

PART I

RATIONALE FOR A BOTANIC GARDENS FOR CHRISTCHURCH

Explanation:

Putting the Gardens in context! This Part was prepared by Dr David Given.



1. What is a botanic garden and its purpose?

Although the boundaries between public parks, private plant collections, scientific collections and scientifically based and landscaped public gardens are blurred, a widely accepted definition for a botanic garden is that:

Botanic gardens are institutions holding documented collections of living plants for the purposes of scientific research, conservation, display and education.

Using a functional approach, the International Botanic Gardens Conservation Strategy includes a comprehensive list of characteristics that both generally define the key characteristics of botanic gardens and the diversity of roles that they can assume:

- Adequate labelling of plants.
- An underlying scientific basis for the collections.
- Communication with other like-minded institutions, including information transfer.
- Exchange of seeds and other propagating material within the limits of national and global legislative constraints.
- A long term commitment to, and responsibility for, maintenance of plant collections.
- Maintenance of a research programme and associated facilities, such as a herbarium and laboratory.
- Monitoring of plants in collections.
- Being open to the public.
- Promoting conservation through extension and environmental education activities.
- Proper documentation of the collections.
- Undertaking scientific or technical research on plants in the collection.

2. What does the Gardens provide?

Some of the features of the Gardens that are important for Christchurch are:

- Three quarters of Christchurch's residents visit the Gardens each year. Two thirds of international visitors to the city visit the Gardens. Overall satisfaction rates have been surveyed at over 95%.
 - Most local people come to the Gardens to appreciate the tree, lawn and garden atmosphere, where they can relax in a setting dominated by greenness and plants, enhanced with the serenity of the Avon River / Ōtakaro.
 - The extensive collections provide a horticultural experience of high quality and variety. This includes New Zealand native species/woodland areas, exotic trees and shrubs, alpine plants and bulbs, orchids, cacti and succulents, water plants and exotic woodlands that are a blaze of colour during the spring when daffodils and bluebells are in flower.
 - The Gardens form part of the Christchurch Cultural Precinct, which is an assemblage of historic and cultural institutions in the central city and makes a significant contribution to the cultural and historic fabric of the city.
 - The Gardens has considerable historic and heritage value, being associated with many key events in the development of Christchurch. The Gardens and Hagley Park have seen historic events of importance, such as John Robert Godley's farewell speech to the Canterbury colonists, instrument calibration by Robert Falcon Scott and Ernest Shackleton en route to Antarctica, the 1906 Christchurch Exhibition and the early acclimatisation of exotic animals in the late nineteenth century. Three of the Gardens' buildings have heritage listings: the Curators House, the Bandsmen's Memorial Rotunda and the Cuninghame House (New Zealand's largest heated conservatory).
 - From time to time the Gardens is the venue for concerts and art exhibitions.
-

- The Gardens are a significant and important area for the support of native New Zealand wildlife. This includes resident kereru (woodpigeon), New Zealand scaup, paradise duck, native freshwater crayfish and a large array of native and introduced fungi. The recent BioBlitz³ identified over 800 animals, plants, fungi and single celled species, in addition to those that have been deliberately planted in the Gardens.
- The Gardens, along with Hagley Park, provides experimental sites and trial areas for local researchers, including students, and for the horticultural industry.
- Overall, the Gardens provides a peaceful green environment that belongs to every person living in the city, as well as benefits every visitor. It is a place very close to the city centre that is accessible every day of the year.

3. What is the Gardens national and international standing?

The Gardens are frequently referred to in terms of international significance and sometimes as being a 'top' botanic garden. How justified are such expressions of support?

- The area of the Gardens is similar to that of many major botanic gardens such as the Royal Botanic Gardens (RBG) Sydney, Montreal and the RBG Melbourne, although it is well below the size of the Missouri Botanic Gardens in the USA and RBG Kew in London, United Kingdom.
- The size and variety of the Gardens collections is impressive and probably, in combination, the largest in New Zealand, with about 6,500 catalogued species and cultivars and a further estimated 1,500 to 2500 uncatalogued conservatory specimens. The total number of specimens (accessions⁴) is believed to be about 35,000. As a comparison, the RBG Edinburgh in Scotland has one of the

world's largest collections (16,000 taxa and about 40,000 accessions), second only to the RBG Kew.

- The Gardens is reasonably old by world standards, being one of the two oldest in New Zealand and one of the earlier gardens established in the Southern Hemisphere.
- Visitor numbers, on an annual basis, are high when compared with those for overseas botanic gardens. Including repeats, Christchurch has about 1.2 million people through the gates each year, including three quarters of Christchurch residents and about 250,000 international tourists – probably about 550,000 visitors in total annually. These figures are high by world standards.
- It is in the very limited range of functions based round the collections and including conservation, education and research, that the Gardens does not compare so favourably with many other well known botanic gardens. The Gardens has a small herbarium (although this is valuable for its size, in that it includes the Armstrong Herbarium). The Gardens has a valuable, but under-resourced, library. There is little active support of conservation programmes, such as recovery of threatened plant species. No seed bank or germplasm bank facilities for preservation of rare species, unusual cultivars or plants used in recovery programmes have been developed.

In Australasia, at the present time, there is little doubt that the RBG Sydney and Melbourne, the Adelaide Botanic Gardens and Kings Park Botanic Garden in Perth have significantly greater overall status than Christchurch, which probably lies within a second tier of gardens that include Dunedin, RBG Tasmania, and Wellington.

Globally, a cluster of top level botanic gardens includes the RBG Kew and Edinburgh, Kirstenbosch in South Africa, Berlin, Singapore, Missouri and New York/Brooklyn, play a lead role. Some tens of gardens make up the next level. These include Frankfurt, Munich, Dublin, New York/Bronx, Berry (USA), Chicago, Fairchild Tropical (USA), Royal Botanic Garden Hamilton (Canada), Strybing Arboretum (USA), Morton Arboretum (USA), Montreal, Leningrad, Bogor

³ An event where Council staff, scientists, students and the public gathered in Hagley Park and the Gardens to count as many species as possible in a 24 hour survey.

⁴ Distinct varieties of plants.

(Indonesia), Las Palmas (Canary Islands, Spain) and the National Tropical Garden (Hawaii, USA).

Christchurch has yet to reach this level of significance with its Gardens. Nevertheless, it should strive towards this level of recognition, but to do so it will have to assume a greater range of functions than achieved so far.

Of special significance is that that the Gardens is in the setting of Hagley Park. Hagley Park, as a large inner city green space, is dedicated to recreation and public use, as set down in the original 1855 ordinance formalising this area. The iconic nature of the Gardens is reinforced when the overall green space size of the Gardens and Hagley Park is compared with other urban green space areas as the following table shows:

Table 3.1: Comparison of Key Urban Open Space Areas

Name	City	Hectares
The Mall	Washington, DC	2670
Fairmont Park	Philadelphia	1692
Chapultepec Park	Mexico City	850
Phoenix Park	Dublin	712
City Park	New Orleans	610
Golden Gate Park	San Francisco	406
Stanley Park	Vancouver	400
Kings Park and Botanic Gardens	Perth	400
Englischer Garten	Munich	400
Central Park	New York	341
Hyde Park	London, UK	255
Royal Park and Princes Park	Melbourne	227
Centennial Park	Sydney	222
Town Belt	Dunedin	205
Hagley Park and Botanic Gardens	Christchurch	192
Royal Park (only)	Melbourne	188
Royal Botanic Gardens	London	121
Piedmont Park and Botanic Garden	Atlanta	109
Bogor Botanic Garden	Bogor	87
The Domain	Auckland	81
Matheson Hammock and Botanic Garden	Miami	74

4. Who uses the Gardens?

Recent surveys⁵ provide an accurate profile of the visitors to the Gardens:

- 65% of visitors are repeat visitors (have been to the Gardens before).
- 50% of visitors are from Christchurch and, of the remainder, about 20% are equally from the United Kingdom and Australia.
- Most visitors from outside Christchurch are on vacation.
- Female visitors outnumber males by over 10%.
- 22% of visitors are aged 20 to 29, 60% are aged 20 to 49; and the 60 years, and older, age group accounts for 20% of visitors.
- There is a significant number of retired visitors from Christchurch.
- Nearly 75% of visitors come with family and friends, and only 2% with a tour or tour group.
- Between 13 and 20% visit with children (differing seasonally).
- The main reasons to visit are to walk (88%), relax (52%), to look at trees and plants (43%) or to pass through (37%).
- Most spend up to two hours in the gardens, few more than three hours.

What is people's source of information about the Gardens? Almost 90% of Christchurch based visitors say that they have "always known about it". Of visitors from outside Christchurch, 36% got information from a guide book. Most visitors have some awareness of attractions within the gardens (96% of Christchurch visitors and 43% of those from outside Christchurch).

⁵ Opinions Market Research Ltd Visitor Audit and Profile Exercise Botanic Gardens 2004. See Section 15 (Page 46), which sources information from a 1985 survey of Gardens visitors.

Most enjoy their visits, but some experiences fall short of expectations. This includes not gaining more knowledge of plants, not seeing enough native New Zealand plants, not having as good a horticultural experience as anticipated and that there is a lack of scientific activity. Despite this, most aspects of the Gardens are rated highly, the lowest rating being for the information centre, parking, botanical information for guided staff, information signs on plant displays, guided tours, the café, gifts and souvenirs and the toilets. Almost all visitors value the Gardens in a general sense and most (88%) agree that it is the most important visitor attraction in Christchurch.

Public consultation in late 2004 has been very important. The general comments on the Gardens were overwhelmingly positive, including that the Gardens are “better than any others seen in New Zealand”, “one of the best in the world” and “the jewel in the Central City area”. Others included “cannot imagine any visitor being disappointed” and “I just love the Gardens”. Specific positives noted in the submissions are enjoyment of walking round the Gardens and of good landscape and views, appreciation of the ‘rooms/special places’, enjoyment of flowers, appreciation of both native and exotic elements, and keeping the gardens much as they are now.

Issues raised include:

- It is time for a new management plan.
- There is a need for a clearer vision and objective statement.
- There is need for reflection of cultural diversity.
- A balance is needed between botanical and tourism needs.
- Development needs to build on both the current management plan and the original ideals of the Gardens.
- A lack of overall integration is evident.
- There is continued need for consultation.

The obvious ‘public’ are not the only users of the Gardens. There is also a significant number of

‘behind the scenes’ users. This includes individuals and groups that use the library, with its particular strengths in botany and horticulture, the herbarium, the grounds and collections for experimental science and education, and those who are interested in heritage aspects of the Gardens. The users include academic, research and educational institutions. They include other botanic gardens – the global botanic garden community.

Users, whoever they may be, expect high quality and excellence in practice and presentation. The very appellation ‘botanic garden’ implies standards and expectations, as do such descriptors as ‘public museum’, ‘art gallery’ and ‘national park’. The title ‘botanic garden’ must not be accepted or worn lightly. Expectations are exceeded in some areas; two examples being the opportunities to take spectacular photographs and to see wildlife. Such aspects of the Gardens should never be regarded just as a means to ‘neutralise’ the deficiencies, but rather as strengths that need to be built on and marketed.

5. General issues for the Gardens

The Greater Christchurch Urban Development Strategy (UDS) points to important issues for the Gardens. These include that there will be growth in the number of people in ‘greater Christchurch’ from the present 380,000 to 430,000 by 2021. There will be an aging population, greater reliance on private transportation and greater environmental awareness.

Tourism projections suggest doubling of tourist visits over an eight year period. Development of the Cultural Precinct concept and inner city revival is likely to result in visitors to the region staying longer in Christchurch and significantly longer or more visits by people to the Gardens. It is reasonable to assume that by 2013 the present 1.2 million visits to the Gardens will increase to at least 2 million per annum.



The review of and planning for the Gardens aims to ensure that all people in the region feel a sense of ownership of and pride in the Gardens. Improvement of the Gardens scenic and botanical qualities and its collections, along with the upgrading of its layout and circulation, will ensure that it continues to function as one of Christchurch's most important visitor attractions and as a significant economic and social contributor to the city.

6. Is there a need for change and development?

If the Gardens is to achieve the local, national and international status that many believe is appropriate, then it needs to be transformed from the existing civic and colonial model to being a more comprehensive and wider based multi-functional botanical garden. In the process of doing so, it will be important not to lose those distinctive features that make the Gardens uniquely 'Christchurch'. To achieve this new level of operation and retain a good balance is a major challenge.

Places such as botanic gardens survive as effective contributors to society only if they undergo periodic assessment of present practice, their managers are prepared to change where it is necessary and even for rejuvenation and re-orientation to occur. To avoid this process is for the botanic garden to decline through benign neglect. These considerations are the basis for the present period of activity and consultation for the Gardens, a renewed vision and goals, a firmer operational base and proposals for improved facilities.

The 1860s, when the Gardens were initially developed, were an exciting and innovative period for the study and growing of plants. John Armstrong, to whom much is owed for the initial development of the Gardens, was clearly familiar with the radical views of the world of nature promulgated by Darwin, Mendel, Wallace and others at that time. Legal changes and new construction technologies had led to a frenzy of activity, creating glass dominated conservatories. People were becoming aware of the botanical treasures in hitherto unknown lands and the

invention of the Wardian case⁶ ushered in a new era of transportation of plants across the seas. Scientific and horticultural societies were being set up and growing plants was no longer the domain of the rich and privileged.

Today, we are in an equally exiting and challenging period of development for botanic gardens. The last twenty years have seen the rapid rise of conservation as both a science and a social concern. We are seeing rapidly changing technologies for growing, displaying and propagating plants. Techniques for preserving reproductive material, such as cryo-preservation and novel genetic techniques, are giving ex-situ⁷ conservation and horticulture new importance. There are outstanding safety and biosecurity issues. The computer age is revolutionising education, science and interpretation. Environmental education has come of age. Large scale tourism is a recent phenomenon, with botanic gardens, museums and parks now having truly global profiles. Lifestyle changes, especially in cities, are dramatic. The planners and managers of the Gardens need to reflect and positively respond to this wide array of changes.

Basic botanic garden activities, such as education, conservation and research, are not yet well catered for in Christchurch. But they are becoming recognised by the city as significant botanic garden functions that need to be considered in redevelopment. There are a range of associated issues for the Gardens. There needs to be the development of better energy, water and waste efficiencies; the circulation and pathway system is often confusing and does not always show plants off to the best advantage; some key collections cannot be adequately displayed because of lack of space; there is need for renewal of interpretation and signage; and the Gardens lacks risk aversion and monitoring policies, along with performance indicators, to ensure that it continues to meet City Council planning, community support and botanic garden community expectations.

⁶ The direct forerunner of the modern terrarium (and the inspiration for the glass aquarium), invented by Dr. Nathaniel Bagshaw Ward (1791-1868) of London about 1829.

⁷ Off-site. Ex-situ conservation is the process of protecting an endangered species of plant or animal by removing it from an unsafe or threatened habitat and placing it or part of it under the care of humans.

Examples of specific areas of need and change include:

- Improved facilities for staff to carry out their duties.
- Modernised and more reliable propagating and holding facilities.
- A relational database to allow efficient cataloguing and retrieval of a wide range of plant related information.
- Dedicated education and improved display facilities.
- A science suite to include an enlarged herbarium, records archiving, library and a seed bank.
- Desk space for visiting professional staff and students, and meeting space.
- Probably new and enlarged retailing and food supply facilities.
- Improved circulation system (paths and driveways), including good pedestrian/vehicle separation.
- Irrigation reticulation.
- Greatly improved, and more extensive, signage and interpretation.

A special year for the Gardens will be 2013, when it celebrates its 150th anniversary. Its establishment year of 1863 is shared with the Dunedin Botanic Garden, making these two the oldest botanic gardens in New Zealand. Within the Australasian Region, the oldest botanic garden is the RBG Sydney (1816), followed by the RBG Tasmania in Hobart (1818), RBG Melbourne (1846) and the Adelaide Botanic Gardens (1855). The Gardens, while not being the oldest, is a relatively long established and, thus historic, botanic gardens. Major development of the Gardens is being targeted early enough so that by 2013 the city will have a proven world class facility that is fully 'botanic', while being an outstanding 'garden'.



CHRISTCHURCH
BOTANIC
GARDENS
EST 1863



PART II: RESOURCE INFORMATION

Explanation:

This Part describes the current status and structure of the Gardens. It includes some discussion of issues affecting the Gardens (see Part IV for a more detailed assessment of issues).

