpretative opportunities, or provide advise or information, therefore enhance the educative values of the Garden

- ensure the financial security and viability of the Garden, therefore contribute to the increasing financial self-sufficiency of the Garden.
Establishing a vision for the Garden

The vision statement articulates the desired outcome for the Garden. This vision relies on a commitment to the strategic actions and programmes detailed throughout the Site Management Plan.

In developing a vision for the Garden, Mount Annan Botanic Garden has firstly been positioned within the Australian Botanic Gardens network, which identifies important market niches at a national scale.

A vision statement for the Garden has then been developed from the strategic drivers presented earlier in the document, which identifies activities and characteristics which will make Mount Annan Botanic Garden distinctive and unique at local, national and international levels.
The Australian Botanic Gardens Network

Spackman and Mossop, working with the Council of Heads of Botanic Gardens (CHRBG) have produced preliminary mapping of the Australian botanic gardens network, recording garden locations, physical size, main functions and products (such as research and development, education, horticultural display), fundamental thematics, modes of transport and associations with other gardens. Documentation of this exercise is provided in the appendices to this report.

This process provided an understanding of the roles and products of leading capital city and regional gardens, which in turn has identified a number of ‘market niches’ for botanic gardens across the country, and in particular influenced some of the decisions about the direction for Mount Annan Botanic Garden.

Mount Annan Botanic Garden’s vision in the Australian context

As an integral part of the Australian Botanic Gardens network, Mount Annan Botanic Garden will become a leader of Australia’s Botanic Gardens to wholly realise the shift from a traditional scientific base to one that encompasses stronger environmental, cultural, educational, recreational, economic and tourism uses.
The diversity of Australian native plants will be showcased, with a focus on species endemic to NSW and western Sydney, and the community will be educated about the growing need to conserve the biodiversity of ecosystems, and preserve endangered plants and their related habitats.

Mount Annan Botanic Garden will provide a diverse range of innovative and engaging botanical experiences, which will change the way people experience the Garden, understand its relevance and interpret its messages. The Garden will be valued and remembered for its unique messages about Australian ecosystems, which encourage visitors to interpret the intricate interrelationships between plants, animals and humans.

The changing needs of the broader community will be a continuing influence in the development of the Garden, and community consultation, appreciation and ownership will be encouraged. Many Garden facilities will focus on community needs, such as the Centre for Urban Horticulture, providing horticultural advice, expertise and demonstration gardens, and the Centre for Land Management, providing land management information, advice and expertise as well as displaying best practice management techniques to institutions, authorities and the community. The Garden will develop to become the premier site for successful, demonstrated ecological management.
A vision for Mount Annan Botanic Garden

botanical and ecological research The Garden will uphold its international reputation as industry leaders in the conservation, research and development of Australian, and predominantly NSW native plants, as well as the research, management and conservation of the natural environment. Collaborative links will be established between the Garden and other research and educative institutions to further these programs.

cultural precinct A cultural precinct will be developed in south-western Sydney, of which Mount Annan Botanic Garden will become the focus. This precinct will collectively provide opportunities for education, celebration, recreation, conservation, research and development, and will embrace the ‘Yandel’ora’ concept of the traditional D’harawal people, in providing a peaceful gathering place for learning about the environment and social interaction.

distinctive identity Mount Annan Botanic Garden will continue to be an important part of the Royal Botanic Gardens Sydney, but will develop an identity that is responsive to the social fabric of its local community and location. The Garden will provide an intergenerational legacy for recreation and cultural expression as well becoming an important tourist attraction and a landmark along the Hume Highway.

ESD and design excellence Through its development, management and maintenance the Garden will exhibit the principles of environmentally sustainable design, and its standards of excellence in horticulture and design will be renown.
A number of objectives and strategic programs have been developed under a series of priority areas which are consistent with those identified in the Key Considerations.

The Objectives state the overall aim of each priority area, and Strategic programs are given for each objective, to be implemented over the next twenty years.

Detailed Actions are then developed for each of the strategic programs as part of the Strategic Performance Evaluation Plan.
Promote the continuing growth of Mount Annan Botanic Garden, in line with the strategic direction of the Royal Botanic Gardens and Domain Trust, and establish an identity for the Garden which embraces the natural, social and cultural heritage of the site and is appropriate to the social and cultural fabric of Western Sydney.

Objectives

- Develop roles and activities which strengthen the importance of the Garden as a major botanic facility in western Sydney
- Establish the Garden as a focus within a larger cultural precinct in Western Sydney
- Uphold and continue to promote the national and international reputation of the Garden through continuing horticultural research and development programs
- Increase overall awareness of the Garden, and foster increased visitation levels, drawing from local, regional, state, national, international and virtual catchments
- Develop and promote activities and services focused on community outreach programmes, education and interpretation of the Garden
- Develop and promote opportunities for cultural expression in the Garden
- Establish opportunities within the Garden for the interpretation of local Aboriginal and European cultural heritage
- Foster a ‘customer focus’ for the Garden throughout all areas and activities.

The presence of the Garden

Assert the position of the Garden as a gateway location at the entry to Sydney and as an important regional facility in south-western Sydney.

- Establish a new entry point to the Garden from Narellan Road, where the potential for profile and access is greatest. Ensure this arrival point to the Garden has a sense of arrival and grandeur, catering for tourists as well as local and regional users
- Develop uses, activities and roadside treatments for the Garden east of the central ridgeline and along the Narellan Road frontage that heighten the Garden’s profile in the local area, across south-western Sydney, and as an important point of reference along the Hume Highway
- Promote the Garden as part of a tourist route in the region
- Maintain the strong promotion of Mount Annan Botanic Garden’s links to the Royal Botanic Garden Sydney and Mount Tomah Botanic Garden, yet develop a clear sense of identity and independence at the site development and management level.

Strategic programmes 2000-2020
Objectives

Resolve the functional aspects of the Garden to protect the values of the site, define landscape elements, maximise the opportunities for commercial growth to enhance the overall visitor experience.

Living collections

Develop living collections which present to the community the outstanding diversity and richness of Australia's native flora, and provide a showcase of western Sydney and/or NSW species.

Strategic programmes 2000-2020

- Resolve Garden circulation patterns across the site
- Relocate visitor facilities to maximise their potential for visitor exposure, commercial growth and aesthetic settings
- Preserve the site’s landscape integrity and significant landscape features
- Develop a range of places in the Garden which surprise, intrigue and delight visitors
- Maintain the Theme Gardens as intensive areas for unstructured recreation within the Garden
- Preserve remnant vegetation communities, and use these areas to demonstrate and interpret ecological communities interrelationships
- Extend opportunities to increase visitor awareness of the plant conservation, research and development undertaken in the Garden
- Establish additional carparking areas within the Garden
- Resolve general visitor orientation and signage across the Garden.

- Reconfigure the Garden’s planting thematics and policies
- Enhance opportunities for interpretation of the living collections, to explain messages based on the intricate interrelationships within Australian ecosystems
- Emphasise landscape features and foci across the site by integrating the living collections with other elements and ecosystem components
- Develop areas in the Garden displaying native plants used in formal and contemporary landscape design styles
- Develop opportunities to interpret the Indigenous use of plants as part of the living collections.
Right of access

Provide equity of access as an integral part of the long-term vision for the Garden, ensuring affordability, strong public transport connections and a variety of transport options around the Garden.

Natural systems

Conserve and enhance the natural resources of the Garden and ensure their management as part of the broader ‘living heritage’ of the Garden.

Objectives

- Review entry fee system to the Garden
- Establish a number of different transport options and a hierarchy of path systems across the site
- Integrate the Garden into regional transport and access networks
- Foster equity of access through information provision and consultation.

Strategic programmes 2000-2020

- Ensure protection, management and monitoring of identified remnant vegetation areas within the Garden
- Ensure protection, management and monitoring of native fauna in the Garden
- Undertake to control pest and weed species in the Garden
- Apply the principles of Total Catchment Management to everyday Garden operations and practices
- Protect and manage Garden soils
- Utilise planned fire regimes as part of the reinstatement of natural ecological processes across the site
- Effectively manage the natural systems of the Garden
- Establish opportunities for interpretation of the Garden’s natural systems based on a ‘whole of ecosystems’ interpretation strategy.
Recreation opportunities

Provide a broad spectrum of experiences that are appropriate to the Garden’s values and functions, and that satisfy a broad range of user groups.

Co-operative partnerships and adjoining landuses

Advocate strategic alliances with government and non-government organisations which benefit the Garden’s development and site management, and promote the Garden as a significant botanic and open space facility in NSW, firmly anchored in south-western Sydney.

Objectives

Strategic programmes 2000-2020

- Develop diverse and engaging recreation opportunities across the site
- Ensure that the majority of recreation activities are developed with strong botanical and ecological themes
- Establish recreation linkages from the Garden to other local and regional open space areas
- Establish monitoring processes to ensure that increasing visitor numbers do not impact on the Garden’s core values nor reduce the quality of the Garden experience
- Ensure that the potential for conflict or duplication between different recreational activities within the Garden is minimised.

- Promote the Garden as an advisory body, providing land management information and expertise and advice as well as displaying best practice management techniques to institutions and authorities and the broader community
- Establish and promote collaborative partnerships with industry and educative bodies
- Establish proactive management relationships between Mount Annan Botanic Garden managers, Local Government, other landowners, stakeholders and the community
- Utilise areas of the Garden to interpret surrounding landuses and land management processes
- Encourage community ownership of the Garden and ensure that the Garden achieves compatibility within the local context
- Develop management strategies for the treatment of the interface between the Garden and adjoining lands.
**Site management**

Establish visionary management policies for the Garden that are responsive to the site and its operations, are accessible to and supported by all Garden staff, and optimise opportunities to incorporate principles of environmentally sustainable development.

- Undertake a full review of all site activities, maintenance procedures and staffing requirements at Mount Annan Botanic Garden
- Introduce customer service obligations into all Garden staff roles
- Implement a range of broadacre land management techniques that demonstrate the principles of environmentally sustainable design and development
- Identify and establish a long term, cost-effective water supply for the Garden
- Identify opportunities for alternate power sources within the Garden
- Identify opportunities for recycling within the Garden
- Continue to investigate the potential for enhanced sustainability practices in all Garden operations
- Integrate the use of varying labour sources into the program of works for the Garden
- Establish clear avenues for information dissemination within the structure of the Garden
- Encourage staff involvement, ownership and enjoyment in the development of the Garden.

**Commercial activities**

Ensure the overall viability and financial stability of the Garden by harnessing the Garden’s commercial potential.

- Identify and harness the Garden’s commercial potential for visitor and community facilities
- Investigate the potential for the Garden to work in collaboration with other environmental, educative and/or scientific activities
- Identify the potential for the establishment of appropriate leases of visitor facilities and services
- Regularly undertake studies to review alternate and increased funding opportunities for the Garden.
Developing a Performance Evaluation Plan for the Garden
What is a Performance Evaluation Plan?

A Performance Evaluation Plan is a document which clearly sets out what an organisation, section or individual proposes to do to measure its performance. The Plan can be used to determine whether a service or action has been completed on time, within budget and to the previously agreed service specification or whether an improvement, status quo or decline in efficiency or performance has been achieved.

For an organisation to improve the service it delivers to its customers, it needs to evaluate its current performance. This is essential for it to gain an understanding of what it is doing and how well the service is being delivered. Service delivery improvement cannot be measured unless you have a benchmark or level against which future work can be measured or compared.

What are we measuring

There are a myriad of items that can be measured in the provision of services to customers but it is very important that the right things are measured. Performance measures can be broadly divided into two types;

- Objective
- Subjective

Objective measurement includes items which can be physically determined such as the number of hours required to cut a specific area of lawn measured in square metres or the number of rings a telephone makes before being answered.

Subjective measurement covers items where an interpretation of quality is determined. This form of measurement is often used to assist in determining what the general public thinks about a product or service being provided. A pertinent example is the assessment of what the public thinks of the type of landscape provided at Mount Annan.

Careful consideration must be given at the commencement of the program to work out what it is that is going to be measured and what will be done with the data collected.

Prior to establishing a Performance Evaluation Plan (PEP), consideration also needs to be given to the availability of resources to administer the PEP. It will be a source of frustration to an organisation if it builds or develops a PEP which requires staff in excess of its availability or budgetary provision.

In order that the PEP is manageable it needs to be kept simple. It needs to be remembered why evaluation is being undertaken, ie to monitor or improve performance not to create an activity in itself.
How do we use the PEP?

A PEP can be used to assist management in many facets of an organisation's performance including the following:

- allocation of resources
- determining the relative importance of an area of activity in relation to others, identifying the efficiency of performance by the section, staff and machinery
- determining costs per visit or use of an area
- utilisation rate such as visitation per 000’s head of population
- cost recovery of an area of activity
- performance in meeting set timelines
- utilisation of energy
- meeting environmental targets including use of water and recycling of waste
- commercial return from concessions or leased operations, and
- value for money.

The basic items for data collection involve:

- What is the strategic driver or issue to be addressed?
- What are the actions proposed to address the issue?
- What is the scope of work?
- What standard or quality specification is to apply?
- What are the resources to be allocated?
- What is the time frame for the action to be completed?

The amount of data to be collected will vary depending on the level of review. For strategic planning, management will be more likely to look at trends and variations from the previously agreed standards. However, for operational management such as horticultural services, far more detail will be required to judge performance.

Hence it is important to spend time deciding what performance is to be measured and whether the effort and cost will deliver management within the information to make real improvements in the operation of the organisation.
Development of Key Performance Indicators

Acceptable/ownership by all

For Key Performance Indicators (KPI’s) to be used as an acceptable tool for measuring performance, they should be developed for each section of the organisation in conjunction with the staff working within the section. This should lead to ownership and more readily acceptance to use the KPI’s.

What period of time should be measured?

KPI’s may cover short term goals, targets and actions through to longer term strategic issues. The more detailed short term actions will most likely be very specific in content and have defined time lines, such as weeks or months, for completion. In these instances, management review meetings where performance is reviewed on a weekly or fortnightly basis may be appropriate. For longer term strategic issues, the KPI’s may be referred to on a quarterly or six month basis. It is worthwhile examining all KPI’s on a quarterly basis.

What is done with the data?

Depending on the area or issue being reviewed, the amount of data may vary enormously. For simple assessments it may be appropriate to have the data recorded in a basic report or table. For more complex issues requiring regular and detailed assessments where analyses is undertaken to provide interpretation and information from the data collected, an appropriate database system should be established. The cost of collecting data can be expensive and the data needs to be available for use in management reports and particularly for future planning purposes.

How often should the PEP be reviewed?

There will be areas of operation where activities continue over a long period of time. Equally many actions are relatively short term and therefore the collection of data to provide information for the PEP needs to be reviewed on a regular basis. This can be done monthly within the section responsible for the action but formally by the management group on a quarterly basis.

Systems to be used

Systems to be used in the collection, storage and interpretation of data can be both simple and complex in nature. The type of system needs to match the complexity of the issue being addressed by the relevant section of the PEP. For long term activities where it is necessary, complex or advantageous to be able to quickly access data from previous inspections and assessments, specific electronic systems are most valuable. For simple assessments, a manual record may be appropriate.
Developing a Performance Evaluation Plan for Mount Annan Botanic Garden

The Strategic Programs and Key Considerations which have been identified in this report provide a useful basis for developing a Performance Evaluation Plan for the Garden. The strategic programs previously identified are now developed further, and associated actions are assigned to each program to progress its implementation. However, it is important to recognise that the Site Master Plan for Mount Annan Botanic Garden is a broad and strategic document, and as such does not develop programs and actions to a level where a measurable performance indicators can be used to determine success.

The Performance Evaluation Plan developed as part of this document identifies Strategic Programs which are consistent with Garden issues and objectives, associated actions for each of these programs, and the outcomes of these programs. Time frames and responsibilities have been developed in conjunction with the RBG Project Control Team and are indicated for each program. Figure 42 details the steps in developing the Performance Evaluation Plan.

There are several steps remaining in order to develop a set of Key Performance Indicators (KPI's) for each program. Garden Managers must further analyse each of the associated actions to identify detailed task listings, accurate time frames for each of these tasks and groups and/or specific personnel for each task (refer Figure 43, below). This will enable meaningful and measurable performance indicators to be written for each of the strategic programs.

![Figure 42](image)

It is appropriate to write Key performance Indicators for many actions only after the feasibility and planning has been completed and the scope of the action or task is understood. In many cases, a series of Key Performance Indicators will need to be developed as the strategic program travels through a number of phases from planning, through budget provision and procurement, and then construction and establishment.

Key Performance Indicators for actions should be progressively prepared by Garden Management as each strategic program and action is worked on. The Key Performance Indicators should be reviewed every twelve months.
### Site Planning/Design/Management

<table>
<thead>
<tr>
<th>Site Master Plan</th>
<th>Monitoring and evaluation processes</th>
<th>Review periods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Garden values</td>
<td></td>
<td>3-5 years</td>
</tr>
<tr>
<td>Key considerations</td>
<td></td>
<td>3-5 years</td>
</tr>
<tr>
<td>Garden vision</td>
<td></td>
<td>3-5 years</td>
</tr>
<tr>
<td>Strategic objectives</td>
<td></td>
<td>3-5 years</td>
</tr>
<tr>
<td>Strategic programs</td>
<td>Strategic program outcomes</td>
<td>1-3 years</td>
</tr>
<tr>
<td>Strategic actions</td>
<td></td>
<td>1 year</td>
</tr>
</tbody>
</table>

### Detailed site planning and design

- Feasibility studies
- Concept design
- Design development
- Detailed design and documentation

### Project Performance Evaluation Plan

- Key performance indicators
- Project dependant

### Management / operations plans

- Specific management plans
- Maintenance procedures
- Staffing requirements

### Operations Performance Evaluation Plan

- Site inventory / operational standards
- 2-4 years
- 1-3 years
- 1 year

---

**Figure 43**
The process of developing Performance Evaluation Plans for the Garden
**Time frames**

The following plan also denotes an expected time frame. This time frame relates to the completion of each of the strategic programs through the listed associated actions, and as such is broad in its measurements. For the purpose of this plan, time frames have been measured in the following increments:

- **Short term - 0-5 years**
  These programs are seen as high priority items and should begin to be actioned as soon as possible.

- **Medium term - 5-10 years**
  These programs are seen as medium priority items and should begin to be actioned as soon as high priority items are completed.

- **Long term - 10-25 years**
  These programs are strategic in their nature and may take several decades to complete.

- **Ongoing**
  An arrow below the time frame bar indicates that the program and its associated actions are ongoing.
Responsibilities

The Responsibility field has been developed in conjunction with the RBG Project Control Group. Primary responsibility for each action are shown in bold, followed by other key staff. Positions listed are as follows:

Royal Botanic Gardens Sydney

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Role Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBGDT</td>
<td>Royal Botanic Gardens and Domain Trust</td>
</tr>
<tr>
<td>DRBG</td>
<td>Director and CEO, Royal Botanic Gardens Sydney</td>
</tr>
<tr>
<td>DBGPP</td>
<td>Director, Botanic Gardens and Public Programs</td>
</tr>
<tr>
<td>DMC</td>
<td>Director, Marketing and Communication</td>
</tr>
<tr>
<td>DCS</td>
<td>Director, Corporate Services</td>
</tr>
<tr>
<td>BSM</td>
<td>Manager, Business Services</td>
</tr>
<tr>
<td>MCHR</td>
<td>Manager, Conservation and Horticultural Research</td>
</tr>
<tr>
<td>MIT</td>
<td>Manager, Information Technology</td>
</tr>
<tr>
<td>CEM</td>
<td>Community Education Manager</td>
</tr>
<tr>
<td>AEO</td>
<td>Aboriginal Education Officer</td>
</tr>
</tbody>
</table>

Mount Annan Botanic Garden

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Role Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM</td>
<td>Curator/Manager</td>
</tr>
<tr>
<td>HDO</td>
<td>Horticultural Development Officer</td>
</tr>
<tr>
<td>CEO</td>
<td>Community Education Officer</td>
</tr>
<tr>
<td>CRO</td>
<td>Community Relations Officer</td>
</tr>
<tr>
<td>SR</td>
<td>Senior Ranger</td>
</tr>
<tr>
<td>HSHS</td>
<td>Horticultural Supervisor Horticultural Services</td>
</tr>
<tr>
<td>HSGS</td>
<td>Horticultural Supervisor Garden Services</td>
</tr>
<tr>
<td>HSN</td>
<td>Horticultural Supervisor Nursery</td>
</tr>
<tr>
<td>SH</td>
<td>Senior Horticulturalist</td>
</tr>
<tr>
<td>EO</td>
<td>Environmental Officer</td>
</tr>
</tbody>
</table>
Strategic Performance Evaluation Plan

The SPEP is divided into the priority areas as defined in the Key Considerations and the Strategic Programs for the development of the Garden, as follows:

#1 The growth of the Garden
#2 The presence of the Garden
#3 The physical site
#4 Living collections
#5 Right of access
#6 Natural systems
#7 Recreation opportunities
#8 Adjoining landuses
#9 Establishing co-operative partnerships
#10 Site management
#11 Commercial activities
### The growth of the Garden

Promote the continuing growth of Mount Annan Botanic Garden, in line with the strategic direction of the Royal Botanic Gardens and Domain Trust, and establish an identity for the Garden which embraces the natural, social and cultural heritage of the site and is appropriate to the social and cultural fabric of western Sydney.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Strategic programs and associated actions</th>
</tr>
</thead>
</table>
| **Develop roles and activities which strengthen the importance of the Garden as a major botanic and open space facility in south-western Sydney.** | • As depicted in the Site Development Plan, advocate that future development focuses botanic activities in the central area of the site, and the advisory/commercial and open space/recreation activities in the north of the site.  
• As depicted in the Site Development Plan, regulate the activities to maintain a balance between scientific, commercial and public open space uses.  
• Advocate the development of a sense of identity and a range of functions for the Garden that are responsive to the social and cultural fabric of south-western Sydney (eg. passive open space and picnic facilities) |
| **Establish the Garden as a focus within a larger cultural precinct in Western Sydney.** | • Establish a co-operative venture with Garden neighbours including the University of Western Sydney, the Elizabeth Macarthur Agricultural Institute, the Campbelltown College of TAFE and the National Parks and Wildlife Service to develop and promote this cultural precinct and the numerous opportunities for education, recreation, conservation, research and development it provides  
• Work with local Councils and relevant government and non-government agencies to identify possible funding sources for the development of the cultural precinct  
• Continue to work with local Aboriginal groups to develop and integrate the 'Yandel'ora' concept into the precinct  
• As shown in the Site Development Plan, work with the RTA, adjoining landowners and local Councils to establish distinctive roadside plantings to signify the extent of this precinct along the Hume Highway and Narellan Road  
• Liaise with the Sydney Catchment Authority to establish a schedule for the development of regional pedestrian and cycle systems across the site, utilising the Sydney Water Supply Canal  
• Work with local Councils and Landcom to establish pedestrian and cycle connections from the surrounding local areas across the precinct |
| **Uphold and continue to promote the national and international environmental reputation of the Garden through continuing research and development programs.** | • Advocate the undertaking of varied and innovative research and development programs at Mount Annan Botanic Garden  
• Promote the Garden’s industry leadership and cutting-edge technologies through these programs, at national and international levels  
• Promote the Garden’s reputation as specialist in the research and development of Australian and predominately NSW native plants, and the conservation of the natural environment.  
• Encourage cross-institution collaborative research between the Garden and other scientific organisations |
The Garden develops to become an integral botanic and open space facility within south-western Sydney

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Responsibility</th>
<th>Program outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>ongoing</td>
<td>RBGDT, DIR, DBGPP, CM, HDO</td>
<td></td>
</tr>
<tr>
<td>ongoing</td>
<td>RBGDT, DIR, DBGPP, CM, HDO</td>
<td></td>
</tr>
<tr>
<td>ongoing</td>
<td>RBGDT, DIR, DBGPP, CM, HDO</td>
<td></td>
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</tbody>
</table>

A cultural precinct is developed in south-western Sydney of which Mount Annan Botanic Garden is the focus

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Responsibility</th>
<th>Program outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 yr (establish committee)</td>
<td>DBGPP, DM, C, CM, CRO</td>
<td></td>
</tr>
<tr>
<td>commenced and ongoing</td>
<td>CM, DM, C, CRO</td>
<td></td>
</tr>
<tr>
<td>commenced 0-5 years</td>
<td>CM, AEO</td>
<td></td>
</tr>
<tr>
<td>commenced 0-5 years</td>
<td>CM, HDO</td>
<td></td>
</tr>
<tr>
<td>0-5 years</td>
<td>CM, HDO</td>
<td></td>
</tr>
<tr>
<td>3 years</td>
<td>CM, HDO</td>
<td></td>
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</tbody>
</table>

Mount Annan Botanic Garden is recognised and valued nationally and internationally for its leading research and development programs.

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Responsibility</th>
<th>Program outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>ongoing</td>
<td>RBGDT, DIR, DBGPP, CM, HDO</td>
<td></td>
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<tr>
<td>ongoing</td>
<td>DIR, DBGPP, CM, HDO</td>
<td></td>
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<tr>
<td>ongoing</td>
<td>DIR, DBGPP, CM, HDO</td>
<td></td>
</tr>
<tr>
<td>ongoing</td>
<td>DIR, DBGPP, CM, HDO</td>
<td></td>
</tr>
<tr>
<td>Topic</td>
<td>Strategic programs and associated actions</td>
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<tr>
<td>---------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Increase overall awareness of the Garden, and foster increased</td>
<td>• Develop a Marketing Plan for the Garden in order to undertake programs of promotion across the range of</td>
<td></td>
</tr>
<tr>
<td>visitation levels, drawing from local, regional, state, national,</td>
<td>potential visitation groups listed above, using a variety of media types</td>
<td></td>
</tr>
<tr>
<td>international and virtual catchments</td>
<td>• Increase the Garden’s general profile in the local and metropolitan media</td>
<td></td>
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<tr>
<td></td>
<td>• Regularly promote the Garden’s Events Program and other activities to a wide visitor catchment</td>
<td></td>
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<tr>
<td></td>
<td>• Increase Garden profile and levels of signage on the Hume Highway</td>
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<td></td>
<td>• Promote the Garden as a ‘journey break’ between Sydney and Canberra</td>
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<tr>
<td></td>
<td>• Develop a comprehensive web site where virtual visitors can access ecological, horticultural and</td>
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<tr>
<td></td>
<td>botanical information and advice, and participate in on-line forums. Develop this web site in</td>
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<tr>
<td></td>
<td>conjunction with the Royal Botanic Gardens Sydney Centre for Plant Conservation</td>
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<tr>
<td></td>
<td>• Continue working with media personalities to promote Garden activities</td>
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<tr>
<td></td>
<td>• Promote the ‘Friends of the Garden’, volunteer guides and other community-based activities associated</td>
<td></td>
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<tr>
<td></td>
<td>with the Garden</td>
<td></td>
</tr>
<tr>
<td>Develop and promote activities and services focussed on</td>
<td>• Promote the Garden’s advisory services and expertise on plants, garden design, model gardens and</td>
<td></td>
</tr>
<tr>
<td>community outreach programmes, education and interpretation of the</td>
<td>product information, education on aspects of gardening and domestic horticulture, pest and disease</td>
<td></td>
</tr>
<tr>
<td>Garden</td>
<td>diagnosis and advice.</td>
<td></td>
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<td></td>
<td>• Establish the Centre for Urban Horticulture and use this Centre to promote and deliver the above</td>
<td></td>
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<tr>
<td></td>
<td>services to the community</td>
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<tr>
<td></td>
<td>• Provide a range of community gardens as part of the Centre for Urban Horticulture, including gardens</td>
<td></td>
</tr>
<tr>
<td></td>
<td>for permaculture, therapeutic horticulture, and gardens for the disabled</td>
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</tr>
<tr>
<td></td>
<td>• Continue to develop and promote a variety of community education programs offered by the Garden,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>covering topics such as gardening, botany, do-it-yourself garden design and construction and nature</td>
<td></td>
</tr>
<tr>
<td></td>
<td>appreciation, as well as art, cooking and health and well-being classes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Extend the existing program of events in the Garden that encourage the local community to use the</td>
<td></td>
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<tr>
<td></td>
<td>Garden on a regular basis, such as open-air theatre and performance, music concerts, fauna tours</td>
<td></td>
</tr>
<tr>
<td></td>
<td>by night and star-gazing</td>
<td></td>
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<tr>
<td></td>
<td>• Continue to develop and promote annual community events held in the Garden such as the Mount Annan</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Challenge Walk</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Consider regular activities such as Community Markets at the Garden on a monthly basis, featuring</td>
<td></td>
</tr>
<tr>
<td></td>
<td>plant and cut flower sales, as well as books and local arts and crafts.</td>
<td></td>
</tr>
<tr>
<td>Time Frame</td>
<td>Responsibility</td>
<td>Program outcome</td>
</tr>
<tr>
<td>----------------------</td>
<td>----------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>1 year</td>
<td>DMC, CM, CRO</td>
<td>Garden visitation increases across all sectors.</td>
</tr>
<tr>
<td>established and ongoing</td>
<td>DMC, CM, CRO</td>
<td></td>
</tr>
<tr>
<td>0-5 years</td>
<td>CRO, CM</td>
<td></td>
</tr>
<tr>
<td>0-5 years</td>
<td>CRO, CM</td>
<td></td>
</tr>
<tr>
<td>0-5 years</td>
<td>DMC, CM, IT Mgr</td>
<td></td>
</tr>
<tr>
<td>ongoing</td>
<td>DMC, CM, CRO</td>
<td></td>
</tr>
<tr>
<td>ongoing</td>
<td>CM, CRO, Friends MABG</td>
<td></td>
</tr>
<tr>
<td>3-5 years</td>
<td>DBGPP, CM, CRO</td>
<td>The Garden is highly valued by the community for its range of educative, interpretative activities and entertainment services.</td>
</tr>
<tr>
<td>1-5 years</td>
<td>DBGPP, CM</td>
<td></td>
</tr>
<tr>
<td>1-5 years</td>
<td>DBGPP, CM, CEM</td>
<td></td>
</tr>
<tr>
<td>1-5 years</td>
<td>DBGPP, CM, CEM, CRO</td>
<td></td>
</tr>
<tr>
<td>commenced and ongoing</td>
<td>CRO</td>
<td></td>
</tr>
<tr>
<td>commenced and ongoing</td>
<td>CRO</td>
<td></td>
</tr>
<tr>
<td>1 yr</td>
<td>CRO</td>
<td></td>
</tr>
</tbody>
</table>
### Develop and promote opportunities for cultural expression in the Garden

- Establish and promote a diversity of events, festivities and activities in the Garden that encourage contemporary cultural expression, such as open-air theatre and performance, music concerts, fauna tours by night and star-gazing
- Establish and promote an Arts Program for the Garden, featuring art exhibitions in the proposed Narellan Road Visitor Centre or the proposed Garden Restaurant south of the lake
- Encourage the placement of environmental and sculptural artworks across the site (such as the Millennium Maize) produced by both Garden staff, the local community and local artists.
- Promote the Garden as a venue for seminars, conferences, gatherings and demonstrations on subjects related to botanical and ecological issues.

### Establish opportunities within the Garden for the interpretation of local Aboriginal and European cultural heritage

- Develop interpretation programs based on the associations between the Garden and the early settlement of the area, such as the history of the Cowpastures area, its early European exploration by figures such as George Caley and Watkin Tench, and early European figures in the area such as John and Elizabeth Macarthur.
- Develop interpretation programs based on the historic Glenlee Estate, of which the Garden was once part, its owner, William Howe, and the former farming uses of the site such as agriculture and dairying.
- Develop interpretation programs based on the local Aboriginal history, the stories of the D’harawal people and the concept of Yandel’ora.
- Working with the Sydney Catchment Authority, develop interpretation programs for the Sydney Water Supply Canal, its importance to the development of Western Sydney and stories of its construction and significance as an historic engineering project.

### Foster a ‘customer focus’ for the Garden throughout all areas and activities.

- Develop policies to ensure that Garden activities and staff have a customer focus.
- Develop and implement programs and surveys to evaluate the customer service focus of all Garden events and activities.
- Develop and implement staff training programs to develop customer services skills for all garden staff.
The Garden is recognised and valued for its range of events and activities promoting cultural expression.

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<thead>
<tr>
<th>Time Frame</th>
<th>Responsibility</th>
<th>Program outcome</th>
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<tbody>
<tr>
<td>1-5 years</td>
<td>CRO</td>
<td>The Garden is recognised and valued for its range of events and activities promoting cultural expression.</td>
</tr>
<tr>
<td>1-5 years</td>
<td>CRO</td>
<td>Interpretation programs are developed within the Garden providing visitors with opportunities to interpret the local Aboriginal and European cultural heritage.</td>
</tr>
<tr>
<td>1year</td>
<td>CRO</td>
<td>All Garden events, activities and staff display a customer service focus.</td>
</tr>
<tr>
<td>1-5 years</td>
<td>CRO</td>
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<tr>
<td>Topic</td>
<td>Strategic programs and associated actions</td>
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</table>
| The presence of the Garden | **Establish a new entry point to the Garden from Narellan Road, where the potential for profile and access is greatest.** Ensure this arrival point to the Garden has a sense of arrival and grandeur, catering for tourists as well as local and regional users.  
- Undertake a full feasibility study and business plan for a Garden Visitors Centre on Narellan Road incorporating the proposed Centre for Urban Horticulture  
- Develop design concept plans for the Narellan Road entry, integrating a new Gardens Visitor Centre, Centre for Urban Horticulture, main Garden carpark, and provision for overflow parking  
- Consider the establishment of a National architectural design competition for the Garden Visitor Centre building  
- Continue liaison with the RTA as development adjacent to the Garden occurs to establish an entry point intersection and associated slip lanes on Narellan Road  
- Liaise with Camden Council to locate the Camden Tourist Information Centre as part of the new development.  
- Undertake staged construction of the new entrance and associated buildings in accordance with the business plan  
- Continue liaison with the Sydney Catchment Authority regarding their Kenny Hill depot and operations. |
| | **Develop uses, activities and roadside treatments for the Garden east of the central ridgeline and along the Narellan Road frontage that heighten the Garden’s profile in the local area, across south-western Sydney, and as an important point of reference along the Hume Highway**  
- Prepare a design concept plan for the roadside areas on the Hume Highway and Narellan Road  
- Work with Camden and Campbelltown Councils and the RTA to develop distinctive roadside and median plantings along the Hume Highway and Narellan Road and at the interchange  
- Work with the RTA to increase Garden signage levels on both the Hume Highway and Narellan Road  
- Undertake a feasibility study for a production plantation across the lower slopes east of the central ridgeline, and if feasibility is determined, lease out this portion of the site for the development of a plantation and depot area. |
A new entrance for the Garden is developed on Narellan Road. Surveys are undertaken to establish the awareness of the Garden amongst travellers using Narellan Road and the Hume Highway before the new uses are developed. Follow up surveys are undertaken to determine the effectiveness of the new uses.

The Garden’s profile across a number of levels is raised by uses and activities developed east of the central ridgeline and along Narellan Road.
<table>
<thead>
<tr>
<th>Topic</th>
<th>Strategic programs and associated actions</th>
</tr>
</thead>
</table>
| **The presence of the Garden cont’d.** | **Promote the Garden as part of a tourist route in the region**  
- Prepare a new tourism marketing strategy for the Garden incorporating the new visitor facilities and programs  
- Develop appropriate visitor facilities (including tourist information facilities and a cafe) to attract visitors to the Camden area  
- Include Mount Annan Botanic Garden, its services and products in a range of tourist promotional material for the south-west Sydney region, including signposts, brochures and electronic media  
- Provide bus parking areas and designated picnic areas to cater for coach tours  
- In conjunction with other tourist facilities in the region, and selected coach tour operators, develop specific tours of south-western Sydney, which include Mount Annan Botanic Garden  
- Market the Garden to domestic and international tourists utilising channels such as the NRMA road magazine, hotel tourist brochures and inflight magazines. |
| | **Maintain the strong promotion of Mount Annan Botanic Garden’s links to the Sydney Botanic Gardens and Domain and Mount Tomah Botanic Garden, yet develop a clear sense of identity and independence at the site development and management level.**  
- Develop programs in conjunction with the Sydney and Mount Tomah Gardens to promote the trilogy of Garden locations, living collections, research and development programs and Garden activities  
- Investigate the feasibility of decentralising certain operations at the Sydney Gardens, including focussing all nursery activities at Mount Annan, and possibly the herbarium.  
- Continue to develop programs to promote the unique location and activities of Mount Annan Botanic Garden  
- Encourage independence and a certain level of autonomy for Mount Annan regarding site management and financial planning. |
The Garden develops to become an important component of the RBG trilogy, but is distinctively different in its services, products and site management.

Promotional material detailing the connections and unique characteristics of Mount Annan Botanic Garden continues to be displayed at the Royal Botanic Gardens Sydney and Mount Tomah Botanic Garden.

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Responsibility</th>
<th>Program outcome</th>
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<tbody>
<tr>
<td>1-2 years</td>
<td>DMC, CM, CRO</td>
<td>The Garden is featured in a range of tourist promotional material and is recognised as an important focus of the tourist routes established in south-west Sydney.</td>
</tr>
<tr>
<td>1 year</td>
<td>CM, CRO</td>
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<tr>
<td>initiated and ongoing</td>
<td>CRO</td>
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<tr>
<td>initiated and ongoing</td>
<td>CM, HSGS</td>
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<tr>
<td>initiated and ongoing</td>
<td>CRO</td>
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<tr>
<td>1-2 years</td>
<td>CRO</td>
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<tr>
<td>1-2 years</td>
<td>DMC, CM, CRO</td>
<td>The Garden develops to become an important component of the RBG trilogy, but is distinctively different in its services, products and site management.</td>
</tr>
<tr>
<td>1-5 years</td>
<td>DIR, DBGPP, DPS</td>
<td>Promotional material detailing the connections and unique characteristics of Mount Annan Botanic Garden continues to be displayed at the Royal Botanic Gardens Sydney and Mount Tomah Botanic Garden.</td>
</tr>
<tr>
<td></td>
<td>initiated and ongoing</td>
<td>CM, CRO</td>
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<tr>
<td></td>
<td>initiated and ongoing</td>
<td>DIR, DBGPP, CM</td>
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<tr>
<td>Topic</td>
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</table>
| **The physical site** | **Resolve garden circulation patterns across the site**  
- Ensure that the reconfiguration of Garden circulation patterns are responsive to a new point of entry on Narellan Road, and the locations of all visitor facilities, as shown in the Site Development Plan  
- Alter the vehicular direction around the central road loop, around the current visitor centre and cafe, from clockwise to anti-clockwise  
- In conjunction with the development for the new Garden entry on Narellan Road, construct the areas of 2-way roads as shown in the Site Development Plan  
- Locate a new entry to the Garden proper just south of the Woodland Conservation Area adjacent to Mount Annan Drive as shown in the Site Development Plan. Ensure this entrance has a sense of arrival and grandeur.  
- Construct an entrance booth along this section of road.  
- Once roads are completed, limit the use of the entry from Mount Annan Drive to a secondary entrance primarily for bus groups, staff and service access & events. |
| **Relocate visitor facilities to maximise their potential for visitor exposure, commercial growth and aesthetic settings** |  
- Incorporate a Garden cafe, retail outlet and information centre into the development for the Narellan Road entry  
- Undertake a feasibility study for the proposed Garden Restaurant and function centre south of the main lakes, and following these results, prepare plans for the design and construction of this building  
- Consider the establishment of a National architectural design competition for the siting and design of the Garden restaurant building  
- Develop the Children’s Eco-Garden and Adventure playground adjacent to the Wattle Garden as shown in the Site Development Plan  
- Establish a Garden Cafe and display house at lakeside as shown in the Site Development Plan. |
| **Preserve the site's landscape integrity and significant landscape features** |  
- Develop comprehensive landscape management plans for the maintenance and preservation of significant landscape features, such as the cleared hilltops, the central valley, the ridgeline and the lakes and dams on site. |
| **Develop a range of places and experiences in the Garden which surprise, intrigue and delight visitors** |  
- As shown in the Site Development Plan, advocate the division of the site to focus Botanic Gardens activities in the south of the site, and botanic parkland activities in the north of the site.  
- As shown in the Site Development Plan, reconfigure existing facilities and develop new areas to provide a diversity of places and experiences across the site.  
- Establish a strong botanic node near the centre of the site, focussed on the reconfigured Terrace Garden and a series of contemporary Australian Gardens.  
- Develop picnic and passive recreation facilities in the northern section of the site, focussed on the central valley and Woodlands Conservation Areas  
- Prepare design concept plans for areas where detailed landscape design is required such as the Terrace Garden and adjoining areas and the large scale plantings including the proposed Wollemi Pine grove. |
Circulation patterns are reconfigured in accordance with the Site Development Plan to improve traffic flow and promote access and exposure to all visitor facilities. A new entry point to the site is established on Narellan Road, with an entry road to the Garden proper located just south of the Woodland Conservation Area adjacent to Mount Annan Drive.

New visitor and commercial facilities are established as depicted in the Site Development Plan.

Landscape Management Plans are developed to manage different areas of the site and are regularly reviewed and updated. Significant landscape features are identified and the overall integrity of the site is managed and protected for the long term.

The site is developed to provide a range of places and experiences which surprise, intrigue and delight visitors. Surveys of gardens users positively identify the range of places and experiences offered in the Garden.
Maintain the Theme Gardens as intensive areas for unstructured recreation within the Garden.

- As shown in the Site Development Plan, maintain the Theme Gardens as high quality picnic areas with horticultural display elements, and allow each Garden to develop its own character
- Develop new areas of structure planting in the Theme Gardens, providing species diversity and shade, and reducing some of the problems experienced with monoculture plantings
- Develop the Children’s Eco-Garden and Adventure Playground adjacent to the Wattle Garden, promoting this area for family interaction, childrens activities and entertainment
- Retain the Bottlebrush Garden in its current form, and undertake planning for this area as a future point of entrance for the Garden once the rail connection is established
- Continue to maintain the Banksia Garden as a tranquil picnic area set in a cool and shady gully
- Connect the Theme Gardens to other areas of activity by establishing strong pedestrian and cycle connections into these areas, particularly from the Water canal path system, linking through using the proposed Palm Grove and Rainforest walk.

Preserve remnant vegetation communities, and use these areas to demonstrate and interpret ecological communities and interrelationships

- Identify, extend and preserve areas of remnant vegetation as shown in the Site Development Plan, and include native grasslands, Cumberland Plain Woodland, Western Sydney Dry Rainforest, and Sydney River Flat Forest
- Manage these areas as detailed in the Natural Systems Management Report in the appendices to this plan
- Establish interpretation opportunities throughout these remnant communities, interpreting the unique ecological components and complex interrelationships of each.
- Incorporate into interpretation plans for the Garden such topics as: the value of the remnant natural vegetation, its relevance to the history of the site and the role of bushland regeneration work in restoring the remnants
- Continue to develop the Gardens Education program to include these interpretation opportunities
- Establish a number of structured walks across the site, allowing the visitor to experience different vegetation communities and their geologies, learn about different floral species and their requirements, and understand the interrelationships between native fauna and particular vegetation communities
### Theme Gardens

The Theme Gardens are maintained as high quality areas for unstructured recreation. Each Garden develops its own character and range of functions, and all are well connected to the pedestrian and cycle network across the site.

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Responsibility</th>
<th>Program outcome</th>
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<tbody>
<tr>
<td>ongoing</td>
<td>HDO, HSHS</td>
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<tr>
<td>1-3 years</td>
<td>HDO, HSHS</td>
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<tr>
<td>1-3 years</td>
<td>HDO, HSHS</td>
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<tr>
<td>ongoing</td>
<td>HDO</td>
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</tr>
<tr>
<td>ongoing</td>
<td>HDO, HSHS</td>
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<tr>
<td>0-5 years</td>
<td>CM, HDO</td>
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### Remnant Vegetation Communities

A variety of remnant vegetation communities across the site are preserved and managed. Interpretation opportunities are established within each community, and as an important component of the Gardens Education program.

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<tr>
<th>Time Frame</th>
<th>Responsibility</th>
<th>Program outcome</th>
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<tr>
<td>identified and</td>
<td>SH (Nat Area Mgmt)</td>
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<tr>
<td>ongoing</td>
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<td></td>
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<tr>
<td>1-3 years</td>
<td>CEM, CEO, SR, SH (Nat Area Mgmt)</td>
<td></td>
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<tr>
<td>1-3 years</td>
<td>CEM, CEO, SR, SH (Nat Area Mgmt)</td>
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<tr>
<td>1-3 years</td>
<td>CEM, CEO</td>
<td></td>
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<tr>
<td>1-3 years</td>
<td>CEM, CEO, SR</td>
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<tr>
<td>Topic</td>
<td>Strategic programs and associated actions</td>
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</table>
| **The physical site cont’d.**                                        | **Extend opportunities to increase visitor awareness of the plant conservation, research and development undertaken in the Garden**  
  • Consider allowing controlled public access to parts of the Garden Nursery and Seedbank, which would provide a valuable education role and also provide effective promotion and exposure for the research programmes  
  • Develop and promote interpretation programs and tours of the Nursery and Seed Bank  
  • Establish layby parking areas north-east of the Nursery as shown in the Site Development Plan and establish interpretation facilities at this point. Explain the unique stories of the place, including this research centre as the ‘home’ of the Wollemi Pine research.  
  • Consider the implementation of trial beds around the Garden, particularly as part of the Centre for Urban Horticulture  
  • Identify and advocate opportunities for the Garden to work collaboratively with other institutions (such as the Elizabeth Macarthur Agricultural Institute) on horticultural research and development programs, and promote this collaboration.  
| **Establish additional carparking areas within the Garden**          | • As shown in the Site Development Plan, locate a main carpark for approximately 350 vehicles within the development on Narellan Road, and make provision for overflow carparking for an additional 200 vehicles also in this precinct.  
  • As shown in the Site Development Plan, redevelop the area within the central loop to provide carparking for approximately 400 vehicles, and make provision for overflow parking to the east of this area, below the lake wall, for an additional 300 vehicles.  
  • Develop new areas of lay-by carparking across the site as shown in the Site Development Plan, including larger parking areas for the proposed Restaurant and function centre, and the Land Management Centre.  
  • Undertake detailed design and staged construction for each of the carpark areas noted.  
| **Resolve general visitor orientation and signage across the Garden** | • As shown in the Site Development Plan, develop new road systems, and dedicated pedestrian and cycle systems to resolve visitor orientation across the site.  
  • Develop a consistent signage strategy for the whole site, which details the site’s functions as a botanic garden and botanic parkland and clearly identifies visitor facilities and general orientation.  
  • Undertake visitor surveys at regular intervals to ensure the successful implementation and upkeep of new visitor orientation and signage. |
Marketing programs, promotion and interpretation facilities have been developed and awareness of the facilities and the work undertaken increases.

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<tbody>
<tr>
<td>1-3 years</td>
<td>SR, CEO</td>
<td>Carparking areas are established across the site as shown in the Site Development Plan.</td>
</tr>
<tr>
<td>1-3 years</td>
<td>SR, CEO</td>
<td></td>
</tr>
<tr>
<td>3-5 years</td>
<td>CM, HSGS, SR, CEO</td>
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<tr>
<td>3-5 years</td>
<td>CM, HDO</td>
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<tr>
<td>1-3 years</td>
<td>DPS</td>
<td></td>
</tr>
<tr>
<td>3 years</td>
<td>CM, HSGS</td>
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<tr>
<td>3 years</td>
<td>CM, HSGS</td>
<td></td>
</tr>
<tr>
<td>1-3 years</td>
<td>CM, HSGS</td>
<td>Visitor orientation and signage across the site are much improved and regular monitoring through visitor surveys confirms this.</td>
</tr>
<tr>
<td>initiated and ongoing</td>
<td>CM, SR</td>
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</table>

Visiting orientation and signage across the site are much improved and regular monitoring through visitor surveys confirms this.
### Topic: Living collections

#### Strategic programs and associated actions

**Reconfigure the Garden’s planting thematics and policies**
- Working with the framework of existing plantings, begin to focus new plantings within the living collections on plants endemic to the western Sydney region and NSW, to include a showcase of species endemic to western Sydney and NSW species.

**Enhance opportunities for the interpretation of the living collections, to explain messages based on the intricate interrelationships within Australian ecosystems**
- Develop a number of interpretation opportunities across the site to explain messages based on the intricate interrelationships within Australian ecosystems.
- Develop these messages to detail relationships, processes and interdependencies at both the micro and macro scales.
- Encourage the use of a variety of mediums, including the use of audio and visual presentations.

**Emphasise landscape features and foci across the site by integrating the living collections with other elements and ecosystems components**
- As shown in the Site Development Plan, incorporate the living collections with other Garden features such as the water harvesting wildflower embankments, the Eastern Forest communities, the Callitris forest, and the Wollemi Pine grove.
- Use these opportunities to strengthen the landscape impact and botanical experience of the site, as well as providing opportunities to interpret the incorporation of environmentally sustainable design principles across the site.

**Develop areas in the Garden displaying native plants used in formal and contemporary landscape design styles**
- Identify opportunities within the Garden to design horticultural displays which draw from the full spectrum of Australian native plants and uses them as formal elements in a way that is distinctively Australian, innovative and contemporary.
- Identify opportunities to run National design competitions for the detailed design of these new areas.

**Develop Indigenous features as part of the living collections**
- Consult with local Aboriginal groups as part of the conceptual development of any Aboriginal features to ensure they are relevant to Aboriginal culture.
- As shown in the Site Development Plan, develop an Indigenous Garden that uses traditional Aboriginal storytelling methods to explain the many Aboriginal uses of native plants for general, medicinal and food purposes.
A redevelopment program has been formulated to enable the introduction of plants endemic to the south-west Sydney region and NSW.

The living collections at Mount Annan Botanic Garden provide a variety of interesting and surprising opportunities to interpret the intricate interrelationships within Australian ecosystems.

Living collections are presented in the Garden using traditional methods of horticultural display, as well as integrating the collections with landscape features and foci across the site.

Mount Annan Botanic Garden is recognised for its innovative, formal and contemporary landscape designs utilising native plants.

The Garden’s living collections include an Indigenous Garden.
Right of access

Provide equity of access as an integral part of the long term vision for the Garden, ensuring affordability, strong public transport connections and a variety of transport options around the Garden.

Review entry fee system to the Garden

- As indicated in the Site Development Plan and site planning principles, consider not charging entry fees for entry to the Visitor Centre precinct.
- Conduct a review of the impacts and benefits of entrance fees into the Garden in order to confirm the benefits or otherwise of entry fees.
- Consider implementing a season pass linked to the ‘Friends of the Garden’ or a similar scheme for frequent visitors.
- Consider implementing a scheme whereby visitors spending a certain amount at any of the food or retail outlets within the Garden may be eligible to have their entrance fee refunded.
- Provide all visitors with the opportunity to understand the benefits of revenue raised through entry fees, displaying information on general Garden growth and the provision of new facilities as a result of visitor’s contribution.

Establish a number of different transport options and a hierarchy of path systems across the site

- Determine a range of roads and path systems across the Garden, for use by vehicular traffic, people movers, pedestrians and cyclists, that traverse the site and are well-connected both internally and externally, as shown in the Site Development Plan and supporting diagrams.
- Ensure that these path systems are responsive to desired circulation patterns and carrying capacities of given areas.
- Maintain the vehicular roads as sealed routes and restrict car movements beyond these circuits.
- Introduce and extend where possible, a people-mover form of transportation and maintain a sealed circuit for this use.
- Provide a sealed primary pedestrian and cycle path system around the entire site, that allows equitable access for visitors with limited mobility, wheelchairs and prams.
- Encourage cyclist use of the Garden, and connect the Garden to the Camden cycle network, south to the Nepean River, and north to Narellan.
- Develop a series of development and maintenance specifications across the hierarchy of roads and paths in the Garden and implement these with each area group, determining width, surfaces, obstructions etc.
- Undertake ongoing investigations into alternative transport options around the Garden.
A review of fees and charges for entry to various parts of the Garden is undertaken and recommendations made to Garden management.

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<tr>
<th>Time Frame</th>
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<tbody>
<tr>
<td>3-5 years</td>
<td>CM, DMC</td>
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<tr>
<td>1-3 years</td>
<td>CM, DMC</td>
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<tr>
<td>1 year</td>
<td>DIR, Friends Exec Comm</td>
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<tr>
<td>initiated</td>
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<td>1 year</td>
<td>CM, CRO</td>
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</table>

A number of transport options across the site which cater for all visitor types. All transport routes are well connected to the Garden’s pedestrian and cycle path network.

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<tr>
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<tr>
<td>1-3 years</td>
<td>CM, HSGS</td>
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<tr>
<td>1-3 years</td>
<td>CM, HSGS</td>
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<tr>
<td>1-3 years</td>
<td>CM, HSGS, SR</td>
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<tr>
<td>initiated</td>
<td>CM, HSGS</td>
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<tr>
<td>1-20 years</td>
<td>CM, HSGS</td>
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<tr>
<td>5-10 years</td>
<td>CM, HSGS</td>
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<tr>
<td>1 year</td>
<td>HSGS</td>
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<tr>
<td>ongoing</td>
<td>CM, HSGS, SR</td>
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</table>
**Integrate the Garden into regional transport and access networks**

- Work with local Councils and the Department of Transport to strengthen public transport connections between the Garden and local and regional centres.
- As residential development around the Garden is completed, work with Landcom and the Department of Transport to incorporate bus services to the Garden with routes and timetables servicing the surrounding residential area.
- Work with the Sydney Catchment Authority to establish a sealed regional pedestrian and cycle route through the centre of the site, utilising the Sydney Water Supply Canal, that is well connected to internal Garden path systems, as well as local and regional networks.
- Establish strong pedestrian and cycle connections between the Garden and local residential areas, establishing links with nearby parks and streets and providing local access points into the site, as well as integrating with established movements networks.
- Investigate the long-term potential for a rail connection for visitors to the Garden utilising a platform for the Main Southern Railway line on the southern boundary of the Garden.

**Foster equity of access through information provision and consultation**

- Develop a Garden newsletter and distribute annually to residents of Campbelltown and Camden, informing of progress, the Garden’s Events Program and establishing lines of communication between the Garden and the community.
- Undertake surveys to monitor ongoing use and user preferences for the Garden.
- Consult with stakeholders, key user groups and interested community members on a regular basis to identify any issues with management or use of the Garden.
### Time Frame | Responsibility | Program outcome
---|---|---
1-2 years | CM | The Garden is connected to local and regional centres by a network of road, rail, pedestrian and cycle transport options.  
1-2 years | CM |  
0-5 years (internal) | CM, HSGS |  
5-10 years (regional) | CM |  
1-2 years | CM, HSGS |  
10-20 years | CM | Communication between the Garden Staff and key groups is regular, ongoing issues are identified and appropriate responses from Garden Managers implemented.  
1 year | CM, CRO |  
initiated and ongoing | CRO, SR |  
initiated and ongoing | CM, CRO |
Ensure protection, management and monitoring of all identified remnant vegetation areas in the Garden

- Develop a comprehensive Resource Inventory for the entire site as discussed in the Natural Systems Management Report, including accurate mapping of condition classes of vegetative remnants, establishing targets for restoration and management, updating plant species listings for each remnant area and the compilation of existing fauna data and implementation of additional targeted fauna surveys.

- Develop comprehensive floral management plans for the remnant woodlands and grasslands within the Garden, based on the vegetation mapping supplied in the Appendices to this report.

- As indicated in the Site Development Plan, gradually increase these areas of the Garden to enhance species diversity, conservation and habitat.

- Collect local seed and store in Seed Bank for revegetation works within the Garden.

- Involve local schools and community groups in vegetation management and restoration processes, to establish awareness and a sense of ownership.

- Undertake regular reviews of these flora management plans.

- As the Land Management Centre is developed (refer Site Development Plan), work collaboratively with other environmental organisations in delivering these plans to government and non-government organisations, demonstrating Best Practice Management techniques.

Ensure protection, management and monitoring of all native fauna in the Garden

- Compile all existing fauna data as produced the Ecological Studies Department of the University of Western Sydney Macarthur, the Royal Botanic Garden Sydney and others, utilise previous faunal monitoring studies, and develop a comprehensive inventory, and a Faunal Management and Habitat Policy for the Garden.

- Ensure this plan identifies the range of native fauna either residing in, or frequenting the site during each season of the year, including fauna species scheduled under the NSW Threatened Species Conservation Act (1995), and the particular habitat requirements of each species.

- Use this plan to establish fauna management plans based on principles such as maintaining a diversity of habitat on site, minimising the impact on fauna resulting from weed control programs, and recognising the proximity of threatened fauna species which may be present or utilising the site.

- Incorporate this information into all management plans for the site.

- Develop a policy on the release of wildlife to the site by groups such as WIRES.

- Enhance the Garden’s role as a regional wildlife corridor, by linking internal vegetated corridors across the Garden, and connecting these to regional corridors using wildlife underpasses.

- Undertake regular reviews of these fauna management plans.

- As the Land Management Centre is developed (refer Site Development Plan), work collaboratively with other environmental organisations in delivering these plans to government and non-government organisations, demonstrating Best Practice Management techniques.
Resource inventories and flora management plans are prepared for all areas of remnant vegetation and strategies and the Garden demonstrates best practice management techniques for the protection, management and monitoring of remnant vegetation communities.

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Responsibility</th>
<th>Program outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 year</td>
<td>SH (Nat Area Mgmt)</td>
<td></td>
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<tr>
<td>2-3 years</td>
<td>SH (Nat Area Mgmt)</td>
<td></td>
</tr>
<tr>
<td>3-20 years</td>
<td>SH (Nat Area Mgmt)</td>
<td></td>
</tr>
<tr>
<td>initiated and ongoing</td>
<td>SH (Seed Bank), SH (Nat Area Mgmt)</td>
<td></td>
</tr>
<tr>
<td>initiated 3-4 years</td>
<td>SH (Nat Area Mgmt), CEO</td>
<td></td>
</tr>
<tr>
<td>5 year intervals</td>
<td>SH (Nat Area Mgmt), HDO</td>
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<tr>
<td>5 years</td>
<td>CM, EO</td>
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</tbody>
</table>

Resource inventories and fauna management plans for all fauna and their associated habitat in the Garden is produced and the Garden demonstrates best practice techniques for the protection, management and monitoring of fauna.

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Responsibility</th>
<th>Program outcome</th>
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<tbody>
<tr>
<td>2-3 years</td>
<td>SR</td>
<td></td>
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<tr>
<td>2-3 years</td>
<td>SR</td>
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<tr>
<td>2-3 years</td>
<td>SR, SH (Nat Area Mgmt)</td>
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<tr>
<td>2-3 years</td>
<td>SR, SH (Nat Area Mgmt)</td>
<td></td>
</tr>
<tr>
<td>1 year</td>
<td>SR, CM</td>
<td></td>
</tr>
<tr>
<td>initiated and ongoing</td>
<td>HDO, SH (Nat Area Mgmt)</td>
<td></td>
</tr>
<tr>
<td>5 year intervals</td>
<td>SR, CM</td>
<td></td>
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<tr>
<td>5 -10 years</td>
<td>CM, EO</td>
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<tr>
<td>Topic</td>
<td>Strategic programs and associated actions</td>
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</tr>
<tr>
<td><strong>Natural systems cont’d.</strong></td>
<td><strong>Undertake to control pest and weed species in the Garden</strong></td>
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<tr>
<td></td>
<td>- Develop a series of weed management strategies for all identified weeds within the Garden, as discussed in the Natural Systems Management Report, to produce systematic guidelines for the control of weed species using best practice techniques</td>
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<tr>
<td></td>
<td>- Ensure weed management takes account of native fauna and habitat values of some weed species</td>
<td></td>
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<tr>
<td></td>
<td>- Ensure that these strategies result in the Garden’s compliance with the Noxious Weeds Act (1993) to control scheduled noxious weed species on site in an environmentally sensitive manner</td>
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<tr>
<td></td>
<td>- Develop a series of feral animal management strategies and ensure that the management of feral animal populations is managed in a coordinated, strategic and humane manner, as detailed in the Natural Systems Management Report</td>
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<tr>
<td></td>
<td>- Implement these strategies at a regional level, collaborating with other local institutions government and non-government organisations to determine the most effective and achievable broadscale methods of weed and pest control</td>
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<tr>
<td></td>
<td>- Undertake regular reviews of these weed management strategies</td>
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<tr>
<td></td>
<td>- As the Land Management Centre is developed (refer Site Development Plan), work collaboratively with other environmental organisations in delivering these strategies to government and non-government organisations, demonstrating Best Practice Management techniques.</td>
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<tr>
<td></td>
<td><strong>Apply the principles of Total Catchment Management to everyday Garden operations and practices</strong></td>
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<tr>
<td></td>
<td>- Work with the Sydney Catchment Authority and other relevant organisations in implementing Total Catchment management (TCM) Principles across the site</td>
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<tr>
<td></td>
<td>- Identify the full potential for the implementation of water harvesting and ‘Keyline Irrigation’ across the site and prepare design concept plans for these areas</td>
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<td></td>
<td>- Work with the Sydney Catchment Authority to develop the interpretation deck along the ridgeline walk to encourage interpretation of these TCM principles</td>
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<td></td>
<td>- Regularly undertake staff workshops and training to ensure that TCM principles are effectively applied to all garden operations in all areas</td>
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<tr>
<td></td>
<td>- As the Land Management Centre is developed (refer Site Development Plan), work collaboratively with other environmental organisations (such as the Hawkesbury-Nepean Catchment management Committee) in delivering these strategies to government and non-government organisations, demonstrating Best Practice Management techniques.</td>
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<tr>
<td></td>
<td><strong>Protect and manage Garden soils</strong></td>
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<td></td>
<td>- Develop a series of Soil Management Guidelines for the Garden, detailing procedures in the mapping, monitoring and overall management of soil pathogens as part of horticultural practice</td>
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<td></td>
<td>- Within these guidelines, Identify all areas of the Garden affected by or susceptible to erosion and develop a series of guidelines for the necessary remedial or preventative works, responsive to the site’s geology and topography Prioritise the affected areas and undertake these works on a staged basis across the site</td>
<td></td>
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<tr>
<td></td>
<td>- As the Land Management Centre is developed (refer Site Development Plan), work collaboratively with other environmental organisations in delivering these strategies to government and non-government organisations, demonstrating Best Practice Management techniques for the management of Garden soils.</td>
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</tr>
</tbody>
</table>
Weed and pest control strategies are prepared and the Garden demonstrates best practice techniques in its pest and weed management.

Total Catchment Management principles become an integral part of the Garden’s management and operations, and best practice techniques are displayed.

Site soils and erosion are effectively managed, and the Garden demonstrates best practice techniques.

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Responsibility</th>
<th>Program outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-3 years</td>
<td>SH (Nat Area Mgmt),</td>
<td>Weed and pest control strategies are prepared and the Garden demonstrates best practice techniques in its pest and weed management.</td>
</tr>
<tr>
<td></td>
<td>SH (Nat Area Mgmt)</td>
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<tr>
<td>2-3 years</td>
<td>SH (Nat Area Mgmt)</td>
<td></td>
</tr>
<tr>
<td>2-3 years</td>
<td>SR</td>
<td></td>
</tr>
<tr>
<td>1 year</td>
<td>SR</td>
<td></td>
</tr>
<tr>
<td>5 year intervals</td>
<td>SH (Nat Area Mgmt)</td>
<td></td>
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<tr>
<td>5 -10 years</td>
<td>CM, EO</td>
<td></td>
</tr>
<tr>
<td>2-3 years</td>
<td>EO</td>
<td>Total Catchment Management principles become an integral part of the Garden’s management and operations, and best practice techniques are displayed.</td>
</tr>
<tr>
<td>3 years</td>
<td>HDO</td>
<td></td>
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<tr>
<td>3-5 years</td>
<td>EO, SR, CEO</td>
<td></td>
</tr>
<tr>
<td>2 years</td>
<td>EO</td>
<td></td>
</tr>
<tr>
<td>5 -10 years</td>
<td>CM, EO</td>
<td></td>
</tr>
<tr>
<td>1-2 years</td>
<td>HDO</td>
<td>Site soils and erosion are effectively managed, and the Garden demonstrates best practice techniques.</td>
</tr>
<tr>
<td>3-20 years</td>
<td>HDO, HSGS, SH (Nat Area Mgmt)</td>
<td></td>
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<tr>
<td>5 -10 years</td>
<td>CM, EO</td>
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<tr>
<td>Topic</td>
<td>Strategic programs and associated actions</td>
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<tr>
<td>Natural systems cont’d.</td>
<td><strong>Utilise planned fire regimes as part of the reinstatement of natural ecological processes across the site</strong></td>
<td></td>
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<tr>
<td></td>
<td>• Introduce fire regimes as part of the management regimes for remnant woodlands and remnant native grasslands, as detailed in the Natural Systems Management Report</td>
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<td></td>
<td>• Educate and regularly notify visitors and residents about the role of fire in natural systems management</td>
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<td></td>
<td>• Establish programs for ecological burns for each community type identified on site</td>
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<td></td>
<td>• Develop and implement hazard reduction techniques which protect the property and horticultural assets of the Garden whilst minimising environmental impacts.</td>
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<td></td>
<td>• Develop and implement training programs to sufficiently resource staff in order to implement and monitor ecological burns, hazard reduction techniques and unplanned fire events.</td>
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<tr>
<td></td>
<td><strong>Effectively manage the natural systems of the Garden</strong></td>
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<td></td>
<td>• Identify and assess the impact of existing and proposed activities in terms of their potential impact on significant natural areas.</td>
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<td>• Develop clear policies, programs and mitigation measures to control and/or restrict any impacts</td>
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<td></td>
<td>• Undertake regular monitoring and reviews of these programs</td>
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<td>• Regularly assess potential impacts from the horticultural activities undertaken within the Garden, and consider implementing mitigating strategies such as reviewing maintenance practices, establishing buffer areas, and collecting and treating runoff, as detailed in the Natural Systems Management Report.</td>
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<tr>
<td></td>
<td><strong>Establish opportunities for the interpretation of the Garden’s natural systems based on a ‘whole of ecosystems’ interpretation strategy</strong></td>
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<tr>
<td></td>
<td>• Identify opportunities to deliver messages based on the complexity of Australian ecosystems and the interrelationships between humans, plants, animals and the earth.</td>
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<tr>
<td></td>
<td>• Develop interpretation plans to express these messages at both the micro and the macro scales, utilising a number of areas if the Garden including the conservation areas, living collections, and wetland systems</td>
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<tr>
<td></td>
<td>• Work with the Sydney Catchment Authority to develop interpretation plans to provide information on water quality, supply and management</td>
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<td></td>
<td>• Develop interpretation plans to provide information on native plant species and their applications, remnant vegetation communities and their importance, native fauna and the impacts and benefits of fire in the Australian landscape.</td>
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<td></td>
<td>• Establish programs to promote the Garden’s role in the conservation and preservation of natural systems.</td>
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<tr>
<td>Time Frame</td>
<td>Responsibility</td>
<td>Program outcome</td>
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</tr>
<tr>
<td>initiated and ongoing</td>
<td>SH (Nat Area Mgmt), CM, SR, SH (Plumber)</td>
<td><strong>The Garden demonstrated best practice techniques in the utilisation of controlled fire regimes as part of the reinstatement of natural ecological processes.</strong></td>
</tr>
<tr>
<td>1-2 years</td>
<td>SH (Nat Area Mgmt), CEO, SR</td>
<td><strong>Activities and uses that compromise the Garden's natural systems are identified and controlled.</strong></td>
</tr>
<tr>
<td>2-3 years</td>
<td>SH (Nat Area Mgmt)</td>
<td></td>
</tr>
<tr>
<td>initiated and ongoing</td>
<td>CM, SH (Nat Area Mgmt)</td>
<td></td>
</tr>
<tr>
<td>initiated and ongoing</td>
<td>CM, SH (Nat Area Mgmt)</td>
<td></td>
</tr>
<tr>
<td>initiated and ongoing</td>
<td>CM, SH (Nat Area Mgmt)</td>
<td></td>
</tr>
<tr>
<td>1-5 years</td>
<td>CEM, SR, CEO, HDO</td>
<td><strong>The Garden is recognised and valued for its many unique opportunities to interpret ‘whole of ecosystems’ interpretation strategies.</strong></td>
</tr>
<tr>
<td>1-5 years</td>
<td>CEM, SR, CEO, HDO</td>
<td></td>
</tr>
<tr>
<td>1-5 years</td>
<td>CEM, SR, CEO, HDO</td>
<td></td>
</tr>
<tr>
<td>1-5 years</td>
<td>CEM, SR, CEO, HDO, SH (Nat Area Mgmt)</td>
<td></td>
</tr>
<tr>
<td>initiated and ongoing</td>
<td>SH (Nat Area Mgmt)</td>
<td></td>
</tr>
<tr>
<td>Topic</td>
<td>Strategic programs and associated actions</td>
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</tbody>
</table>
| Recreation opportunities | **Develop diverse and engaging recreation opportunities across the site**  
- Develop the range of recreation opportunities detailed in the Site Development Plan, focusing botanic parkland activities in the north of the site, and Botanic garden activities in the south of the site  
- In their development, ensure that these opportunities cater to a broad range of user groups. |
| | **Ensure that the majority of recreation activities are developed with strong ecological and botanical themes**  
- Develop a Recreation Plan in order to identify opportunities to combine recreation opportunities with lessons based on ecological and botanical themes in the Garden  
- Develop interpretation plans and facilities to enhance these opportunities  
- Develop a variety of programs for a wide range of user groups that can be incorporated into these recreation opportunities |
| | **Establish recreation linkages from the Garden to other local and regional open space areas**  
- Establish strong recreation linkages based on pedestrian and cycle networks connecting the Garden with other local areas of open space. Refer to Site Planning Principle #1, Establishing a Cultural Precinct, which identifies connections to the University of Western Sydney, Mount Sugarloaf, William Howe Regional Park, the Nepean River Corridor, the Camden cycleway, the proposed Spring Farm Bush Corridor and the Elizabeth Macarthur Agricultural Institute.  
- Develop these connections around the Garden, utilising the Sydney Water Canal regional pedestrian and cycle route as the ‘connector’ between all accessways.  
- Establish linkages from open space systems in surrounding residential areas, such as George Caley Reserve and open space networks proposed as part of residential development in South Mount Annan. |
| | **Establish monitoring processes to ensure that increasing visitor numbers do not impact on the Garden’s core values nor reduce the quality of the Garden experience**  
- Undertake regular monitoring programs and reviews of visitor numbers and analyse any impacts on the Gardens core values  
- Continually investigate and promote other forms of visitation, particularly virtual forms on the web  
- Review international precedents regularly. |
| | **Ensure that the potential for conflict or duplication between different recreational activities within the Garden is minimised**  
- As shown in the Site Development Plan, develop recreation opportunities according to the division of the site into Botanic Garden and botanic parkland to minimise conflict of uses  
- Consider recreation opportunities provided in adjoining open space areas and use this information to avoid duplication of activities. |
The Garden is recognised and valued for its diverse and engaging recreation opportunities.

<table>
<thead>
<tr>
<th>Time Frame</th>
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<th>Program outcome</th>
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<tbody>
<tr>
<td>1-20 years</td>
<td>CM, HDO</td>
<td>The Garden is recognised and valued for its diverse and engaging recreation opportunities.</td>
</tr>
</tbody>
</table>

Recreation opportunities offered in the Garden have strong botanical and ecological themes and messages.

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<tr>
<th>Time Frame</th>
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<tbody>
<tr>
<td>1-3 years</td>
<td>CM, CEM, SR</td>
<td>Recreation opportunities offered in the Garden have strong botanical and ecological themes and messages.</td>
</tr>
<tr>
<td>1-2 years</td>
<td>CEM, SR, CEO, HDO</td>
<td></td>
</tr>
<tr>
<td>1-3 years</td>
<td>CM, HDO, CEM, SR</td>
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</table>

The Garden is well connected to local and regional areas of open space.

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<tr>
<th>Time Frame</th>
<th>Responsibility</th>
<th>Program outcome</th>
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<tbody>
<tr>
<td>5 -10 years</td>
<td>CM</td>
<td>The Garden is well connected to local and regional areas of open space.</td>
</tr>
</tbody>
</table>

As visitation increases, the Garden’s core values, qualities and experiences remain protected, and a large portion of Garden visitation is virtual.

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Responsibility</th>
<th>Program outcome</th>
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</thead>
<tbody>
<tr>
<td>initiated and ongoing</td>
<td>SR</td>
<td>As visitation increases, the Garden’s core values, qualities and experiences remain protected, and a large portion of Garden visitation is virtual.</td>
</tr>
<tr>
<td>initiated and ongoing</td>
<td>MIT, CRO</td>
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<tr>
<td>ongoing</td>
<td>CM</td>
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</tbody>
</table>

Conflict and/or duplication between different recreational activities within the Garden and adjoining areas is minimised.

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<tr>
<th>Time Frame</th>
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<th>Program outcome</th>
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<tbody>
<tr>
<td>1-3 years</td>
<td>CM</td>
<td>Conflict and/or duplication between different recreational activities within the Garden and adjoining areas is minimised.</td>
</tr>
<tr>
<td>1-3 years</td>
<td>CM</td>
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</tbody>
</table>
### Co-operative partnerships and adjoining landuses

Advocate strategic alliances with government and non-government organisations which benefit the Garden’s development and site management, and promote the Garden as a significant botanic and open space facility in NSW, firmly anchored in south-western Sydney.

### Promote the Garden as an advisory body, providing land management information, expertise and advice as well as displaying best practice management techniques to institutions and authorities and the broader community

- Develop facilities as part of the Centre for Urban Horticulture where the community can access information and advisory services and expertise on plants, garden design, model gardens and product information, education on aspects of gardening and domestic horticulture, pest and disease diagnosis, provided by Garden staff.
- Establish the Centre for Land Management, where the Garden works in collaboration with other institutions to provide expertise and advice in issues such as flora and fauna management, remnant vegetation protection and management, pest and weed control, land degradation, soils and erosive processes, the application of Total Catchment Management Principles, management of infrastructure and easements.
- Advocate the availability of these services to a broad range of government and non-government organisations, and the community.

### Establish and promote collaborative partnerships with industry and educative bodies

- Continue to work collaboratively with the NPWS and broaden programs of plant conservation, research and development.
- Continue to promote the regional conservation programs undertaken in the Nursery and Seedbank, providing plants for regional regeneration programs such as the Nepean River corridor.
- Establish and promote the Garden as an important partner with Universities and TAFE systems, providing programs and facilities for student work experience and internships.

### Establish proactive management relationships between Mount Annan Botanic Garden managers, Local Government, other landowners, stakeholders and the community

- Ensure that members from the groups noted above are represented on the Mount Annan Trust Committee.
- Undertake stakeholder and community consultation as part of detailed planning design work for all new major facilities within the Garden.

### Utilise areas of the Garden to interpret surrounding landuses and land management processes

- Investigate interpretation opportunities arising from co-operative partnerships with Garden neighbours such as Jacks Gully Waste Management and Recycling Centre, the Glenlee Coal Washery, the Regional Parks Unit of NPWS.
- Establish a range of interpretive tours and activities explaining the role of these organisations and their undertakings, and the role of the community in these processes.
The Garden is recognised and valued by the community and a variety of government and non-government organisations for its expertise and advice and is highly regarded for its display of Best Practice Management Techniques.

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<tr>
<th>Time Frame</th>
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<th>Program outcome</th>
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<tr>
<td>3-5 years</td>
<td>CM, HDO</td>
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</table>

The Garden sustains active collaborative partnerships with industry and educative bodies.

<table>
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<tr>
<th>Time Frame</th>
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<th>Program outcome</th>
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<tbody>
<tr>
<td>3-5 years</td>
<td>CM, HDO</td>
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<tr>
<td>3-5 years</td>
<td>CM, HDO</td>
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<tr>
<td>3-5 years</td>
<td>CM, HDO</td>
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</tbody>
</table>

Proactive management relationships between Mount Annan Botanic Garden managers, Local Government, other landowners, stakeholders and the community are established and maintained.

<table>
<thead>
<tr>
<th>Time Frame</th>
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<th>Program outcome</th>
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<tbody>
<tr>
<td>initiated</td>
<td>CM</td>
<td></td>
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<tr>
<td>as required</td>
<td>CM</td>
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</table>

A number of opportunities are established in the Garden to interpret surrounding landuses.

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Responsibility</th>
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<tbody>
<tr>
<td>3-5 years</td>
<td>CEM, CM</td>
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<tr>
<td>1-2 years</td>
<td>CEM, SR, CEO</td>
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<tr>
<td>Topic</td>
<td>Strategic programs and associated actions</td>
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</tbody>
</table>
| Co-operative partnerships and adjoining landuses cont’d. | **Encourage community ownership of the Garden and ensure that the Garden achieves compatibility within the local context**  
- Establish community activities within the Garden and encourage regular patronage and participation in Garden events and activities |

<table>
<thead>
<tr>
<th>Develop management strategies for the treatment of the interface between the Garden and adjoining lands</th>
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</thead>
<tbody>
<tr>
<td>• Liaise with adjoining land administrators to develop continuity in landscape treatments of planting and infrastructure design and maintenance, particularly the linking of pathways and cycleways</td>
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<tr>
<td>• Work with Camden and Campbelltown Councils and Landcom to develop regional signage and planting strategies for streetscapes in the area</td>
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<tr>
<td>• Liaise with Landcom in developing the perimeter road along the western boundary of the Garden and the type of road frontage this will supply</td>
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<tr>
<td>• Liaise with the RTA to define strategies to reduce the visual and noise impact of the Hume Highway, as well as co-ordinated weed control programs</td>
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<tr>
<td>• Liaise with all Garden neighbours (including private land owners) on a regular basis to identify and manage any interface issues.</td>
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<tr>
<td>Time Frame</td>
<td>Responsibility</td>
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</tr>
<tr>
<td>initiated and ongoing</td>
<td><strong>CM, CRO</strong></td>
</tr>
<tr>
<td>initiated</td>
<td><strong>CM, HDO</strong></td>
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<tr>
<td>completed</td>
<td><strong>CM, HDO</strong></td>
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<tr>
<td>initiated and ongoing</td>
<td><strong>HDO</strong></td>
</tr>
<tr>
<td>initiated and ongoing</td>
<td><strong>CM, HDO, SR</strong></td>
</tr>
<tr>
<td>Topic</td>
<td>Strategic programs and associated actions</td>
</tr>
<tr>
<td>-------</td>
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</tr>
<tr>
<td>Site management</td>
<td>Implement a range of broadacre land management techniques that demonstrate the principles of environmentally sustainable design and development</td>
</tr>
<tr>
<td></td>
<td>- As shown in the Site Development Plan implement broadacre land management treatments and maintenance regimes for woodlands and native grass areas</td>
</tr>
<tr>
<td></td>
<td>- Implement the principles of keyline irrigation across the site to improve soil and water management</td>
</tr>
<tr>
<td></td>
<td>- Develop comprehensive interpretation facilities to explain these site management techniques.</td>
</tr>
<tr>
<td></td>
<td>Undertake a full review of all site activities and maintenance procedures and staffing requirements at Mount Annan Botanic Garden</td>
</tr>
<tr>
<td></td>
<td>- Develop a full inventory of all Garden areas in detailed unit measurements</td>
</tr>
<tr>
<td></td>
<td>- Determine a set of operational standards for each of these areas</td>
</tr>
<tr>
<td></td>
<td>- Based on industry and contract standards, determine the most cost effective methods on achieving and maintaining these standards</td>
</tr>
<tr>
<td></td>
<td>- Reconfigure the inhouse/out-sourced labour ratio for maintenance and Garden activities accordingly</td>
</tr>
<tr>
<td></td>
<td>- Undertake a study into the feasibility of relocating RBG Nursery activities to Mount Annan Botanic Garden</td>
</tr>
<tr>
<td></td>
<td>- Undertake a study into the feasibility of relocating the herbarium to Mount Annan.</td>
</tr>
<tr>
<td></td>
<td>Introduce customer service obligations into all Garden staff roles</td>
</tr>
<tr>
<td></td>
<td>- Assign a proportion of staff hours toward a customer service focus as a result of the staff reviews listed above</td>
</tr>
<tr>
<td></td>
<td>- Conduct ongoing workshops and training to develop staff skills in these customer service roles.</td>
</tr>
<tr>
<td></td>
<td>Implement a range of broadacre land management techniques that demonstrate the principles of environmentally sustainable design and development</td>
</tr>
<tr>
<td></td>
<td>Identify and establish a long-term, cost-effective water supply for the Garden</td>
</tr>
<tr>
<td></td>
<td>- Employ water conservation principles in all Garden operations</td>
</tr>
<tr>
<td></td>
<td>- Continue to investigate the potential for the Camden effluent water re-use scheme on the site</td>
</tr>
<tr>
<td></td>
<td>- As shown in the Site Development Plan, establish a system of wetlands in the northern half of the site and treat all site run-off within this system</td>
</tr>
<tr>
<td></td>
<td>- Identify opportunities for water harvesting, storage and water features across the site using keyline irrigation.</td>
</tr>
<tr>
<td></td>
<td>Identify opportunities for alternate power sources within the Garden</td>
</tr>
<tr>
<td></td>
<td>- Undertake feasibility studies into the use of alternate powers sources such as wind and solar collection in the Garden, and identify the most suitable locations for the required infrastructure</td>
</tr>
<tr>
<td></td>
<td>- Ensure all proposed buildings as a minimum are solar-passive in their siting and design.</td>
</tr>
</tbody>
</table>
Site activities, maintenance procedures and staffing requirements operate efficiently and a number of the Royal Botanic Garden field operations are sited at Mount Annan.

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Responsibility</th>
<th>Program outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>initiated - 1-3 years</td>
<td>HDO, HSGS, HSHS</td>
<td>Site activities, maintenance procedures and staffing requirements operate efficiently and a number of the Royal Botanic Garden field operations are sited at Mount Annan.</td>
</tr>
<tr>
<td>1-3 years</td>
<td>HSGS, HSHS</td>
<td></td>
</tr>
<tr>
<td>1-3 years</td>
<td>CM, HDO, HSGS, HSHS</td>
<td></td>
</tr>
<tr>
<td>1-3 years</td>
<td>CM, HSGS, HSN, HSHS</td>
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<tr>
<td>1-3 years</td>
<td>CM, DBGPP</td>
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<tr>
<td>1-3 years</td>
<td>CM, DPS</td>
<td></td>
</tr>
</tbody>
</table>

All Garden staff spend approximately 2-5% of their time interacting with Garden visitors and acting in customer service positions.

A range of broadacre site management techniques are implemented across the site, and these demonstrate the principles of environmentally sustainable design and development across the Garden.

A long-term water supply for the Garden is assured.

The Garden utilises alternate power sources where available.
<table>
<thead>
<tr>
<th>Topic</th>
<th>Strategic programs and associated actions</th>
</tr>
</thead>
</table>
| Site Management cont’d. | **Identify opportunities for recycling within the Garden**  
- Establish efficient recycling procedures for all garden waste utilising the mulching and re-use of green waste, composting and worm farming facilities  
- Liaise with the Jacks Gully Waste Management Facilities and develop a Waste Management Policy for the Garden which co-ordinates green waste programs  
- Provide recycling facilities across the site and encourage recycling of all picnic waste  
- Advocate the incorporation of environmentally friendly packaging and presentation techniques in all Garden products  
| | **Continue to investigate the potential for enhanced sustainability practices in all Garden operations**  
- Regularly review international standards and Best Practice Management Technique and apply these to the Garden’s operations  
- Regularly consult with Garden staff and conduct site sustainability training programs and workshops  
| | **Integrate the use of varying labour sources into the program of works for the Garden**  
- Develop policies and programs on the use of varying labour sources such as staff, contractors, employment programs and community volunteers on a range of projects within the Garden  
- Integrate these labour sources in a cost-effective manner, prioritising the use of the labour to those areas of the Garden where the staff to area managed ratio is lowest (such as the remnant natural areas)  
- Ensure that activities undertaken by the contract and volunteer labourers are appropriately directed, well planned, well supervised and backed up with adequate resources.  
- Ensure that the application of labour (staff, contract, employment program or community volunteer) in projects across the Garden is strategic and based on the assessed skill levels of the labour used.  
- Allow sufficient resources for ongoing maintenance of these projects (or in the case of bush regeneration, follow-up treatments).  
| | **Establish clear avenues for information dissemination within the structure of the Garden**  
- Ensure that all Garden management policies, programs, management strategies, maps and resource inventories are regularly accessible to staff  
- Formalise the use of the Royal Botanic Gardens Intranet to distribute this information, and develop a policy regarding maintaining and updating the information as needed.  
- Ensure this information is made available in hard copy to staff who are unable to access the electronic versions  
- Implement training programs, where required, to skill staff in the access of data.  
| | **Encourage staff involvement, ownership and enjoyment in the development of the Garden**  
- Establish staff workshops and regular updates on the the development of Garden projects, policies, programs and management strategies  
- Hold regular staff forums to provide opportunities for staff input and review  

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### Site Management Plan

#### The Garden demonstrates best practice techniques in site-wide recycling techniques.

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Responsibility</th>
<th>Program outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 years</td>
<td>EO</td>
<td>The Garden demonstrates best practice techniques in site-wide recycling techniques.</td>
</tr>
<tr>
<td></td>
<td>EO, HSHS</td>
<td></td>
</tr>
<tr>
<td>initiated and ongoing</td>
<td>HSGS</td>
<td></td>
</tr>
<tr>
<td>1-2 years</td>
<td>EO</td>
<td></td>
</tr>
</tbody>
</table>

#### The Garden demonstrates best practice management techniques in sustainability practices.

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Responsibility</th>
<th>Program outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>ongoing</td>
<td>EO, CM</td>
<td>The Garden demonstrates best practice management techniques in sustainability practices.</td>
</tr>
<tr>
<td>1-20 years</td>
<td>EO, CM</td>
<td></td>
</tr>
</tbody>
</table>

#### The Garden effectively utilises a variety of labour sources.

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>Program outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM</td>
<td>The Garden effectively utilises a variety of labour sources.</td>
</tr>
<tr>
<td>CM</td>
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<td>CM</td>
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</table>

#### All Garden policies, programs, management strategies, maps and resource inventories are accessible to staff digitally and in hard copy.

<table>
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<tbody>
<tr>
<td>CM</td>
<td>All Garden policies, programs, management strategies, maps and resource inventories are accessible to staff digitally and in hard copy.</td>
</tr>
<tr>
<td>DCS</td>
<td></td>
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<tr>
<td>DCS</td>
<td></td>
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<tr>
<td>Training and Planning Review Committee</td>
<td></td>
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</tbody>
</table>

#### Garden staff enjoy and take pride in their ongoing contribution to the growth of the Garden.

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>Program outcome</th>
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<tbody>
<tr>
<td>CM</td>
<td>Garden staff enjoy and take pride in their ongoing contribution to the growth of the Garden.</td>
</tr>
<tr>
<td>CM</td>
<td></td>
</tr>
<tr>
<td>CM</td>
<td></td>
</tr>
<tr>
<td>Topic</td>
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<td>-------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>Commercial activities</td>
<td>Ensure the overall viability and financial stability of the Garden by harnessing the Garden’s commercial potential</td>
</tr>
</tbody>
</table>
| Identify and harness the Garden’s commercial potential for visitor and community facilities | • Commission a detailed feasibility study and a precise concept for the proposed Centre for Urban Horticulture  
• Continue investigations to identify the demand for the requisite skills and reputation of the Garden and its staff to be engaged to provide advisory services to both the community, and government and non-government organisations, as part of the Centre for Urban Horticulture  
• Continue investigations into the feasibility for the Centre for Land Management in the northern area of the Garden |
| Investigate the potential for the Garden to work in collaboration with other environmental, educative and/or scientific organisations | • As indicated in the Site Development Plan, investigate the potential for the Garden to work collaboratively with organisations such as the University of Western Sydney, the Elizabeth Macarthur Agricultural Institute and the Hawkesbury-Nepean Catchment Management Trust to develop a Land Management Centre operating from the Garden site, and offering information and interpretation for both the community and government and non-government organisations |
| Identify the potential for the establishment of appropriate leases in the Garden | • Investigate the potential for the establishment of leases for visitor and commercial facilities, particularly retail and food outlets, in the new development proposed as part of the Visitor Centre on Narellan Road, the Garden restaurant and function centre proposed just south of lakeside and the Cafe at lakeside.  
• Investigate the potential for the establishment of a lease for the area east of the central ridgeline, to establish a production plantation and depot/distillery |
| Regularly undertake studies to review alternate and increased funding opportunities for the Garden | • Review annually the range of funding sources available from Government and non-government programs and activities  
• Maintain regular liaison with similar Botanic Garden and open space management organisations to identify new and innovative funding opportunities. |
### Time Frame | Responsibility | Program outcome
--- | --- | ---
1 year | CM | **The Garden develops commercially viable community and visitor facilities through the Centre for Urban Horticulture and the Centre for Land Management.**
1-5 years | CM |  
2-3 years | CM |  
1-20 years | CM | **The Garden works collaboratively with a number of different organisations across a diversity of environmental, educative and scientific programs.**
3-10 years | CM, BSM |  
3-5 years | CM, BSM |  
1-20 years | DIR, DBGPP, CM | **The Garden maximises funding opportunities from a variety of sources.**
ongoing | DIR, DBGPP, CM |  

Mount Annan Botanic Garden  
Site Master Plan  
Site Management Plan
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