

Visionary Plan for the Ballarat Botanical Gardens

Prepared for
City of Ballarat

by



March 2014

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1. Purpose of the Visionary Plan

This visionary plan is to provide recommendations that will assist the Ballarat Botanical Gardens (BBG) achieve the following visionary goals:

- *To position itself as one of Australia's top rural botanic gardens*
- *To meet its role as a botanic garden in the 21st century*

In doing so, this plan primarily looks at how the BBG could achieve this with what it already has.

As a part of this the following have been considered:

- Current botanic garden features
- Themes of the current living collections
- Condition of the current living collections
- Possible future living collections
- The curation of the living collections, including plant records
- Current interpretation, including plant labelling
- Use of the current and future collections for education
- Use of the current and future collections for conservation
- Use of the current and future collections by the Federation University for studies and research
- The role of the Friends of the Ballarat Botanical Gardens
- Other assistance that could be gained from a closer link with the Royal Botanic Gardens in Melbourne and other institutions.

2. The BBG as a 21st Century Botanic Garden

The BBG is often referred to as a 'Victorian pleasure garden'. Effectively, the pleasure garden was the first truly egalitarian venue, where anyone was granted admission, regardless of class. As such, the BBG will always play that role. However, this should not be viewed as something holding the BBG back from playing the role of a current day botanic garden. Even in the late 1800s George Longley had a strong association with the Mines Institute and its young botanists as well as supporting horticultural apprentices – including one apprentice supported to visit UK botanic gardens in 1892! (FBBG,2012). As such, the BBG went well beyond just being a pleasure garden and played out some the roles of a functioning botanic garden in the Ballarat region.

Although those botanical connections have not grown greatly over the last 130 years, it is no reason to not take the BBG forward to fulfil the role of a botanic garden today. It is in fact a botanic garden with a huge capacity to achieve that, without a significant expenditure on capital works.

A current definition of botanic gardens that has been well accepted internationally since the late 1990s is: "Botanic gardens are institutions

holding documented collections of living plants for the purposes of scientific research, conservation, display and education” (BGCI, 2000). However, with the changes that have occurred over the last ten years, they are now expected to be “environmentally sustainable institutions”.

Given this definition the main foci for botanic gardens today are:

- Greater involvement in plant conservation
- Greater need for environmental sustainability
- Greater use of native flora
- Promotion of the above through education
- High level of visitor satisfaction

How well does the BBG meet the definition of a botanic garden today?

- Environmental sustainability– Yes (100% non-potable water for irrigation)
- Horticultural display – Yes
- Education Programs – Yes (Although currently driven by the Friends of the Ballarat Botanical Gardens (FBBG), it is now proposed to create an Education officer position for BBG)
- Documented Collections: No (except for Heritage trees and a nationally registered Begonia Collection)
- Interpretation – Very limited
- Conservation – No
- Research – No

Although the BBG does not meet a number of the ‘requirements’ for a modern botanic garden, the agreed aims of the City of Ballarat for the Ballarat Botanical Gardens (as given in the 2014 MOU between the City of Ballarat and the Friends of the Ballarat Botanic Gardens) have committed them to start this change already. The aims are:

- 1: To maintain and preserve the Crown Reserve as a Botanical and Public Gardens as was the purpose the reserve was established by the Crown.
- 2: To ensure that the Botanical Gardens are maintained to the highest standard as possible and that the gardens staff can provide support, training and educational assistance to the Friends and the community generally, staff should be suitably qualified in Horticulture
- 3: To cultivate and display plant species of ornamental, economic, cultural and conservation value to the Ballarat region.
- 4: To provide quality recreation opportunities and educational programs and to assist educational and scientific institutions.
- 5: To provide a regionally significant facility that is accessible to all residents and visitors of Ballarat.
- 6: To display exotic and native plants suitable for use in the Ballarat region.

7: To label clearly and correctly identify those plants and provide interpretive services to educate the public on their uses, potential and distribution.

8: To keep appropriate records to ensure the scientific value of the collection.

9: To retain existing native vegetation where possible in the Botanical Reserve.

10: To provide an opportunity for the public to learn about the environment generally.

11: To create a high quality outdoor precinct for passive recreation for both local residents and visitors.

12: To promote the Botanical Gardens as a unique and major tourist attraction for the City and the district.

13: To utilise the Friends as a reference body in Botanical Gardens related matters.

Note: If any of the above aims correspond to the recommendations in this plan they are mentioned as a 'CoB Point'.

In addition to the support the BBG has from the Council, the BBG has a good number of other positives that many botanic gardens would certainly wish they had. These include:

Mature plantings – Yes (trees up to 140 years old)

Good nursery facilities – Yes

Conservatory – Yes

Offices on site – Yes

Meeting room - Yes

Friends group – Yes

Strong historical connections – Yes

Playground – Yes

Picnic area – Yes

Café facilities – Yes

Attractive location – Yes

Artworks - Yes

Recommendation 1: To better link the resources the BBG already has, combine the North Garden, South Garden and Lake Precincts 6, 7 and 8 to form a single Arboretum that encompasses the current Ballarat Botanical Garden. Consideration could be given to 'renaming' it all to become the **Ballarat Botanical Garden and Arboretum**. The value of creating the Arboretum is that it will highlight the previous and significant tree plantings in the areas around the botanical gardens and would greatly help to guide tree plantings in the future.

By including the three lake precincts in the proposed Arboretum, the BBG will not only include part of the lake shore but would also include a range

of other features that are very relevant to a modern day botanic garden, including:

- a picnic area (Precinct 8)
- playgrounds (Precinct 8)
- Pipers on the Parade Restaurant & Kiosk (Precinct 7)
- the ferry mooring (Precinct 7)
- beauty of distant views across the lake (Precinct 7)
- an opportunity to tell the story of the water recycling (Precinct 6)
- reedbeds (Precinct 6)
- native aquatic plants (Precinct 6)

The picnic area and playground provide an excellent chance to use interpretation to tell the botanic gardens story to people who otherwise may not have really thought about visiting it.

This recommendation also takes into account the comments about the importance of the tree plantings made in the 1995 Master Plan and Maintenance Strategy - 4.4.3 Arboreta (Patrick, 1995).

Recommendation 2: Make the wetlands a part of the botanical garden (as opposed to arboretum) and use them to talk about water treatment and native vegetation. The area around the wetlands could be developed as a reflection of the natural vegetation that used to exist around the lake when it was a swamp. As a part of this, consideration should be given to the removing the Willows from the watercourses near the lake and replacing them with native trees that can be used as a way of extending the wetland down to the edge of the lake. **(CoB Points 9&10)**

3. Living Collections

As for an art gallery or museum, it must be remembered that for a botanic garden its collections are its core – they are the reason it exists and an important reason why many people visit. As a part of this, it is important to know what you have and where it is. Without the recognition of this, it can be viewed as a town park. At present, there are some records relating to trees and the Begonias but there is not a good understanding of what is currently in the BBG collection.

It should also be appreciated that when looking at the collection plan for the BBG, the number of species in a collection is not the most important consideration. The question of why a species is in the collection is always the most important – whether it is for education, research, conservation or, importantly, producing an attractive display. While there are a number of themed plantings (see below) the plantings do not always match and again the actual collections in the themed plantings are not recorded.

In terms of the origin of the BBG plantings, the living collections are currently about 10% native and 90% exotic. This very much reflects not only the past of the BBG but also the past of most botanic gardens around the world. However, with the inclusion of the wetlands this could be addressed, with the BBG holding a connection to its earlier times and the same time displaying a much more current picture of a botanic garden.

Recommendation 3: Review and identify all of the current living collections, in both the botanic garden and the arboretum, so as to be able to better understand what plants the BBG is currently displaying. **(CoB Point 8)** As a part of this, develop a collection plan to establish what sort of long term collection is actually wanted.

Recommendation 4: As a part of Recommendation 3, consider how the re-development of the BBG can be used to also improve the Buninyong Botanic Garden. Should the plantings in the two gardens be considered as part of one collection?

Current collections

a) Begonia collection

The BBG's Begonia collection is the most prominent and well recorded living collection with the tuberous forms registered as a national collection with Garden Plant Collections Association of Australia.

The Begonias as a collection seem to go back to at least as far as 1889, being first cultivated in open ground in 1911 and a conservatory display of 1700 begonias in 1932 (FBBG,2012). The current national collection is substantial and takes up a significant percentage of the Nursery space.

In 1953, BBG held its first Begonia Festival. The collection has been placed on display for every Festival since and the displays now held in the Robert Clark Conservatory have been referred to as the 'jewel in the crown' of the Ballarat Begonia Festival. (CoB website)

While the Begonia collection continues to grow and continues to have a good reputation, its standing as a national collection needs to be addressed. In the conditions of GPCAA Registration, Point 3 is "Maintain, as far as possible, accurate lists and records of the plants and label or map the individual plants or plant groups in the collection." At present, the BBG does not have either the database or the staff allocated to such work.

Recommendation 5: Review the Begonia collection, record its content and develop a plan for its future use and promotion in the Begonia Festival.

b) Trees

About 52 of the trees in the BBG and North and South gardens are Heritage listed. While they are not databased by the BBG, they are on the Heritage Register and the information would be available. However, this only covers those trees that are registered and the large collection of impressive old trees across the entire site still needs to be recorded.

It is suggested that the main difference between the 'arboretum' part of the BBG and the 'botanic gardens' should continue to be the density of the plantings. Whereas the arboretum will be just trees planted on grassland, the garden beds of the botanic garden make it distinctively different.

Within the botanic garden, there have been a number of areas under the trees that have been mulched but not planted. The mulched areas are now opportunities to further develop the BBG's living collection and should be included in the collections planning in Recommendation 3.

Recommendation 6: Review the current Arboretum plantings and develop a plan for future plantings in the area.

Recommendation 7: Consider planting the mulched beds around the mature *Sequoia* and the *Cedrus* plantings in the botanic garden. One possible theme for the *Sequoia* planting could be the plants that naturally occur in the same habitat. Typically, giant sequoia is found in a mixed conifer type dominated by California white fir (*A. concolor* var. *lowiana*). Characteristic associates include sugar pine (*Pinus lambertiana*), Jeffrey pine (*P. jeffreyi*), ponderosa pine (*P. ponderosa*), Douglas-fir (*Pseudotsuga menziesii*), incense-cedar (*Calocedrus decurrens*), and California black oak (*Quercus kelloggii*). Shrub types include bush chinkapin (*Castanopsis sempervirens*) and mountain whitethorn (*Ceanothus cordulatus*).

c) Cacti and Succulents

In 2007 Ballarat Cacti and Succulent Society developed 2 beds near the Lily Pond and several of the plants have been labelled. However, the basis of the collection is not obvious (beyond cacti and succulents) and the collection is again not recorded. See Recommendation 3.

d) Western Bed

The development of the Western Bed has followed up from the recommendations made in the 1995 Master Plan. It has effectively provided a border along the BBG's western boundary, all of the plantings have been themed and it is the best labelled area in the BBG. As a long

continuous bed broken up into a series of themes it is an excellent one to use for tours or school groups.

Recommendation 8: Consider changing the naming of the sections in the western bed to give them a more 'botanical' feeling and provide the opportunity for them to be further used in education. For example, instead of "Grasses" call the planting "Monocots". It not only assists with education but is a more accurate reflection of what should be/has been planted. However, this does not discard the use of the word "grass" which could appear early in the interpretation.

Recommendation 9: Where possible, extend the plantings in the Western bed across the path to envelope visitors in a particular theme, in a similar way to the conifer planting which already has appropriate plantings in the adjacent lawn area.

Recommendation 10: Review the Australian garden in the Western Bed.

What part of the Australian flora is being displayed:

- Geographic or taxonomic themes?
- A flora of the Ballarat region?

Consider an interpretation plan and plant to achieve the plan.

Recommendation 11: Review the Asia garden. What are the main messages? What plants will tell the stories?

Recommendation 12: Reconsider the fragrant garden theme and look firstly how you would interpret it and then select the plants that tell the stories that are wanted.

Recommendation 13: Review the colour themes for the western gardens i.e. white garden, grey and purple garden etc. Are the plantings providing the intended displays and what messages are they providing for guides and for education groups?

Recommendation 14: Involve the Friends Western Bed Group in the above.

e) Other Collections:

- Fernery – to be re-developed
- Water-lily pond
- Azalea Garden
- Camellia Garden
- Dahlia Garden
- Rose Garden
- Rockery
- Sensory Garden

Whereas all of the above plantings could be identified as collections there is no record of what is actually in them and no known collection plans for the future (except the fernery).

Recommendation 15: Identify and record what is in the above 'themed' beds as a part of the BBG review. What is the message for each theme and what plants will tell it?

Recommendation 16: Thoroughly review the 'alpine garden'. It has obviously been planted with a wide range of plants that do not relate to the theme. Consider changing the theme.

Recommendation 17: Develop a collection of what used to grow naturally around Ballarat – it could be in one place (near the wetlands?) or spread through the different collections. This could include ex situ collections of locally threatened plants.

Recommendation 18: Re-develop the collections of the Fernery to be in association with the collection plan of the entire botanic garden.

4. Conservatory

Opening in 1995, the Robert Clark Conservatory is an asset that very few small botanic gardens possess and it should be used to its best.

Recommendation 19: Review the purpose of the conservatory in relation to the current and seasonal collections and in relation to a collections plan for the BBG.

Recommendation 20: Review the use of the conservatory for the 'coffee lounge' and shop. Could they be accommodated in the Resource Centre?

5. Living Collections Records

Maintaining a record of what is being grown with information about, at least, its location in the garden and original source is a very important part of being a credible botanic garden. This is not something that has been developed at the BBG though it has certainly been highlighted in the BBG's Master Plan and Strategy and recognised in the City of Ballarat in its MOU with FBBG.

Recommendation 21: Develop/purchase a living collection database commencing with updating held information regarding the begonia and tree collection. **(CoB Point 8)**

Recommendation 22: Record the BBG's full living collection in the BBG database. **(CoB Point 8)**

Recommendation 23: Prepare a map of the BBG collection/tree plantings. **(CoB Point 8)**

6. Staffing

Currently there are 3 gardeners, an apprentice and a plant operator in the gardens plus 4 gardeners and an apprentice in the nursery. In addition, a part time staff member looks after the Ex POW Memorial and 2 part time staff work in the conservatory. An additional a plant operator/gardener looks after Eureka and the Buninyong Botanic Garden.

The current Curator of the BBG is responsible for both the botanic gardens and associated/nearby parklands.

The general look of the garden is good and visitor responses (e.g. in TripAdvisor) appear to have been positive. However, to review the functions of the botanic garden it would be necessary to reviewing the current structure and allocation of duties (including the Nursery).

One weakness to be addressed is the need for a position responsible for the development of the living collections, the maintenance of the BBG's plant records and the involvement of BBG in plant conservation and research. This could involve either: a) the creation of a collections manager who works to the current manager for the BBG and associated park areas, or; b) the separation of the botanic garden and arboretum from the current management and the re-definition and creation of a new 'curator' position that answers to the Manager Park and Gardens.

Recommendation 24: Review the current staffing in terms of its structure and their duties.

Recommendation 25: Create a position for the management of the BBG's living collection.

7. Environmental Sustainability

As noted earlier, the importance of environmental sustainability has become very important to today's botanic gardens with water being the main concern. The wetlands projects that have already been carried out in the City of Ballarat, helps to put the BBG in a very good position in terms of being a current day botanic garden. Now that the water supply has been addressed, the irrigation system is something that still needs to be seriously upgraded, though Peter Marquand said that this has already started.

Recommendation 26: Give the upgrading of the BBG's irrigation system a priority in the capital works program. Prior to its installation, a review of the current procedures would be valuable.

Recommendation 27: Interpret the story of the wetlands and water use at the botanic gardens to promote both the environmental sustainability of both the botanic gardens and the City of Ballarat.

Recommendation 28: Ensure that the development of any new or re-developed parts of the BBG (e.g. the Fernery) makes environmental sustainability one of their principle drivers.

Recommendation 29: Review BBG's current:

- Power use
- Vehicle and machinery use
- Waste management
- Pesticide and herbicide use

8. Labelling, Interpretation and Signage

a) Labelling

Although the labelling of BBG plants commenced 1915 (FBBG, 2012), very few of the collections were labelled prior to the FBBG taking on the task, with a large number of the plants in the Western Bed now labelled. Such labelling is not only valuable for visitors walking through the gardens but is also extremely helpful for guides taking tours. Of course, to label plants it is necessary to know what they are (see Recommendation 3).

Below are pictures of labelling currently being used at BBG and a label from the Alice Springs Desert Park. The latter puts more emphasis on the common name and includes a small amount of information for visitors.



Recommendation 30: Review the current labelling, both in terms of the format and resources needed to label the BBG's living collection. This should also include consideration about which plants are viewed as the priority for labelling. As a part of this, a review of the tree labelling should be done as recommended in the 1995 Master Plan. **(CoB, Point 5)**

b) Interpretation

At present there is very little interpretation in the botanic garden and there is no interpretation plan for the BBG. Even the map below largely refers to non-plant features.



1. The Conservatory	9. Growing Friends Nursery	17. Azalea Garden	25. 'Tilly' Thomson Garden
2. The Robert Clark Centre	10. Botanical Gardens Nursery	18. Camellia Garden	26. Dahlia Garden
3. Statuary Pavilion	11. Claxton Monument	19. Floral Clock	27. Rose Garden
4. Prime Ministers Avenue	12. Morey Gates	20. McDonald Bandstand	28. McDonald Gates
5. Sir William Wallace statue	13. Lake Pavilion Restaurant	21. Sequoiadendron Avenue	28. also South Pergola
6. Fernery	14. Almeida Pavilion	22. Horsechestnut Avenue	29. Community Playground
7. Water-lily Pond	15. North Gardens Playground	23. Rockery	30. Fish Hatcheries
8. Adam Lindsay Gordon Cottage	16. North Picnic Pavilion	24. Sensory Garden	31. Vintage Tramway Museum

Interpretation is now perhaps the major education feature in botanic gardens – even though it is considered non-formal education. It is an important way of conveying messages to visitors (often through stories) and is again extremely useful for guided tours.

As can be seen on the Alice Springs label above, all of the plant labels also had the local Arrernte name for the plant. Whereas this does not apply to most of the BBG collection, the development of the display of the local flora in and around the wetlands, would be an excellent opportunity

to introduce people to the Wathaurong language and stories. Developing the indigenous flora display with input from the local indigenous people would again be a way of strengthening the standing of the BBG.

Recommendation 31: Consider whether there is a primary message that the BBG is trying to promote, decide on the messages that visitors will get from each of the main plantings and develop the interpretation needed to convey them. **(CoB Point 7)**

Recommendation 32: Review the FBBG guide program in relation to the gardens primary message and the messages coming from the main displays. **(CoB Point 7)**

Recommendation 33: Use interpretation to highlight collections like the rare elms. This is not only where the trees are but also at places where people gather, for example, the entrance to the Arboretum and the picnic area.

Recommendation 34: Introduce the use of the Wathaurong language and stories to the BBG's interpretation.

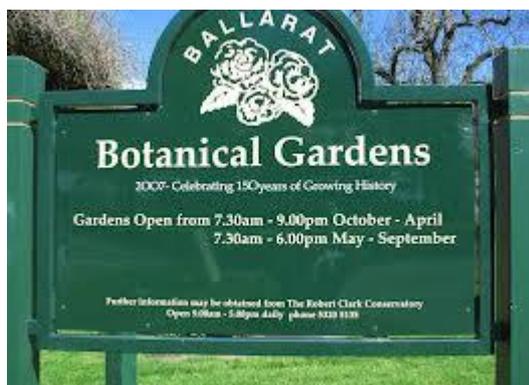
Recommendation 35: Rethink the way the Aboriginal poles have been used (e.g. does it make sense having them in the Asia garden). And look at what repair is needed.

Recommendation 36: Consider using computer based interpretation such as QR code.

c) Signage

If the recommendation to promote the botanic garden as the Ballarat Botanical Gardens and Arboretum and use the wetlands as part of the botanic garden:

Recommendation 37: Review what new signage is needed. However, as the area would still be split into the Botanical Gardens and the Arboretum it should not affect the use of signs like the one below.



9. Education and Research:

a) Primary and Secondary Schools

Since the early 2000s the BBG in conjunction with the FBBG has been running a range of Education projects involving school children including the development of an Education Kit in 2002 and more recently the FBBG's BotaniKids program. In addition, it is now planned that the City of Ballarat is to appoint an education officer who will be responsible for the further development of BBG's education program. This will greatly assist the BBG to achieve the proposed vision. As a part of developing the BBG's Education program, the use of other parts of the BBG such as the new Fernery, southern glasshouse and related activities such as the Hatchery should be considered.

Recommendation 38: Proceed with the proposal to appoint an education officer responsible for the program at the BBG.

Recommendation 39: Look at how the current plant collection links with the school curriculum and modify the collection to suit.

Recommendation 40: Explore the use of the southern glasshouse for the education program.

Recommendation 41: Include the Hatchery in the Gardens education program

b) Tertiary Education

As mentioned earlier, George Longley had developed a connection with the Mines Institute and its botanical students. A re-connection with tertiary education should also be explored, which could involve projects like the development of the wetlands, re-establishment of the original Ballarat flora or plant conservation.

Recommendation 42: Explore links with Federation University to explore the possibility of research projects.

A possible contact is:

Dr Simon Cook

Centre for Environmental Management

School of Science, IT and Engineering

Federation University

PO Box 663

Ballarat, Victoria

AUSTRALIA 3353

Tel: +61 (0)3 5327 9122

Fax: +61 (0)3 5327 9240

e.mail: s.cook@federation.edu.au

Recommendation 43: Given earlier involvements, consider the possibility of another joint project between the City of Ballarat and the Monash Freshwater Ecology School for the wetlands area.

10. Conservation

Plant conservation has, over the last 25 years, become one of the main activities in which botanic gardens throughout the world are now involved.

This could be achieved by developing an involvement in current projects being run by, for example DEPI. They have suggested that this could include projects involving species in the pea and grevillea families where the DEPI have seen possibilities for propagation. They have also suggested some display gardens of threatened ecosystems such as the volcanic plains grassland and grassy woodlands which would help raise public awareness. This could also be a good connection for the City of Ballarat with the Victorian government.

Recommendation 44: Introduce conservation as a significant part of the role for BBG.

The contact for such projects would be:

Elspeth Swan

Biodiversity Officer

Environment and Water

Grampians Region

Regional Services

Department of Environment and Primary Industries

402-406 Mair Street, Ballarat, Victoria 3352

T: 03 5336 6722

M: 0409 022 243

E: elspeth.swan@depi.vic.gov.au

11. Interaction with Other Organisations:

Friends of the Ballarat Botanical Gardens

Of the other organisations and institutions that the BBG has had collaboration, the FBBG is obviously the most important.

As given in the MOU between the City of Ballarat and the FBBG, the agreed role of the FBBG is:

- To assist in the promotion of the Ballarat Botanical Gardens, and to undertake activities for the benefit of the Botanical Gardens.
- To stimulate interest and community awareness in the activities of the Botanical Gardens.

- To involve the community in scientific, educational, historical, cultural and recreational functions of the Gardens.
- To initiate and coordinate special interest groups of the Friends to support the stated management aims of the Botanical Gardens and the Friends
- To raise funds for use in furthering the stated management aims of the Botanical Gardens.
- Under direction of CoB representatives, to undertake such work as necessary to further the stated management aims of the Ballarat Botanical Gardens.
- To serve as a link between the City and the wider community, and to promote, support and contribute to the development of the Gardens.
- To promote and support horticultural and botanical science and interests.

So as to get the best input from the FBBG in achieving this vision, the following recommendations will be very important.

Recommendation 45: Involve the FBBG in the review of the living collections and development of themes. This is to strongly connect them with what the BBG is trying to 'sell' to the public.

Recommendation 46: Seriously consider inviting the FBBG's botanical artists to provide illustrations for the garden's future interpretation. The images in *An Eden of Loveliness* give a very good idea of the quality of work that could be provided.

Recommendation 47: Use the Friends Newsletter to better promote the living collection and give the newsletter more 'plant content'.

Royal Botanic Gardens, Melbourne

The RBG Melbourne has had a very long term relationship with the BBG from as early as 1858 when it provided planting material for the first plantings till now with its Director, Prof. Tim Entwisle being the Patron of FBBG. As a principle botanic garden, both nationally and internationally, it is of real benefit to maintain such an association.

Recommendation 48: Discuss with the RBG Melbourne what relationship is possible in the future, especially in relation to activities like the development of living collections records.

Recommendation 49: Consider developing a staff exchange program with RBG Melbourne and Geelong Botanic Garden.

Recommendation 50: Discuss the possibility of the BBG to have a regular display at the Royal Botanic Garden in Melbourne, encouraging their visitors to visit BBG.

Trout Hatchery

The Trout Hatchery is obviously a substantial part of the history of the BBG's site having been there since 1873. Visiting the botanic garden there is no obvious connection with the Hatchery and their current use of shade cloth for the ponds is not attractive from the botanic garden. However, there are several opportunities for the BBG and the Hatchery to connect much more successfully.

Recommendation 51: Treat the Trout Hatchery more as a part of the botanic gardens to create a better connection between the vegetation of the Hatchery and the botanic garden. As a part of this, BBG could consider providing: advice on species to be planted; a supply of trees relevant to the botanic garden's living collection, and; possibly some assistance with maintenance.

Recommendation 52: Help with providing advice on suitable species for shading the trout ponds/tanks to help remove the shade cloth – and talk with the Hatchery about improving the look of the shading in the meantime.

Recommendation 53: Develop a much closer tie with the Trout Hatchery – both for visitors and education groups. Look at promoting the Hatchery from the botanic gardens side – as long as security doesn't become a problem.

Recommendation 54: Consider including the Hatchery in the BBG's Begonia festival display in some way.

Summary of Recommendations (suggested priorities are highlighted)

Recommendation 1: Combine the North Garden, South Garden and Lake Precincts 6, 7 and 8 to form a single Arboretum that encompasses the Ballarat Botanical Garden.

Recommendation 2:

Make the wetlands a part of the botanical garden (as opposed to arboretum) and are used to talk about water treatment and native vegetation.

Recommendation 3: Review and identify all of the current living collections, in both the botanic garden and the arboretum, so as to be able to better understand what plants the BBG is currently displaying.

Recommendation 4: As a part of this review, consider how the re-development of the BBG can be used to also improve the Buninyong Botanic Garden.

Recommendation 5: Review the Begonia collection, its content and develop a plan for its future use and promotion in the Begonia Festival.

Recommendation 6: Review the current Arboretum plantings and develop a plan for future plantings in the area.

Recommendation 7: Consider planting the mulched beds around the mature *Sequoia* and the *Cedrus* plantings in the botanic garden.

Recommendation 8: Consider changing the naming of the sections in the western bed to give them a more 'botanical' feeling and provide the opportunity for them to be further used in education.

Recommendation 9: Where possible, extend the plantings in the Western bed across the path to envelope visitors in a particular theme, in a similar way to the conifer planting which already has appropriate plantings in the adjacent lawn area.

Recommendation 10: Review the Australian garden in the Western Bed.

Recommendation 11: Review the Asia garden.

Recommendation 12: Reconsider the fragrant garden theme and look firstly how you would interpret it and then select the plants that tell the stories that are wanted.

Recommendation 13: Review the colour themes for the western gardens i.e. white garden, grey and purple garden etc.

Recommendation 14: Involve the Friends Western Bed Group in the above.

Recommendation 15: Identify and record what is in the 'themed' beds as a part of the BBG review.

Recommendation 16: Thoroughly review the 'alpine garden'.

Recommendation 17: Develop a collection of what used to grow naturally around Ballarat.

Recommendation 18: Re-develop the collections of the Fernery to be in association with the broader collection plan of the entire botanic garden.

Recommendation 19: Review the purpose of the conservatory in relation to the current and seasonal collections and in relation to a collections plan for the BBG.

Recommendation 20: Review the use of the conservatory for the 'coffee lounge' and shop.

Recommendation 21: Develop a BBG plant database commencing with updating held information regarding the begonia and tree collection.

Recommendation 22: Record the BBG's full living collection in the BBG database.

Recommendation 23: Prepare a map of the botanic garden and arboretum plantings.

Recommendation 24: Review the current staffing in terms of its structure and their duties.

Recommendation 25: Create a position for the management of the living collection.

Recommendation 26: Give the upgrading of the BBG's irrigation system a priority in the capital works program.

Recommendation 27: Interpret the story of the wetlands and water use at the botanic gardens to promote both the environmental sustainability of both the botanic gardens and the City of Ballarat.

Recommendation 28: Ensure that the development of any new or re-developed parts of the BBG (e.g. the Fernery) make environmental sustainability one of their principle drivers.

Recommendation 29: Review BBG's current:

- Power use
- Vehicle and machinery use
- Waste management
- Pesticide and herbicide use

Recommendation 30: Review the current labelling, both in terms of the format and resources needed to label the BBG's living collection.

Recommendation 31: Consider whether there is a primary message that the BBG is trying to promote, decide on the messages that visitors will get from each of the main plantings and develop the interpretation needed to convey them.

Recommendation 32: Review the FBBG guide program in relation to the gardens primary message and the messages and messages coming from the main displays.

Recommendation 33: Use interpretation to highlight collections like the rare elms. This is not only where the trees are but also at places where people gather, for example, the entrance to the Arboretum and the picnic area.

Recommendation 34: Introduce the use of the Wathaurong language and stories in the BBG's interpretation.

Recommendation 35: Rethink the way the Aboriginal poles have been used (e.g. does it make sense having them in the Asia garden). And look at what repair is needed?

Recommendation 36: Consider using computer based interpretation such as QR code?

Recommendation 37: Review what new signage is needed.

Recommendation 38: Proceed with the proposal to appoint an education officer responsible for the program at the BBG.

Recommendation 39: Look at how the current plant collection links with the school curriculum and modify it to suit.

Recommendation 40: Explore the use of the southern glasshouse for the education program.

Recommendation 41: Include the Hatchery in the Gardens education program.

Recommendation 42: Explore links with Federation University to explore projects such as landscape planning and wetland systems.

Recommendation 43: Given earlier involvements, consider the possibility of another joint project between the City of Ballarat and the Monash Freshwater Ecology School for the wetlands area.

Recommendation 44: Introduce conservation as a significant part of the role for BBG.

Recommendation 45: Involve the FBBG in the review of the living collections and development of themes.

Recommendation 46: Seriously consider inviting the FBBG's botanical artists to provide illustrations for the garden's future interpretation.

Recommendation 47: Use the Friends Newsletter to better promote the living collection and give the newsletter more 'plant content'

Recommendation 48: Discuss with the RBG Melbourne what relationship is possible in the future, especially in relation to activities like the development of living collections records.

Recommendation 49: Consider developing a staff exchange program with RBG Melbourne and Geelong Botanic Garden.

Recommendation 50: Discuss the possibility of the BBG to have a regular display at the Royal Botanic Garden in Melbourne, encouraging their visitors to visit BBG.

Recommendation 51: Treat the Trout Hatchery more as a part of the botanic gardens to create a better connection between the vegetation of the Hatchery and the botanic garden.

Recommendation 52: Help with providing advice on suitable species for shading the trout ponds/tanks to help remove the shade cloth

Recommendation 53: Develop a much closer tie with the Trout Hatchery – both for visitors and education groups.

Recommendation 54: Consider including the Hatchery in the BBG's Begonia festival display in some way.

References

Botanic Gardens Conservation International (2000) *International Agenda for Botanic Gardens in Conservation*. BGCI, London

Friends of the Ballarat Botanic Gardens (2012) *An Eden of Loveliness: A Pictorial History*. FBBG, Ballarat

Patrick, J. (1995) *Ballarat Botanical Gardens, Master Plan and Management Strategy*.