



The Royal Tasmanian Botanical Gardens
Recommendations for the development of the Living Collections
2015



Zanthoxylum ailanthoides and Ginkgo biloba - Japanese Gardens, RTBG Autumn 2013

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2014

Prepared by the Living Collections Working Group

Executive Summary

As a direct outcome of the Strategic Master Plan and the Living Collections Plan the RTBG's Living Collections Working Group has undertaken a program of in-depth analysis and assessment of the RTBG's Living Collections. This process has highlighted the RTBG's strengths and weaknesses in this critical area of botanic gardens management. The Living Collections Recommendations Report provides the basis for the on-going management of the RTBG's collections by outlining recommendations at a number of levels for the future development and management of every living collection in the Gardens.

Some notable strengths of the living collections are: the heritage landscape and its significant trees; The Tasmanian Seed Conservation Centre; The Tasmanian Collections, including the Conservation Collections; the heritage values of the site and the early collections including the historic connections linking Tasmania's first farm to the site of the current vegetable patch; the Subantarctic Plant House, and a number of high standard horticultural / ornamental displays including the Friends Mixed Border; the Lily Pond plantings, the Conservatory and the Japanese Garden.

The weaknesses include: A general lack of interpretation; several collections that lack botanical / thematic integrity and focus and / or do not relate to the RTBG's strategic directions, and a number of collections with relevant themes that are not well articulated by the collections content and composition. Other weaknesses include the spatially disjunct nature of some of the collections and the fact that our visitors are largely unaware of two key collections (the Tasmanian Seed Conservation Centre and the Conservation Collections). A significant weakness in the planning process is the omission of the potential to display Tasmania's alpine flora.

Recommendations vary in scope from large-scale 'whole of landscape' spatial plans (the Tasmanian Collections in the Northern Precinct and a substantial rethink of the Eastern Precinct) through to specific major projects (the Tasmanian Community Food Garden project and a proposed immersive Tasmanian Rainforest Experience). At the other end of the scale recommendations will focus on horticultural detailing and interpretive opportunities.

Once the report is signed off by the Director and the Board it will be used to formulate five yearly and one yearly business plans. These will provide direction for both, major developments and a process of continual improvement across all the Gardens collections.

Introduction

Established in 1818, just 15 years after the settlement of Tasmania, the Royal Tasmanian Botanical Gardens (RTBG) is a significant part of the global botanic gardens' network. The heritage landscape at the core of the Garden holds demonstration and ornamental collections as well as a collection of nationally significant trees. Collections with a strong southern hemisphere and/or conservation focus include the unique Subantarctic Plant House, The Tasmanian Seed Conservation Centre, collections of Tasmanian flora, conservation collections, southern hemisphere conifers and taxonomic collections including the southern heaths and the Tasmanian ferns.

Background to the Planning Process

Living collections in older Botanical Gardens have often developed idiosyncratically, governed by fashion or driven by individuals. The Royal Tasmanian Botanical Gardens (RTBG) is an older colonial era botanical gardens (est. 1818) with collections dating from the early 1800s.

The RTBG Strategic Master Plan of 2009 developed a suite of 5 linked plans, the plans refocus the Gardens key strategic directions, major interpretive themes, conservation targets and heritage values and 're-brand' the RTBG to be more regionally and globally relevant.

During the planning process a unique method of assessing each collection's status and value was developed to both evaluate and realign the living collections with the Gardens' new directions.

Living collections have a range of attributes that can be used for evaluation. These attributes were clustered into three principal attribute classes: *Defining attributes, Use attributes and Managerial attributes*. Collections were evaluated against each attribute via a formula and a simple table. The table provides an easy means of assessing how aligned the collections are with the organisations strategic directions and also indicates where improvements can be made. Every collection was taken through a rigorous three-stage assessment, review and evaluation process to enable staff to confidently propose the actions and developments recommended in this document.

Using This Report

The Living Collections Recommendations report should be used to help formulate yearly business operations plans and five yearly strategic action plans for the living collections. Recommendations put forward will also influence future activity in relation to a number of other RTBG program areas including: education, interpretation, maintenance (sustainable management), marketing and communications and business opportunities.

The report is neither categorical nor complete, the recommendations are a guide only - every project arising from the recommendations needs to be reconsidered, researched and reassessed individually before being actioned.

This report is a 'living' document and should be updated regularly to reflect the changes that arise from its recommendations. (Updates should be yearly if possible or every three years as a minimum.)

The Recommendations:

Whole of Precinct Recommendations:

Introduction:

For convenience the RTBG can be divided spatially into three precincts:

The Heritage Core, which extends from the main gate and encompasses the Pinetum and Lily Pond and the central area of the Gardens between the Arthur and Eardley-Wilmot Walls including the Floral Clock Lawn and Palm Collection
The Northern Section, extending from the Lily Pond and the axial path below the AMP Arch to the northern extremity of the Gardens, and
The Eastern Section, which includes everything east of the Eardley-Wilmot Wall.

The Heritage Core

The Heritage Core is the oldest, most established, and most visited section of the Gardens.

Major recommendations for the Heritage Core include specific recommendations in the Strategic Master Plan to remove the car parking from the 'carriage way' and to review the entry experience from the main gate to the Visitor Centre. The entry experience changes are also planned to improve visitor information and services and are linked to a potential future expansion of the Visitor Centre. A key whole of precinct recommendation is to undertake an analysis of the visitor experience and the visitor's pathway and facility usage throughout the heritage core with a view to enhancing the experience and developing facilities to meet demand.

Landscape recommendations for the Heritage Core include a redesign of the Gondwanan Terraces to heighten the experience of walking amongst the trees and to provide increased interpretive opportunities and better access and proximity to the collection as well as to consider the potential for expanding this key collection onto the Floral Clock lawn.

A potential development with implications for the Living Collections would be the implementation of water sustainable urban design practices utilizing run off from the Domain through rills and reed beds. No other major landscape scale changes for the heritage core are suggested in this plan. All other changes for this precinct will be considered at a collections level.

Heritage Core Recommendations

- Review recommendations arising from the Strategic Master Plan
- Undertake an analysis of the visitor experience with a focus on improving the experience and facilities and to improve the delivery of core messages.
- Prepare scoping documents for the development of landscape plans for the Gondwanan terraces.

Significant changes have been proposed for both the Northern and Eastern Precincts of the Gardens, specific 'whole of landscape' recommendations have been developed for these areas and the collections they hold. Given that the suggested changes will impact significantly on the collections within each precinct it is essential to consider the whole of landscape recommendations prior to the recommendations for the individual collections.

The Northern Precinct

(In relation to the whole of precinct change, this reassessment covers the Northern precinct from the road above the Gondwanan Terraces and the New Zealand Collection northward).

The assessment process for the collections held in the Northern precinct pointed towards a need to reassess the site as a whole. An analysis of the area indicated a number of challenges and problems to be addressed including:

- Management of existing established trees;
- Inadequate representation of the Tasmanian flora;
- Aging, inadequate and poorly connected pathway infrastructure / lack of circulation with one major path in and out;
- Isolation, lack of focal points, lack of people spaces;
- Movement of vehicles to service area;
- Highway (visual and noise impacts);
- Lack of spatial relationships between collections, and
- Lack of design focus and cohesion.

The Tasmanian collections are a key focus of the SMP, and there is strong justification for increasing the area occupied by these collections and re-visioning the display.

The northern precinct is the preferred site for developing these collections due to the varied microclimatic and cultural conditions it offers. There is enough available space for expansion and the capacity to create interesting connections with favourable existing elements against the backdrop of the Queen's Domain. A whole of site concept plan needs to be developed and it is envisaged that this planning process will see the existing Tasmanian Fern House decommissioned in favour of a larger walk-in experiential Rainforest House with associated Wet Forest collections within the Northern Precinct.

The site of the existing Fern House could be incorporated into an entry point experience for the Tasmanian Collections. The current Australian Section would also be de-accessed to enable expansion of the Tasmanian Collections. Isolated Tasmanian plant collections (Greater Hobart and East Coast Collections) will also be considered for decommissioning in their current locations and incorporation in the expanded Tasmanian collection.

Northern Precinct Recommendations

- Develop a spatial concept plan for the RTBG's Northern Precinct with a key focus of meeting the aims of the Tasmanian collections.
- Develop a spatial concept plan for the Northern Precinct, to enable expansion and integration of the Tasmanian Collections and to better integrate and contrast the physical and visual connections between the Tasmanian Collections and the Deciduous Trees that dominate the central strip of the site.

The aim of the Tasmanian collections is:

To demonstrate the uniqueness, diversity and beauty of the Tasmanian flora and to inspire and create a deeper understanding and appreciation of Tasmania and its native flora.

This will be achieved through a habitat based Tasmanian collections concept. This will not be based on the re-creation of habitats but by extracting the visual essence of the habitat through creative design.

A brief for the spatial concept plan of the Northern Precinct will be developed.

Elements critical to the brief are:

- A purpose designed entry point to engage and draw visitors in;
- Expanded and connected Tasmanian collections;
- Fitting each planting theme into the topographic and microclimatic area that best suits it;
- Contemporary design;
- Compliance with contemporary sustainability expectations;
- Development of focal points and recreational opportunities running through the space that draw visitors from one end to the other;
- Spatial and themed links between new and existing collections;
- Reconfiguration of access to the site to maximise flow and functionality and accommodate easy access standards;
- A large-scale structure to house elements of cool temperate rainforest vegetation (especially Ferns);
- Covered spaces to provide gathering points for education and public use, and
- Consideration of existing heritage plantings into the landscape design.

Given approval of the recommendations, early planning that will provide essential information for whole of landscape planning will be to:

- Develop a cool temperate rainforest concept plan;
- Develop sub-themes for the Tasmanian collections;
- Consider design elements for features such as a dramatic entry;
- Carefully select the species to be displayed eg. the mixes of plants in each of the components of the habitat concept – (what are the iconic plants?), and
- Propagate slow growing species in the nursery for future plantings eg. pandani, scoparia, deciduous beech.

The Eastern Precinct

The Strategic Master Plan (Living Collections Plan) proposed developing a Tasmanian heathland garden in this precinct. On closer analysis the Living Collections Working Group assessed this collection as not suitable for the site on cultural and aesthetic grounds. Further work by the Living Collections Working Group also recommended that for maximum benefit and for sustainable management, the Tasmanian collections would work best if amalgamated into the Northern precinct.

Additionally the assessment process for the individual collections held in the eastern precinct established a need to reassess the site as a whole. An analysis of the area (everything east of the Eardley-Wilmot Wall) indicated a number of challenges and problems to be addressed:

- The current assemblage of disjunct collections with little or no thematic basis;
- Several collections assessed as being of little value through the living collections analysis process (the Erica beds / Flax beds / Ornamental Conifers) / several collections have already been de-accessed and removed after assessment (the Protea beds / the Rills);
- The French Memorial Fountain sits in isolation, away from other Tasmanian plantings;
- Problems in relation to heritage infrastructure (the proximity of a number of trees to the Eardley-Wilmot Wall);
- Disease – conifer canker and plant health issues with other conifer species such as *Cryptomeria japonica*;
- Overplanting – associated tree management issues;
- No unity or logic in tree plantings;
- Poplar windbreak – suckering, root competition, wind damage;
- Poorly planned pathway structure eg. A bottleneck at the lower entrance, the central path through the wall doesn't link to anything;
- Lack of an entry experience.
- Poor drainage – Japanese Garden, Potager Garden area.
- The Government House screening needs replacement.
- Lack of people spaces;
- Proximity of toilet facilities, and
- Infrastructure issues with the Japanese Garden pond and leakage / irrigation infrastructure generally.

The Japanese Garden remains the one consistent feature (it has important and ongoing value through the sister city relationship with Yaizu, Japan and remains a popular site with visitors).

Proposed new collection themes include Southern Hemisphere Conifers, a key focus of the SMP. One of the principle recommendations of the LCP is to: “recognise the strong relationships of the Tasmanian and Southern Hemisphere collections to the vision and mission of the Gardens and the need to retain and expand these collections for their potential benefits;”

The development of a Southern Hemisphere Conifer and Gondwana Arboretum would allow the RTBG to utilize its extensive potted southern hemisphere conifer collection while incorporating other Gondwanan elements.

Eastern Precinct Recommendations

Develop a spatial concept plan for the RTBG's Eastern Precinct with strongly relevant botanical and horticultural themes within a cohesive design that incorporates existing elements.

Key collections/plantings envisaged for the site include:

- Southern conifers;
- Gondwanan elements – eg Southern Beeches (will require shelter to create microclimates), Proteaceae;
- Japanese woodland fringe around the Japanese Garden;
- Cherry walk into lower entrance of the Japanese Garden, and
- Children's spaces.

Considerations for the Design Brief will include:

- Imaginative plantings, copses, garden rooms, use of sculptures;
- Definition of where collections are going to sit in the space;
- Creation of multifunctional people spaces – seating etc;
- Looking at ornamental groupings of plants eg. southern conifers, based on their size, scale in the landscape, texture, and
- Links between areas eg. Japanese Garden to the rest of the eastern precinct.

Planning considerations should include:

- A central focal point for paths;
- Pathways that are functional, encourage flow between collections provide entry experience;
- Water capture – use of pathways and roadways, storage tank;
- The creation of microclimates;
- Consideration of sight lines eg. views to mountain, river;
- Use of screens for unsightly distant views such as Shell depot, and
- Utilisation of wall archways to connect both sides of the wall.

Individual Collection Recommendations

Tasmanian Collections

Conservation Focus /

Tasmanian Seed Conservation Centre

Current Status

The Tasmanian Seed Conservation Centre (TSCC) is a seed banking facility located in a purpose-built laboratory at the Royal Tasmanian Botanical Gardens. Established in 2005, the TSCC has become the cornerstone of the Botanical Gardens' conservation strategy.

The TSCC will ensure the long-term security and conservation of Tasmania's unique native plant species by providing:

- Research into the germination of Tasmania's native flora;
- Ex-situ support for plant conservation programs;
- Seed material to assist in the scientific study of our native plants, and
- Long term preservation of plant biodiversity loss caused by environmental degradation.

Recommendations:

Improvements through Interpretation and Ancillary Programs

On-ground interpretation of the importance of the TSCC to the conservation of Tasmania's flora.

Continual updating of the TSCC web pages.

Conservation Collections and Seed Orchards

Current Status

The Royal Tasmanian Botanical Gardens (RTBG) has been actively conserving threatened plants ex-situ since 1994. In 2008 a Memorandum of Understanding was signed with the Threatened Species Section (TSS) of DPIPW with the aim of 'maximizing the co-operative effort to achieve positive outcomes for the conservation of Tasmanian native plant species'.

The prime focus of the RTBG conservation program is the *ex-situ* conservation of Tasmania's endangered plant species through the long-term storage of seed in the Tasmanian Seed Conservation Centre. However, the Gardens also maintains some species as potted collections because:

Some species are unable to produce viable seed or the germination requirements have not been resolved.

Some are grown on for re-introduction/recovery purposes.

Some potted collections are established as seed orchards for the Tasmanian Seed Conservation Centre.

Some are maintained for educational display purposes.

Recommendations:

Improvements through Interpretation and Ancillary Programs

On-ground interpretation about RTBG conservation programs.

Foster and Maintain External/Research Relationships

Maintain MOU with the TSS.

Foster relationships with government, research institutions and NGOs with regard to the potential to provide plants for recovery plans, research and education programs.

Tasmanian Collections

Geographical Focus

Subantarctic Plant House

Current Status

The Subantarctic collection is housed in a purpose built structure, opened in 2000, it was built on a very low budget and originally intended as a prototype house. The building has become a permanent fixture and houses plants from Australia's subantarctic territories of Macquarie and Heard Island. This unique display focuses largely on the flora of Macquarie Island with the plants complemented by a mural of island habitats behind each planting.

The Subantarctic Plant House is recognised in the SMP as an important collection that gives emphasis to the RTBG's point of difference as a Tasmanian / Southern Hemisphere Garden. The Subantarctic Plant House is a globally unique display and strongly links the RTBG to Tasmania's Antarctic connections.

Over 150,000 people (over a third of all the RTBG's visitors) will visit the Subantarctic Plant House per annum, a significant number of those visitors will be tourists. The house is a strong educational resource for school students and members of the public alike.

Recommendations:

Improvements to the Existing Collection

More fine detailing to the internal and external landscape.

Sustainable Management of the Existing Collection

Examine options for more cost effective and environmentally efficient equipment and methods to cool the growing house.

In the interests of sustainability and cost reduction it is recommended that the house performance is reviewed and upgraded.

New Developments and Expansion

A major business case will be required for any new Subantarctic display house proposal.

Investigate the potential to improve back up facilities for the subantarctic collection.

Develop a back of house display looking at improved growing facilities and conservation work.

Improvements through Interpretation and Ancillary Programs

Create a dynamic interpretation where historical stories, 'real' time images and current news can be used to capture repeat visits.

Interpretation in relation to the unique geology and climate change are other potential avenues for further engaging visitors.

Developing Commercial Potential

Improve the commercial aspect of the collection through branding, sponsorship and ecotourism links.

Foster and Maintain External / Research Relationships

Foster relationships with external organisations & research bodies in particular the AAD.

Greater Hobart Collection

Current Status

The Greater Hobart Collection was established in 1999 and extends for 100 metres along the narrow bed directly above the Wombat One Pavilion in the Gardens' Northern Precinct.

The collection is focussed around the theme "the plants over your back fence" and displays plants collected around Hobart's bushland fringes. The theme is considered to be relevant and links to major collections and interpretive strategies. The theme is poorly articulated due to lack of interpretive infrastructure and material and the collection needs horticultural revitalisation.

Recommendations:

Improvements to Existing Collection

Improve horticultural presentation of the collection following a process of critical assessment of the existing display.

New Developments and Expansion

Reconfigure the collection in accordance with the development of an overall RTBG Tasmanian native collection display strategy. The theme is regarded as being highly relevant. Options are to maintain the current theme as is / or alternatively incorporate aspects of the display into the larger Tasmanian collection and interpret accordingly.

Needs to be considered as part of the Tasmanian Plants Display and incorporated into a spatial landscape plan required for the whole of northern section.

Alternative Uses for the Site

Consider connections with adjacent elements of the Northern precinct collections.

Improvements through Interpretation and Ancillary Programs

The interpretation for this theme should localise and personalise Hobart's flora by adding interpretation that indicates the exact urban and peri-urban origin of the material and its values.

Foster and Maintain External / Research Relationships

Develop links with relevant municipal authorities to cooperatively develop strategies that raise awareness about local indigenous flora.

East Coast Collection

Current Status

The East Coast Collection is understorey to several large Eucalyptus cladocalyx in a bed that extends from the northern storage gate to the area above the storage bays. The collection focuses on the flora of Tasmania's east coast, while the theme is recognised as a relevant one, it is not supported by signage or interpretation. The theme and collection will need to be reconsidered within the spatial plans for the Northern Section with a likely outcome of incorporation into an expanded Tasmanian Section.

Recommendations:

Improvements to Existing Collection

Plan for the removal and replacement of the Eucalyptus cladocalyx along the fence line.

Maintain the existing collection to prescribed standards while awaiting the incorporation of this theme within the planning for a combined Tasmanian section.

New Developments and Expansion

Existing area to be included in whole of landscape design of Northern area. Relocate species within new Tasmanian Collections.

Improvements through Interpretation and Ancillary Programs

Incorporate the coastal theme into the Greater Northern precinct interpretation.

Tasmanian Collection

Current Status

The Tasmanian Collection was established in 1991 and occupies a narrow bed north of the Lily Pond. The collection is organised in habitat types extending from Rainforest through to Coastal flora. While the collection aligns strongly with the directions of the RTBG's Strategic Master Plan, the potential scope of this collection is hampered by the very constricted site. The importance of the collection points towards an expansion in both scale and thematic scope. The disjunct nature of the various Tasmanian Collections creates issues in regard to cohesive interpretation. Rectifying this must be an important consideration for future planning.

Recommendations:

Improvements to Existing Collection

Improve horticultural presentation of the collection following a process of critical assessment of the existing display.

New Developments and Expansion

As part of long term planning, develop a spatial concept plan for the Northern Section including the Tasmanian Collections (possible additional / alternate sites include the Australian Section as recommended in the SMP and a selected area of the Deciduous Lawn).

As part of the above planning develop a high impact entry point to the Tasmanian Garden to the north of the Lily Pond and redevelop the entrance at Northern end.

Foreshore Plantings

Current Status

The RTBG's Foreshore Plantings extend along the foreshore from near the northern end of the railway platform northward to the Hobart City Council (HCC) marker in-line with the Garden's northern end. The path connects with the HCC's path and provides a route from Pavilion Point through to Cornelian Bay. Some sections of the path infrastructure are subject to periodic damage by king tides and storm events. The plantings are local provenance Derwent foreshore flora.

A grant to create a horticultural planting of locally provenanced foreshore species was received by the Friends of the Gardens from the Federal Government envirofund in 2002.

Recommendations:

Improvements to Existing Collection

Manage the existing collection to enhance the horticultural plantings of local provenance species.

Investigate the option for finer detailing with herbaceous plants and groundcovers, with a focus on weed suppression.

Sustainable Management of the Existing Collection

Improve and manage pathways to Australian standards.

Consider and plan for the impacts of climate change on rising sea levels.

New Developments and Expansion

Needs to be included in Queens Domain whole of landscape planning in relation to the development of complementary infrastructure & facilities.

Improvements through Interpretation and Ancillary Programs

Interpretive opportunities include Tasmanian (Derwent) riparian flora) / Foreshore history / Aboriginal history.

Foster and Maintain External Relationships

With HCC and other relevant stakeholders.

Grassland Remnant

Current Status

The Grassland Remnant is a geographically focussed collection located at the far northern extremity of the RTBG which contains a significant number of typical native 'grassy vegetation' species and includes four that are listed as rare and threatened. Apart from scattered plantings of native species and the establishment of commercial beehives, the site has remained relatively undeveloped since the establishment of the Gardens. A more focussed management approach to the site was initiated during 2010 with the aim of developing strategies to ensure the important natural values of the remnant are maintained and enhanced. Activities include mapping of rare species, flora survey, herbarium collection, weed control and determination of maintenance procedures.

Recommendations:

Sustainable Management of the Existing Collection

Continue to manage the area with the aim of maintaining/enhancing natural site values. An adaptive management approach may be necessary in response to changes in the distribution/density of native and weedy species.

Planned removal of *Eucalyptus cladocalyx*.

Improvements through Interpretation and Ancillary Programs

Determine how the collection should be interpreted (on and/or offsite) - the natural values and our management of the site could be interpreted in an appropriately themed area elsewhere in the Gardens.

The area has potential to be utilised as an educational resource to interpret the importance of grassy ecosystems and the species that comprise them and to demonstrate the principles and practices of restoration ecology.

Foster and Maintain External / Research Relationships

With the Tasmanian Herbarium and HCC.

Tasmanian Collections

Taxonomic focus

Tasmanian Ericaceae

Current Status

Positioned to the left of the steps leading down to the Lily Pond, the Tasmanian *Ericaceae* collection was originally conceived and constructed in 1994 as a 'show case' for the outstanding Tasmanian members of this important plant family.

While this family is regarded as an essential collection, the current site has a number of inherent problems, including :

The root rot fungus *Phytophthora cinnamomi* (Southern *Ericaceae* are highly susceptible).

Poor site suitability, the area is exposed to full day sun which precludes the display of many alpine and wet forest species.

The collection is isolated from other Tasmanian collections and out of context in an area close to the ornamental core of the Gardens.

Recommendations:

De-access the collection and display more species in the planned expanded Tasmanian Collection in the Northern Precinct.

Future Use

Future use of space following de-accession should be compatible with surrounding landscape and should incorporate a horticultural display.

Phytophthora root rot will be a limiting factor.

Tasmanian Fernery

Current Status

The Tasmanian Fern Collection is a taxonomic display focussed on the diversity of Tasmania's fern flora. The collection is housed in a 1964 built structure

designed by Walter Tobias (Superintendent 1960 – 1968). The majority of specimens on display were propagated from wild collected material. The display is popular with visitors who generally view it from the road in front of the display as the steep stone steps with relatively tall risers discourage entry. The current display is not accessible to wheelchairs.

Recommendations:

Medium Term – de-access the collection with the living collection rehoused in the planned Tasmanian Rain Forest Display.

Redevelop the site as part of the entry experience for the redeveloped Northern Precinct.

Improvements to Existing Collection

Manage to the prescribed standards and continue to increase diversity.

New Developments and Expansion

Tasmanian ferns will form an essential component of the Cool Temperate Rainforest Display and surrounding wet forest element.

Banksia Bed

Current Status

The bed below the Restaurant deck was planted with a display of banksias species and cultivars in 2013. This is a taxonomic focus relevant to the Gardens' vision and mission and has strong botanical integrity through the use of wild sourced material. Consideration of structural elements and landscaping will give this planting year round appeal when viewed both from the Restaurant and ground below.

Recommendations:

Improvements through Interpretation and Ancillary Programs

There is broad scope for interpretation with stories such as the origin of the name of the genus, banksia ecology and bird attractiveness amongst the possibilities.

Tasmanian Collections

Heritage Focus

French Memorial Plantings

Current Status

The French Memorial Fountain Collection, located in the eastern region of the Gardens, is a heritage focussed display representing plant species collected by French botanists attached to the 1792 and 1793 French expeditions using voyager-naturalist Jacques-Julien de Labillardiere's notes and plant lists. It was established in 1972 and the current landscape layout, refurbished during 2004, comprises plantings designed to fit around and enhance Stephen Walker's Huon pine sculptural centrepiece.

Recommendations:

Improvements to Existing Collection

Strengthen the botanical and historical integrity of the display through propagation material collected from original collection locations only.

New Developments and Expansion

Investigate the implications of de-accessing the collection on this site and moving an expanded concept of a French Explorer's Garden including the sculpture to a site within or closely connected to the expanded Tasmanian Collection.

Alternatively use the sculpture with interpretation alone to demonstrate the story of the French explorers.

Tasmanian Collections

Horticultural Focus

Visitor Centre Beds (Waratah / Resource Centre beds)

Current Status

The Visitor Centre Beds aim to demonstrate the use of horticultural selections of Tasmanian native species. The beds were established during re-landscaping of the area surrounding the newly constructed visitor centre in 1999.

Recommendations:

New Developments and Expansion

Existing planting needs to be reconsidered in context with the surrounding heritage landscape.

Investigate possible enhancement of waratah planting.

Southern Hemisphere Collections

Geographical Focus

New Zealand

Current Status

The New Zealand collection is located on the top side of the Floral Clock Lawn within a long, rectangular bed between the roadway and Palm Collection. It was established around the turn of the 20th century as a broadly based collection of New Zealand plants. It has been thinned out over the past few years with the loss of a number of diseased and senescent specimens.

Recommendations:

Improvements to Existing Collection / New Developments and Expansion

Assess potential for more focussed planting and interpretive thematics.

Improvements through Interpretation and Ancillary Programs

Establish interpretive focus for the collection.

Explore a dominant theme for the collection such as the unique nature of the NZ flora and the relationships with the fauna, particularly bird herbivory.

Foster and Maintain External / Research Relationships

Investigate the potential for developing relationships / internships with NZ based Botanical Gardens.

Gondwana Terraces

Current Status

The Gondwana collection is of limited diversity and occupies a cramped location situated on the eastern end of the Rhododendron Terraces. This collection comprises mainly of Nothofagus species with a few associated shrubs of Gondwanan origin.

An increased focus on southern hemisphere flora is flagged as a key directional change in the RTBG Strategic Master Plan 2009. With creative planning this site and collection has the potential to be developed into an engaging and meaningful display.

Major Recommendation:

While the existing planting lends itself to this theme it currently lacks focus and the site has accessibility problems. Planning is required to develop the landscape to increase access and effectively integrate the plantings.

Develop a design brief for a contemporary redesign of the Gondwanan Terraces that incorporates existing vistas and allows for an immersive experience.

Recommendations

Improvements to Existing Collection / New Developments and Expansion

Rationalise existing plants and develop a stronger taxonomic focus.

Review the potential for utilising other parts of terraced areas close to existing Gondwana collection. Consider expanding the collection across the road and onto the Floral Clock lawn.

Improvements through Interpretation and Ancillary Programs

Develop interpretive connections to the Tasmanian Gondwana flora and the proposed Southern Hemisphere Conifer and Gondwana Arboretum.

Southern Hemisphere Geographic / Taxonomic Focus

Potted Southern Hemisphere Conifer and Gondwanan Species

Current Status

The potted Southern Hemisphere Conifer and Gondwanan Species Collections were established in 1998 with a donation of specimens from researchers at the University of Tasmania. Since that time it has been developed through further donations from various individuals and institutions. This is a significant collection with a number of very rare conifers that would be difficult to access from the wild. At present the collection requires cyclical propagation to maintain healthy stock. This practice has a significant impact on nursery resources in terms of labour and space.

Major Recommendation:

Incorporate the collections into the RTBG landscape, focussed on the proposed Southern Hemisphere Conifer Arboretum and Gondwana Terraces.

Recommendations

Improvements through Interpretation and Ancillary Programs

Paleobotanic records indicate Tasmania had a rich conifer component in its flora with ties to the diversity that exists in areas like New Caledonia today.

Interpretation should focus on this strong connection with the Tasmanian Flora as a point of difference.

Foster and Maintain External / Research Relationships

Maintain relationships with UTAS researchers.

Maintain connections with the Tasmanian Arboretum.

Cultural & Ornamental Horticultural Focus

Bedding Plants

Current Status

The display of Bedding Plants has had a long tradition at the RTBG and is focussed in the heritage core of the Gardens. It features varying annual and bulbaceous floral displays that are rotated twice yearly. This collection is predominantly in areas that experience high visitation, namely the main entrance and the plantings surrounding the conservatory.

Recommendations:

Improvements to Existing Collection

Maintain existing approach of flexible displays.

Remain inventive - with regard to design and the use of different plants including grasses, perennials & vegetables.

Consider developing temporary additional displays.

Sustainable Management of the Existing Collection

Regularly review bedding display area for suitability and capacity to maintain.

Visitor Centre Beds (Shop and Restaurant entry beds)

Current Status

The loss of the National Trust listed significant tree *Schinus polygamus* has changed the focus of the entry point beds. New plantings are planned that will focus on bold landscape plantings with a very strong horticultural focus.

These beds function as the entry point to both the shop and the restaurant.

Recommendations:

New Developments and Expansion

Plan and implement new plantings. The planting needs to be reconsidered in context with the surrounding heritage landscape.

Conservatory

Current Status

The RTBG Conservatory is an unheated structure that was opened in 1939 and occupies a central position within the Gardens. It has long been a popular venue for visitors to enjoy high quality floral displays.

The original practice of filling the conservatory with predominantly annual flowering plants has changed with the introduction of a collection of specimens that are displayed over a longer time period. These include orchids, lilies, bromeliads, ferns, species cyclamen and a variety of iconic Tasmanian species.

Recommendations:

Improvements to Existing Collection

Maintain existing approach of flexible displays.

Remain inventive - in regard to design and the use of different plants.

Consider developing temporary additional displays.

Sustainable Management of the Existing Collection

Regularly review Conservatory display area for suitability and capacity to maintain.

Improvements through Interpretation and Ancillary Programs

Increase interpretation about displayed collections, history and other aspects of botanical horticulture.

Include interpretation of the history of the Conservatory itself.

Developing Commercial Potential

The Conservatory is an important source of revenue as a wedding space, displays need to be designed with this in mind.

Foster and Maintain External / Research Relationships

With horticultural specialist groups.

Deciduous Trees

Current Status

Deciduous Trees are an integral part of the mixed tree canopy providing a structural framework to many horticultural displays throughout the RTBG. The collection includes many historically significant and visually prominent specimens planted as early as the 1860's. More recent additions include a number of Nothofagus specimens of Gondwana heritage and known provenance. Hobart's cool temperate climate facilitates the display of colour and texture provided by deciduous trees, contributing to the unique sense of place at the RTBG.

Recommendations

Improvements to Existing Collection

Look at the introduction of multiple plantings of selected suitable species in the heritage Core of the Gardens.

Consider future planting locations for visual effects, screening and managing vistas.

Sustainable Management of the Existing Collection

Plan (where possible), for future tree replacements to create different age classes within any species cohort.

New Developments and Expansion

Consider southern hemisphere beech copses to frame other plantings in the Eastern Precinct Gondwana development.

Improvements through Interpretation and Ancillary Programs

Investigate interpretive display strategies to tell relevant stories about the diversity and unique aspects of deciduous trees.

Developing Commercial Potential

For any new large scale deciduous tree plantings consider designing the planting to incorporate glades as people spaces.

Tree sponsorship.

Foster and Maintain External / Research Relationships

National Trust / Tree sponsors.

Conifer cultivars (general landscape plantings)

Current Status

The purely ornamental plantings of conifer cultivars includes dwarf and ornamental selections that provide an evergreen backdrop to many displays throughout the gardens. Some, like the viewing platform, are dominated by conifer cultivars that have outgrown their intended function in the landscape.

Recommendations:

Conifer cultivars should be regarded as landscape elements and not as a collection per se.

Develop a specimen replacement plan in line with the recommendations of the SMP.

The Mixed Border

Current Status

The Friends' Mixed Border (FMB) runs along the western side of the convict built Eardley-Wilmot Wall. The original Herbaceous Border was established in the early 1980s and major redevelopment occurred during 2006-2007. The Border was extended to include a rose arbor and entry points in 2009-2011.

The Mixed Border Collection is intended as an aesthetically pleasing horticultural display with an emphasis on prolonging the colour season through the inclusion of late summer/autumn flowering plants. Roses feature throughout the display. The Iris Collection adjacent to the Mixed Border consists of cultivars supplied by the Iris Section of the Hobart Horticultural Society.

Recommendations:

Improvements to Existing Collection

Continue to look for new selections and plant combinations.

Evaluate entry points and associated landscaping for improvement.

Sustainable Management of the Existing Collection

Review the collection for suitable plants chosen to withstand changing cultural and climatic conditions.

Improvements through Interpretation and Ancillary Programs

Ensure infrastructure is maintained and review interpretive opportunities.

Developing Commercial Potential

There is potential to develop a line of seeds and seedlings of plants from the border, either on the shop trolley or at the annual FOG plant sale.

Lily Pond Plantings

Current Status

The Lily Pond was established in 1848 and is surrounded by herbaceous, horticultural displays with water lilies in the pond. The planting is in a Gardenesque style, representative of the era that the lily pond was constructed.

Recommendations:

Improvements to Existing Collection

Maintain high quality, changing and innovative displays.

Maintain emphasis on pond and waterside plants.

Renovate infrastructure.

Manage the background plantings to enhance the views across the pond.

New Developments and Expansion

The current deck could be removed and a new deck constructed to hold larger groups.

Undertake pond repairs to prevent the leakage of water.

Consider the installation of submerged planting beds to add botanical and aesthetic value to the area.

Improvements through Interpretation and Ancillary Programs

Provide visually discreet historical interpretation.

This area has high visual amenity and requires careful placement of additional infrastructure.

Lily Pond Backdrop Plantings

Current Status

The Asian Woodland planting, located above the Lily Pond is a geographically focussed display representing species of Asian origin. This planting is an ornamental backdrop to the Lily Pond.

Recommendations:

Sustainable Management of the Existing Planting

This planting needs to be maintained to a high standard with consideration given to focal points, seasonal colour and views across the Lily Pond.

Rhododendrons & Camellias

Current Status

The Rhododendron & Camellias are sited in several central locations close to the Lily Pond above the Visitor Centre and on terraces surrounding the AMP Arch. These plantings have historically been grown at the Gardens over a long period and fit well within the cultural heritage core of the Gardens.

Recommendations:

Improvements to Existing Collection

Rationalise collection to maximise horticultural impact of the display.

New Developments and Expansion

Rhododendron and camellia plantings should be contained to the Mexican Swamp Cypress terrace and the terraces to the east should be developed as part of the Gondwana Collection.

Fuchsia House

Current Status

The Fuchsia House was built in 1958 and has had a number of changes to the display over the succeeding years. It was re-landscaped in 1985 with the display focussed on cultivars while in the late 1990s more species Fuchsia were introduced. In 2012 the House was refurbished again and the roof's shade cloth replaced with Laserlite™ to provide an all weather events space.

Recommendations

New Developments and Expansion

A small collection of Fuchsia species have been maintained in and around the house.

The new display is horticulturally focussed and complements the surrounding Mixed Border display.

Palm Collection

Current Status

The Palm Collection was originally located close to the Australian Section. The collection was moved to its' current location at the northern end of Floral Clock Lawn in 1914. The reason that this site was selected was due to a number of large palms already in existence on the site including specimens of *Phoenix canariensis*, and *Washingtonia filifera* that were planted in the late 1800's. The Palm Collection is a non-provenanced collection of palms from around the world. New specimens were added to the collection in 2013-2014 with an emphasis on species from Australia and New Zealand.

Recommendations:

Improvements to Existing Collection

Continue to review and strengthen plantings.

Sustainable Management of the Existing Collection

Manage collection for optimum plant health.

New Developments and Expansion

Focus on the introduction of southern hemisphere palms to strengthen their representation of the collection.

The New Zealand endemic Nikau palm (*Rhopalostylis sapida*) can be used to link the Palm and New Zealand Collections.

Consider a Wind Garden of monocots such as grasses, restios, and bamboo in the Floral Clock Lawn to tie in with the established "giant" monocot planting of palms.

Improvements through Interpretation and Ancillary Programs

Develop interpretive themes and focus for the collection.

Foster and Maintain External / Research Relationships

Maintain contacts with local palm enthusiasts.

Magnolia Collection

Current Status

The Magnolia collection runs along the base of the Gondwana Terraces across to the lower section of the Cork Oak Lawn. The collection consists largely of cultivated varieties combined with a number of species Magnolia. It is a mixed age planting and includes other members of the Magnoliaceae such as Michelia.

Recommendations:

New Developments and Expansion

Plan for relocation over time to allow the Gondwana collection to expand and bulk up specimens in the Cork Oak Lawn Beds.

Improvements through Interpretation and Ancillary Programs

Interpret links to early flowering plants.

Grey Foliage Planting

Current Status

This is an ornamental planting above the Lower Entrance. The defining purpose of the planting was to develop a visually strong display of grey foliated species that thrive in dry conditions. The planting was established in 1999 in response to the exposed location that necessitated the use of plants that would withstand full sun and the prevailing winds coming across the Derwent River.

Recommendations:

Improvements to Plantings

Continued development of the plant list to introduce novel grey foliated species.

Sustainable Management of the Existing Planting

This planting is an important entry horticultural display and needs to be managed creatively and at a high standard to provide an evolving and visually interesting display.

Improvements through Interpretation and Ancillary Programs

Develop simple interpretation to introduce the concept of plant adaptation.

Cultural & Ornamental **Taxonomic Focus**

Eucalypt Lawn

Current Status

The Eucalypt Lawn is a taxonomically focussed collection that was originally designed as an open arboretum displaying a collection of Eucalyptus species. This sloping lawn at the northern extremity of the Gardens occupies 0.75 ha and contains around 50 trees, half of which are unnamed. A review of the condition of specimens on the Lawn resulted in the removal over 40 trees and a number of shrubs in 2002. There have been further removals of a number of larger trees since that time due to the risk to public safety.

The area includes Wombat 1, a shelter of post and beam construction that was an award winning design from the School of Environmental Science in 1980, and is listed on the National Estate.

Recommendations:

Sustainable Management of the Existing Collection

Maintain the collection from a public risk perspective until the collection is de-accessed.

New Developments and Expansion

The site and the collection need to be considered as part of the greater Northern development. This area should be considered as part of the whole of Tasmanian spatial concept plan.

A possible focus being Tasmanian Eucalyptus species.

The site would benefit from a circulatory path to allow the possibility of an alternative level path.

Developing Commercial Potential

There is potential to incorporate gathering spaces as part of the development of an overall plan for the area with tables, seats and possibly barbecue facilities set into the landscape.

Wombat 1, already a popular facility for group gatherings, has potential for promotion as a site hire venue.

Conifer Species

Current Status

The Conifer Species Collection is underpinned by the garedenesque, historically significant early plantings along the entrance road to the RTBG and the Pinetum, dating back to the 1860's. More recent additions throughout the Gardens include a number of Tasmanian endemic species and many conifers from the Southern Hemisphere. The high proportion of mature conifers making up the collection adds to the sense of place and uniqueness of the gardens on a national level.

Recommendations:

Sustainable Management of the Existing Collection

Develop a management and replacement strategy for the collection, with preference given to the establishment of species over cultivars and known provenance material of Southern Hemisphere origin.

Improvements through Interpretation and Ancillary Programs

Strengthen main theme interpretation and develop interpretive/educational display strategies to tell relevant stories about conifer diversity, with an emphasis on Tasmanian endemic and Southern Hemisphere species.

Developing Commercial Potential

Continue to encourage individual and corporate sponsorship of the significant specimens in the collection.

**Cultural & Ornamental
Demonstration Focus**

Herb Garden

Current Status

The Herb Garden lies at the edge of the southern end of the Arthur Wall. It was constructed in 1983 and is made up of a flat sandstone paved area surrounded by a series of beds displaying culinary and medicinal herbs. It is a popular attraction with interpretive signage informing the public about a number of the species displayed and has frequently been used for classes in the past.

Recommendations:

Sustainable Management of the Existing Collection

The purpose and focus of this collection needs to be re-examined in relation to the development of the new Tasmanian Community Food Garden.

Improvements to Existing Collection

Maintain creative approach to Herb Garden plantings.

Improvements through Interpretation and Ancillary Programs

Focus on cultural and community links e.g. Africa, Europe.

Interpreting early medicinal usage provides an opportunity to interpret the early history of Botanical gardens (Physic Gardens).

Tasmanian Community Food Garden

Current Status

This area has a long history of cultivation as a food garden and orchard from the original Hangan's Farm in 1806 to Government House vegetable beds until the 1950s and more recently as the Economic Garden and Pete's Vegie Patch. A major direction from the SMP 2009 was to develop the entire area with a focus on community based food plantings, sustainability and education.

The Tasmanian Community Food Garden was officially opened in April 2014. It was largely funded by a grant of \$189,000 from the Tasmania Community Fund and has secured community support with groups such as Able Tasmania, Second Bite, the Salvation Army and the 24 Carrot Gardens Partnership involved. The garden design is based on a dragonfly wing and provides plots for community

groups as well as ABC's Gardening Australia program. The area not only allows for hands on community engagement but acts as a display garden for visitors to see what they can do in their home gardens. The proposed Living/Learning Centre would be a dedicated educational facility that would link the programs in the Food Garden with a kitchen in the new facility. If developed the Centre would house the RTBG's learning and community programs.

Recommendations:

New Developments and Expansion

The Tasmanian Community Food Garden project has been funded to develop the community food beds element of the project.

The new plan aims to redevelop the area as a purpose built Education / Community Garden / Economic plants precinct.

Foster and Maintain External / Research Relationships

Continue to build relationships with stakeholders and project partners including sponsors.

Easy Access Garden

Current Status

The Easy Access Garden was officially opened in 1985 with the aim of providing education and community engagement with beds designed for gardening by the disabled. In recent years it has been utilised by the RTBG horticultural education program and the area will be redeveloped as part of the Tasmanian Community Food Garden Precinct

Recommendations

New Developments and Expansion

This area will be redeveloped to house the Living / Learning Centre as a part of the TCFG precinct.

The stone trough has heritage significance dating back to an early cottage on the site.

The larger specimens from the Cactus House were transplanted to the kidney shaped beds outside the Easy Access glasshouse in late 2012.

Cacti & Succulents

Current Status

The Cactus House was developed in 1984 with the support of the now defunct Southern Tasmanian Cactus and Succulent Club and the collection was rationalised in 2004. There have been ongoing OHS and maintenance issues with the Cactus House and it was decommissioned in 2012 as part of the Tasmanian Community Food Garden project.

Recommendations:

Sustainable Management of the Existing Collection

Significant parts of the collection were temporarily relocated to the kidney shaped beds outside the Easy Access glasshouse in late 2012. The remaining plants have been maintained as a potted display collection.

Continued opportunities will be sought to develop a novel display of cacti and succulents in a permanent location.

Cultural & Ornamental **Heritage Focus**

Significant Trees

Current Status

The Significant Tree Collection consists of 102 trees and includes the Oak Collection (12), the Palm Collection (31), numerous conifers and broad-leaved trees. The trees are scattered throughout the gardens, but the oldest specimens, some 130-150 years old, can be seen along the driveway leading to the main gate, and within the Pinetum and the Oak Collection. The trees are significant due to their age and stature, their historical links with early colonists in Tasmania, some are uncommon, while others are simply splendid examples of their species. All of the significant trees are listed on National Trust of Australia (Tasmania) Significant Tree Register.

Recommendations:

Improvements to Existing Collection

Develop procedures for the routine maintenance, de-accessioning and replacement of significant trees.

Sustainable Management of the Existing Collection

Develop a management and replacement strategy for the collection, sensitive to the historical and cultural values of the existing trees.

The management and replacement strategy should also consider the need to maintain the aesthetic qualities of the heritage landscape in regard to scale and canopy cover.

Consider the potential impacts of changing climate on the Significant Trees and its influence on replacement species.

Improvements through Interpretation and Ancillary Programs

Develop a range of interpretive material, including web-based information and interactive tours, to convey the rich history and stories behind the collection and individual trees.

Focused interpretation on the importance of professional tree care.

Developing Commercial Potential

Maintain and seek sponsorship for individual trees.

Foster and Maintain External / Research Relationships

National Trust of Tasmania Significant Tree Register.

Cottage Garden

Current Status

The Friends of the Gardens Cottage Garden is located just inside the main entrance of the Gardens in front of the original Overseer's Cottage that was built in 1845. The current planting was established in 1999 based on the 1857 Catalogue of Plants in the Royal Society's Gardens.

Recommendations:

Improvements to Existing Collection

This collection is an important entry horticultural collection and needs to be managed at a high standard and creatively to provide an evolving and visually interesting display.

Sustainable Management of the Existing Collection

Maintain strong elements of the plantings from original RTBG lists to give an impression of a Victorian era planting.

Cultural & Ornamental **Geographical Focus**

Japanese Garden

Current Status

The Japanese Garden was opened to the public in 1987 and was designed by Yaizu landscape architect, Kanjiro Harada, with an emphasis on traditional Japanese garden elements of wood, stone and water. This project involved a reciprocal Australian garden design for Hobart's Japanese sister city Yaizu. The plants in the Garden largely consist of species native to Japan and selected cultivars with Japanese maples a feature, particularly in autumn. The waterway with its associated tea house, waterwheel and bridges, acts as a focal point for the central plantings. The area has a high rate of visitation and is a popular wedding space.

Recommendations:

Improvements to Existing Collection

Needs to be considered as part of the whole of precinct development, with a focus on plantings outside the boundary of the garden, the entrance walk way and area to the north.

Maintain to a high standard of care with the incorporation of more traditional Japanese horticultural techniques in the curation of the collection.

A management review is required with a focus on horticultural direction and potential changes to infrastructure and landscape elements such as Mt Fuji.

Sustainable Management of the Existing Collection

Need to repair leaking pond infrastructure, pathway, surfaces, drainage and irrigation.

Improvements through Interpretation and Ancillary Programs

Investigate the potential for interpretation (suggestions include information about Japanese Gardens throughout the world).

Chinese Collection

Current Status

The Chinese Collection is located on the path below the Pinetum and features a layer of deciduous trees underplanted with species rhododendrons and groundcovers. It was established in 1996 from wild provenanced seed collected in Yunnan Province in southwest China and has been augmented with donations of wild collected specimens from the Royal Botanic Gardens Melbourne.

Recommendations:

Improvements to Existing Collection

This is a small site that has an element of overplanting and needs to be managed to rationalise the canopy and improve the understorey planting.

Improvements through Interpretation and Ancillary Programs

Review of the existing interpretation for style and content and future renewal. Consider some content in Chinese.

Australian Collection

Current Status

The Australian Section lies within the Northern Precinct and is thought to have been established during the 1950s or 1960s as a geographically broad assemblage of Australian native plant species. No thematic basis in terms of taxonomy or regionalised floras is evident. There are approximately 250 specimens on display representing some 120 species and cultivars.

Recommendations:

New Developments and Expansion

De-access collection.

Needs to be considered as part of the Northern Section redevelopment and the Tasmanian Spatial concept plan.

South African Terraces

Current Status

The two terraces below the Conservatory were developed as a South African planting in 2009. Many of the specimens were grown from seed accessed directly from South Africa, while the remainder is nursery bought material.

Recommendations:

Improvements through Interpretation and Ancillary Programs

There is currently no interpretation but linkages between the South African and Australian floras present a strong theme emphasising Tasmania's Gondwanan connections as recommended in the SMP 2009.