St Kilda Botanical Gardens
Future Directions Plan

July 2009

Jill Orr-Young Landscape Architects

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Sandringham, Victoria

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The Friends of the St Kilda Botanical Gardens Inc

Contents

Summary

Future Directions Plan

The future directions plan is not a *master plan* - which would demand a multi-discipline project team, extensive community consultation, and be more comprehensive and prescriptive in its outcomes. The value of the future directions plan is its flexibility and its bridge between planning and design. It aims to reconnect the past to the present by actions which will re-establish coherence and contemporary relevance.

Our approach has been to carefully examine all remnants of nearly 150 years of growth and decline and redevelopment, and ask 'what can be made of this place now?' The knowledge that these gardens were carefully planned and designed brings a responsibility to respect 'original design intent' as can be rediscovered from fragments of historical evidence. Inevitably there are gaps in the evidence, which leaves place for reformatting the 'traces' as a connected whole and for new interventions to be imagined.

Botanic Function, Cultural Heritage Significance and New Cultural Vitality

The St Kilda Botanical Gardens is distinguished from other gardens in the municipality by its *botanic function*. A botanic (botanical) garden has four key roles – *scientific* (plant collections)*, conservation, education* (including interpretation) and *recreation.*

The St Kilda Botanical Gardens is recognised by Heritage Victoria for its *cultural heritage significance* as one of Victoria's earliest botanic gardens, developed in association with the Botanic Gardens Melbourne and its first full-time director Ferdinand von Mueller, which retains an original geometric layout, features an outstanding collection of mature trees, and remains a valued place of recreation. The Gardens reinforce a widespread local character of palm tree avenues and grassed surface ambience, which encourages un-programmed activities such as wandering, promenading, resting and observing.

The St Kilda Botanical Gardens continues to enrich lives in many different ways. It attracts local dwellers who lack alternative garden spaces, as well as international visitors who may combine a visit to the Gardens with a tram ride, Ackland Street café culture, the St Kilda beach, or other attractions. The future directions plan acknowledges a need for new ideas and continued renewal as a means of facilitating *cultural vitality*[1]*.* But it also values opportunities for the 'ephemeral' – both in organised 'events' and spontaneous 'happenings' – which will leave no permanent physical mark on the place.

Each of these factors is teased out and examined in the following pages, to inspire actions that will strengthen the botanic function, respect the cultural heritage significance and promote new cultural vitality.

'Big Picture' Context

In 2010, the St Kilda Botanical Gardens will mark 150 years. From 1860, cyclical drought periods have impacted on the garden, but diverse plant collections have survived on piped water. It has recently been suggested that 'drought' is now a redundant term, and that climate change has brought a 'permanent dry'[2]. This situation is a new challenge for the Gardens, with watering restrictions already at a critical stage 3A level, and traditional design elements such as fine grass lawns and annual bedding displays no longer feasible.

The dry conditions threaten not only the fabric of the gardens but also the survival of biodiversity in the wild. Of approximately 3,200 native plant species in Victoria, nearly 700 are considered to be in danger of extinction in the next few decades. Thus, the *conservation* role of botanic gardens has gained critical importance.

2010 will also mark the target year for botanical collections on a world scale. The 'Millennium Seed Bank', an initiative of Britain's Royal Botanic Gardens in Kew, aims to collect and conserve seeds of 30,000 world species by 2010. As collaboration between the Royal Botanic Gardens Kew, the Royal Botanic Gardens Melbourne and Victoria's Department of Sustainability and Environment, the 'Victorian Conservation Seed bank' will collect seeds of nearly 400 Victorian endemic plant species for storage and research into germination requirements. Plants grown in the course of germination experiments will be further propagated by the RBG and replanted in the wild or in secure sites, such as the St Kilda Botanical Gardens.

The St Kilda Botanical Gardens has a particular focus on the conservation of indigenous plants of the 'Sandbelt' region, as a *collection* and as a seed source for propagation and replanting in the wider municipality. This living collection is supported by knowledge contained in the *'Indigenous Plants of the Sandbelt, A Gardening Guide for South-eastern Melbourne'*, (2002). Whilst this publication has a regional application, and came about through a rare collaboration between multiple agencies (including the City of Port Phillip), it nevertheless provides particular support for the *scientific, conservation, education* and *recreation* roles of the St Kilda Botanical Gardens.

Community consultation

Community consultation was undertaken on 8 June and 13 June 2009. During consultation, plans of trees to be removed and replaced, proposed signage and the future directions plan principles and values were displayed for discussion. Copies of future direction plan and tree report were available for collection on the day and web.

In summary, the community overall were supportive of the plan and reoccurring comments focused on security and need for additional gardeners. Additional principles and values were added including landscape aesthetics and need to retain harmony and sense of mystery in gardens. A detailed summary of all comments are attached in appendices.

[1] The City of Port Phillip includes 'cultural vitality' as a key concept in its planning framework
[2] From an interview with Water Services Association of Australia executive director Ross Young, in 'The Age', Friday Sept. 7, 2007 (News 4)

Introduction

The future directions plan examines *botanic function*[3] and *cultural heritage* (Parts 1 and 2). Though each is analysed separately, the resulting recommendations acknowledge the interrelationships and interconnections, which make and enrich the complexity of the 'place', through *inspired design*. The concept of *cultural vitality* is interwoven throughout, acknowledging the plant collections and history as living and dynamic.

The Plan begins with *knowing* what resources exist – in the physical gardens, written analyses[4], preliminary scoping[5], the memories of those who work there, an existing features plan and plant inventory[6] – and looks for answers to questions that arise:

What is the condition of the existing tree collection?
How is planting structured as living botanical collections?
What is missing from the complexity?
Who was the original designer (beyond a name)?
What was the original design intent?
How does original design intent survive in the Gardens?
How can interpretation enrich the visitor's experience?
What contemporary values can be reflected in the physical setting?

The process of developing the future directions plan has included meetings with the client group – Council officers and the Friends of the St Kilda Botanical Gardens – and liaison with the arboriculture consultant[7]. There have been discussions about celebration of the Gardens' 150th anniversary in 2010. Although not part of our brief, the notes prepared as 'Ideas for St Kilda Botanical Gardens 2010' have been included as an appendix (Appendix 4).

Values and Principles:

Values are the basis on which all else is built. In April 2007, the City of Port Phillip undertook a community summit to encourage debate and develop a shared vision for a 10-year Community Plan. Not surprisingly, environmental issues and social inclusiveness were found to be high on the agenda for people living in Port Phillip. Details of how these will translate as actions for the St Kilda Botanical Gardens have not yet been developed, but Council's Revised Vision provides direction. From this we propose *values* and *principles* for the St Kilda Botanical Gardens as a point of departure for the future directions plan. These were discussed with the client group.

Values:

The botanical role (plant collections, conservation of species, interpretation)
Age/history/heritage (conservation of the extant tree collection, conservation of original design intent, interpretation). [8]
Diversity (a place for everyone, equitable access)
Cultural vitality/life (movement/change, seasonal colour, changing light, events, ephemeral art)
A welcoming setting (sun and shade, seating, lawns, drinking water, information, facilities, equitable access)
Visible care (quality maintenance, attention to detail)
Future heritage (new design – new ideas, renewal, layers)
Landscape aesthetics (value the landscape settings and ensure the landscape remains the dominant visitor experience)
Community resource for diverse activities, resource for community education, recreational, social and cultural

Principles:

* Maintain as public open space in perpetuity
* Maintain character and cultural heritage significance, while accepting the inevitability of continuing changes in detail
* Maintain botanical diversity
* Maintain a healthy tree collection, with a spread of ages, recognizing visual values, climatic constraints and the sequence of tree growth and maturation
* Recognise and accommodate climatic constraints (particularly water availability) and adapt to them through plant content management, and appropriate engineering interventions
* Provide for passive recreation through appropriate but discreet facilities (lawn areas, discreetly placed rubbish bins etc)
* Foster community and cultural activities, including educational activities
* Provide attention to detail in garden, lawn and facility maintenance
* Maintain an appropriate level of security, particularly through night time Garden closures
* Create heritage, harmony and mystery through placement of plants and retention of heritage layout
* Aim to respond ‘beyond the visual’, eg. consider the other senses, particularly smell and touch, the feeling underfoot, and intangible experiences
* Provide free drinking water
* In recognition that this is a much-loved garden that offers respite for residents and visitors who don’t have private spaces, appreciate and enrich what is already there by small design *interventions* which integrate the whole (eg. spectacular effects can be created by strategic placement of one special tree)
* Retain stormwater on site for reuse/recharge
* Ensure areas of dry rainforest have representation in the gardens that ensure diverse plant collection and visitor experience
* Create heritage, harmony and mystery through placement of plants

These values and principles have been added to following community consultation on 8 June and 13 June 2009.

Exclusions:

The brief does not include strategies for conserving water, community consultation (other than meeting with the Friends Group), development of an interpretation strategy, or detailed design, which are nonetheless important future tasks.

Archaeological investigations have not been commissioned (but are recommended in conjunction with path works).

[3] The four key roles of a botanic garden are *scientific* (plant collections)*, conservation, education* (including interpretation) and *recreation.*
[4] Conservation Management Plan 1996
[5] Preliminary scoping by Jill Orr-Young included research into original design intent and a recommendation for a major tree assessment study (completed by Stephen Fitzgerald Arboriculture)
[6] CoPP, March 2005
8 Botanical and heritage values of equal importance to local community
[7] Stephen Fitzgerald Arboriculture has completed tree assessments as a separate arboriculture report. The resulting recommendations are endorsed by this Plan.

Part 1: Botanic Function

Plant Collections

The basis of a *botanic* garden is its plant collections. The four roles of a botanic garden (*scientific, conservation, education* and *recreation*) depend (with the possible exception of *recreation*) on the *plant collections.*

Neither *the botanic role* nor *plant collections* were specifically addressed in the *St Kilda Botanical Gardens Conservation Management Plan (1996)*[8]*,* and no policy direction was formulated. Instead, the 'detailed descriptions' of 'soft landscape' describe *landscape effects* - structural planting, avenues, landmark specimens and garden bed displays - with only general reference to the Alister Clark Memorial Rose Garden, the 'native section', the 'consistent theme of palms', and a 'collection of rainforest and tropical plants' in the conservatory[9].

A plant inventory (CoPP, March 2005) provides a basis for analysing existing *plant collections,* in conjunction with an existing features plan. The inventory groups plants in areas and themes (as shown by the headings below[10]). However, the groupings are sometimes at the expense of design intent, with planted features (such as the central feature of the Gardens and the avenues) divided by the groupings.

The following analysis of existing plant collections, by areas, also considers opportunities for development of the collections. However, an overall policy is needed for context. Three 'major design elements' are considered in further detail.

Table 1 *Analysis of Existing Plant Collections*

See **Fig. 1** *Reference Plan* (p.13)	Description	Comments	Opportunities
Ecocentre Garden	27 taxa: mainly groundcovers (74%), of Australian origin (93%); recent plantings	Repeats 'indigenous garden'??? themes. Strengthen plant design/presentation of space *Requires further consultation and detailed design*	Opportunity for distinctive theme (eg. 'diversity at risk', etc.) Opportunity to deliver a stronger message about water conservation, in support of the ecohouse, (eg. methods demonstration garden, low water-use plants, with interpretation) Opportunity for culinary collection, eg. 'SE Asia', 'bush tucker', (inc 'native citrus'), with interpretation (harvesting, recipes, demonstration)
Northwest Corner	26 taxa: mixture of trees (38%) and shrubs (50%); no strong theme; includes 19th century favourites and rainforest species;	Includes important remnant *Ulmus procera* 'avenue', which is thought to define original path layout *Requires detailed design*	Opportunity for east coast Australia dry rainforest collection OR cacti/succulent collection

	Description	Comments	Opportunities
Blessington Gate West Bed (Formerly Blessington Gate Bed)	33 taxa: mainly shrubs (73%), old-fashioned garden favourites (eg. Buddleia, Viburnum); mainly European, South African & American origin; no Australian provenance	Choose plant species suited to Mediterranean climate *Requires detailed design*	Opportunity to reinforce Gardens symmetry at entrance (with Blessington Gate East Bed) Opportunity to reinforce entrance experience with 'wow factor' Opportunity to strengthen theme of nineteenth century shrub plants (refer *'Plants Listed in Nursery Catalogues in Victoria 1855 – 1889'*, OPCA, RBG)
Blessington Gate East Bed (formerly Camellia Bed)	146 taxa: mainly shrubs (63%), including Theaceae family (10%) - Camellia, Gordonia; Rosaceae family (8%) - Malus, Photinia, Spiraea; Caprifoliaceae family (8%) -Abelia, Viburnum, Weigela; other strong themes - Japan & China origin	Strengthen existing theme *Requires detailed design*	Opportunity to reinforce Gardens symmetry at entrance (with Blessington Gate West Bed) Opportunity to strengthen theme of nineteenth century shrub plants (refer *'Plants Listed in Nursery Catalogues in Victoria 1855 – 1889'*, OPCA, RBG) Opportunity to strengthen Asian (Japan/China) collection Opportunity to ensure low water need plants, including removal of existing plants with water needs greater than 800-900mm annually Opportunity to review internal garden path to enhance visitor experience
Mediterranean Bed	161 taxa: mainly shrubs (53%), <15% of Mediterranean origin	Strengthen existing Mediterranean climate theme *Requires detailed design*	Opportunity to develop Mediterranean collection, (plants from 5 Mediterranean climate zones of the world: explore countries such as Canary Islands, S.W. Africa, North Africa, North Chile, S.W. United States) **Fig. 2** Opportunity for interpretive signage to promote plants suited to non-irrigated beds/low rainfall needs
Rose Garden *(Including The Alister Clark Memorial Rose Garden*)	81 Rose varieties: 22 Alister Clark bred Rose varieties (of the 67 Alister Clark varieties currently available)	Poor collection of Alister Clark bred Rose varieties. Note David Austin bred Rose varieties proving more drought-tolerant and pest/disease resistant *Requires detailed design: note existing planting design follows colour-wheel spectrum and individual beds are planted with a singular cultivar to strengthen impact*	Opportunity to improve the representation of Alister Clark bred Rose varieties, inc interpretation *(see detailed analysis under 'Major Design Elements - The Alister Clark Memorial Rose Garden', p. 11)* AND Opportunity to diversify Rose collection by building on representation of David Austin Rose varieties OR Opportunity to redevelop section as Mediterranean collection (plants from 5 Mediterranean climate zones of the world), inc interpretation **Fig. 2** Opportunity to replace English Box hedge (high water needs) with Rosemary or Catnip (low water needs) Opportunity to replace climbing roses (prone to possum browsing) with other plant species Opportunity to plant Artimisia at base of Cypress hedge as backdrop to Roses Opportunity for rose catenary Opportunity to replace deteriorating timbers of rose arbour

	Description	Comments	Opportunities
Rose Embankment	54 taxa: mainly decorative, flowering, scented, fruiting; shrubs 68%; garden origin >18.5%;	This Bed is also part of the extended feature of the centre of the Gardens *(see 'Major Design Elements – the central feature of the Gardens', p.10) Requires detailed design in conjunction with Rose Garden*	**Recommendation:** **Improve enclosure of the 'central space' by tall evergreen planting in the Rose Embankment** Opportunity for *Brachychiton acerifolius/ Stenocarpus salignus/Erythrina sp.* 'red' theme (symmetrically spaced) as existing trees age and decline, in conjunction with North Crescent Bed, South Crescent Bed, Salvia Bed, Buddleia Bed, Chessboard Bed, Pond East Bed **Fig. 3** Opportunity for culinary collection (small trees, eg. mulberry, pistachio) Opportunity to remove high water-need plants eg. Betula
Rose Emb. Nth	12 taxa: mainly decorative, flowering; shrubs 42%	*Requires detailed design*	Opportunity to strengthen Magnoliacea collection (Magnolia, Michelia, Liriodendron genera) eg. 'Magnolia Walk' OR Opportunity to redevelop as Mediterranean collection (plants from 5 Mediterranean climate zones of the world), (*see also Rose Garden, above*) **Fig. 2**
Rose Emb. Sth	7 taxa: decorative, flowering, scented	*Requires detailed design*	Opportunity to strengthen Magnoliacea collection (Magnolia, Michelia, Liriodendron genera) eg. 'Magnolia Walk' OR Opportunity to feature Doryanthes spp. AND extend Mediterranean collection (*see also Rose Garden, above*) **Fig. 2** Opportunity to enclose Rose Garden from path
North Crescent Bed ★ *Part of CENTRAL HERITAGE CORE* **Fig. 4**	125 taxa: inc east coast Australia landmark trees, rainforest species Agathis robusta (Araucariacea family), Brachychiton acerifolius, Stenocarpus salignus; **56% of listed species are represented in this bed only**; leafy enclosed space, ferns, flowering understorey; strong representation China/Japan	This Bed is also part of the extended feature of the centre of the Gardens *(see 'Major Design Elements – the central feature of the Gardens', p.10) Requires detailed design*	**Recommendations:** **Preserve spatial enclosure and species diversity** **Retain east coast Australia dry rainforest collection** Opportunity to build on existing planting framework, whilst removing high water-need species Opportunity for *Brachychiton acerifolius/ Stenocarpus salignus/Erythrina sp.* 'red' theme (symmetrically spaced) in conjunction with South Crescent Bed, Salvia Bed, Rose Embankment Bed, Buddleia Bed, Chessboard Bed, Pond East Bed **Fig. 3**

	Description	Comments	Opportunities
Pond East Bed ★ *Part of CENTRAL HERITAGE CORE* **Fig. 4**	41 taxa: mainly decorative; no strong themes	*Requires detailed design*	**Recommendation:** **Retain large conifer trees** Opportunity for thematic collection, eg. Cycad collection, Conifer collection Opportunity for strengthened (dry land) Palm theme, to link with conservatory theme Opportunity for *Brachychiton acerifolius*/ *Stenocarpus salignus/Erythrina sp.* 'red' theme (symmetrically spaced), as existing trees age and decline, in conjunction with North Crescent Bed, South Crescent Bed, Salvia Bed, Rose Embankment Bed, Buddleia Bed, Chessboard Bed **Fig. 3**
Pond Stream Bed	48 taxa, mainly Australian native (85%); mainly ground layer (grasses, sedges) & water-related; Palm theme	'Botanic' function needs definition Note important remnant Ulmus procera avenue, which is thought to define original path layout. Note the pond and conservatory do not relate as originally intended. *Requires detailed design*	Opportunity to harvest water to supply pond stream bed Opportunity for strengthened aquatic theme, eg. indigenous wetland plants (inc naming and interpretation) Opportunity to improve water quality by plant choice Opportunity to plant 'islands' with consideration of pond reflections – investigate an Iris collection Opportunity to strengthen design by repeating plants as link to new Herbert Street bed Opportunity to link to conservatory by path or hard space via existing crossing Opportunity for 'deck chair' lawn (hire of deck chairs, improved lawn space, improved spatial enclosure) Opportunity for Herbert Street boundary screening (east coast Australian dry rainforest collection OR NZ collection)
Conservatory	76 taxa, east coast Australia rainforest collection, (recently 'rationalised'); diverse collection representing rainforest layers, including (tropical) palms, ferns, lilies, orchids; **74% taxa are represented only in this section of the Gardens**	Links to North Crescent and South Crescent collections	Opportunity to improve naming and interpretation of east coast Australia rainforest collection Opportunity for inclusion of tables and chairs to allow time for visitor appreciation/contemplation
Salvia Bed ★ *Part of CENTRAL HERITAGE CORE* **Fig. 4**	30 taxa: mainly shrubs, including Salvia collection; small Lilac collection	This Bed is also part of the extended feature of the centre of the Gardens *(see 'Major Design Elements – the central feature of the Gardens', p.10)*	Opportunity for *Brachychiton acerifolius*/ *Stenocarpus salignus/Erythrina sp.* 'red' theme (symmetrically spaced), as existing trees age and decline, in conjunction with North Crescent Bed, South Crescent Bed, Rose Embankment Bed, Buddleia Bed, Chessboard Bed, Pond East Bed **Fig. 3** Opportunity for theme collection eg. Salvia collection

	Description	Comments	Opportunities
South Crescent Bed ★ *Part of CENTRAL HERITAGE CORE* **Fig. 4**	98 taxa: trees 36%; shrubs 55%; strong east coast Australia theme, rainforest species[11]; Landmark tree *Araucaria bidwillii;* minor N.Z. & S. African themes; **40% taxa are represented in this bed only**; dark, leafy enclosed space; links to conservatory collection	This Bed is also part of the extended feature of the centre of the Gardens *(see 'Major Design Elements – the central feature of the Gardens', p.10)*	**Recommendations:** **Preserve spatial enclosure and species diversity** **Retain east coast Australia dry rainforest theme** Opportunity to build on existing planting framework, whilst removing high water-need species Opportunity for *Brachychiton acerifolius*/ *Stenocarpus salignus/Erythrina sp.* 'red' theme (symmetrically spaced), as existing trees age and decline, in conjunction with North Crescent Bed, Salvia Bed, Rose Embankment Bed, Buddleia Bed, Chessboard Bed, Pond East Bed **Fig. 3**
Buddleia Bed ★ *Part of CENTRAL HERITAGE CORE* **Fig. 4**	44 taxa: mainly shrubs (75%), Buddleiaceae family *minor theme* (9%), Lamiaceae family 30% (Plectranthus, Salvia, Teucrium); garden origin 39%	This Bed is also part of the extended feature of the centre of the Gardens *(see 'Major Design Elements – the central feature of the Gardens', p.10)*	**Recommendation:** **Preserve spatial enclosure** Opportunity for *Brachychiton acerifolius*/ *Stenocarpus salignus/Erythrina sp.* 'red' theme (symmetrically spaced), as existing trees age and decline, in conjunction with North Crescent Bed, South Crescent Bed, Salvia Bed, Rose Embankment Bed, Chessboard Bed, Pond East Bed **Fig. 3** Opportunity for theme collection OR continue east coast Australia dry rainforest theme OR Mediterranean climate theme
Koelreutaria Bed ★ *Part of CENTRAL HERITAGE CORE* **Fig. 4**	42 taxa: mainly shrubs (67%), *Koelreutaria paniculata* 'Golden Rain Tree' – (National Trust Register of Significant Trees), recently replaced		Opportunity for theme collection OR continue east coast Australia dry rainforest theme
Chessboard Bed ★ *Part of CENTRAL HERITAGE CORE* **Fig. 4**	13 Taxa: no clear themes;	This Bed is also part of the extended feature of the centre of the Gardens *(see 'Major Design Elements – the central feature of the Gardens', p.10)*	Opportunity for *Brachychiton acerifolius*/ *Stenocarpus salignus/Erythrina sp.* 'red' theme (symmetrically spaced), as existing trees age and decline, in conjunction with North Crescent Bed, South Crescent Bed, Salvia Bed, Rose Embankment Bed, Buddleia Bed, Pond East Bed **Fig. 3** Opportunity for theme collection eg. Cycad collection
Cypress Avenue ★ *Part of CENTRAL HERITAGE CORE* **Fig. 4**	48 taxa: dominant conifer theme: (Cedrus, Cupressus, Chamaecyparus, Juniperus, Picea)	Mixed age avenue (from c.1920) of *Cupressus torulosa* (Bhutan Cypress)* and *Cedrus deodara* (Cedar) * Note correct I.D.	**Refer SFA Sept 2007, Para 5.3 for recommendations re maintenance, removals and replacement** (Opportunity to provide new gate entrance suitable to botanic gardens and central core) Opportunity to improve understorey plants suitable to dry shade

	Description	Comments	Opportunities
Indigenous Garden	133 taxa: mostly from SE Australia; trees 19%/ shrubs 26%/ groundcovers 54% including 17 Grasses	*See recommendations for perimeter path in southwest section (p.22)*	**Recommendation:** **Develop the indigenous collection by completing its representation of 'Sandbelt' plant species** as described in the *'Indigenous Plants of the Sandbelt, A Gardening Guide for South-eastern Melbourne'*, (2002), **and by labelling and interpretation**
Lawn Trees ★ *Palm avenue part of CENTRAL HERITAGE CORE* **Fig. 4** *Includes trees listed on NT Sig. Tree Register, VHR, and trees of assessed landscape value (refer report, Stephen Fitzgerald Arboriculture, Sept. 2007)*	107 taxa: *north-west lawn:* dominant *Quercus* collection (4 species), includes part of Palm avenue; *north-east lawn:* dominant Palm collection (4 taxa), Conifers (5 taxa), includes part of Palm avenue; *playground lawn:* dominant Palm collection (6 taxa), Conifers (4 taxa), includes Cherry Tree avenue *south lawn:* dominant SE Australia taxa; and Conifers (8 taxa)	*Includes avenues (see 'Major Design Elements – The Avenues', p.11) Requires detailed design*	**Recommendation:** **Remove Cherry Tree avenue and replace with Corymbia ficifolia cultivar and Brachychiton cultivar** (select for flowers and height of 3 metres), **suitably spaced** Opportunity for Australian (non-indigenous) showy flowering shrub collection to south-east boundaries, inc Acacia, Banksia, Grevillea, Hakea collections (yellow theme) Refer SFA Sept 2007, Para 5.2 for recommendations re maintenance of the Palm avenue and Para 5.4 for recommendations re open lawn spaces (in removing poorly performing species there may be an opportunity to create *lawn spaces*)

Recommendations:

- **Develop a Living Collections Policy that includes consideration of the recommendations and opportunities identified for the garden areas in Table 1[12] and Figs. 1 - 5**
- **Secure plant collections against theft and vandalism by improved boundary fencing, in conjunction with the retention of a security service[13]**

Major Design Elements

The central feature of the Gardens

- Focus of the 'central heritage core' ★ **Fig. 4**
- Symmetrical arrangement of beds and shrubberies from a centre point defines the crossing of the north-south and east-west design axes *Comprises:*
- Outer circle including the North and South Crescent beds, Salvia bed, Rose Embankment bed, the Chessboard bed, and Buddleja bed. While each bed can and does feature a plant collection, the unity of the whole must be kept in mind. There is an opportunity to develop the dry east coast rainforest theme, and opportunity for the introduction of a 'red' theme, with equally spaced *Brachychiton acerifolius/Stenocarpus salignus/Erythrina sp.* in each of the beds **Fig. 3** as existing trees age and decline.
- Four Canary Island Palms, *Phoenix canariensis,* on the centre lawn are placed to frame a central feature. But the current central feature (shrub bed) is not strong enough to claim the focus. (The centre space was probably originally intended to feature a fountain, which is no longer feasible; later photographs show what appears to be an extensive rose garden.) The features survey plan shows that the Palms have not been precisely placed, as can only be achieved by survey setout. Two of the Palms are currently being assessed for possible Fusarium wilt disease, which would necessitate their removal. (Refer SFA Sept 2007, Para 5.2 for recommendations re maintenance, removals and replacement of the Palms.) The issue of their replacement, or redesign of the space, should be addressed when the condition of the Palms is known. The Palms date from c.1920 (see *Appendix 1 Tree Age Estimates*)
- The symmetry of the central feature may have been compromised by one of the small round beds having been elongated. However, it is questioned if this shape was changed or the shape of the round bed where the Norfolk Pine is planted. In addition, a seat has been inappropriately placed on the short end of one of the rectangular beds and the raised edge to the Norfolk Pine is also inappropriate.
- The paths are compromised by the existing lillydale topping surface. Replace with red granitic sand eg St Vincent Gardens

Recommendations:

- **Reassess design elements of the central space when the condition of the Canary Island Palms is known**
- **Select an advanced, well-structured *Dracaena draco,*** (Dragon Tree), **as a spectacular central focus (and future significant tree)**[14]
- **Remove seat from central core that disrupts symmetry of bed.**
- **Replant a pair to the existing Araucaria heterophylla. Consider planting a different Araucaria species to provide diversity and interest**
- **Replace lillydale topping with red granitic sand eg St Vincent Gardens**

The Avenues

- Component of the 'central heritage core' ★ **Fig. 4**

  Palm Avenue (central north-south axis from Blessington Street to northern crescent bed)
- Alternating *Phoenix canariensis* and *Washingtonia robusta*, (with one *Butia capitata*)
- The avenue does not have the heritage status suggested in previous documents, as it dates from c.1930s
- Note *Phoenix canariensis* is susceptible to 'Fusarium wilt'; which if found, would require the removal of affected trees
- If disease is found in the Palms, a different plant species could be chosen to replace the Palms
- *(See also 'The Palm Avenue', p. 24)*

  The Cypress Avenue (central north-south axis from Dickens Street to south crescent bed) has been analysed in Table 1 (p. 9).

The Alister Clark Memorial Rose Garden

The Alister Clark Memorial Rose Garden was developed at St Kilda BG in 1950, in the year following Alister Clark's death, and redesigned to the current layout in 1985.

This is a small rose garden by comparison with other public rose collections. It displays less than 1,000 specimens, compared to 5,500 roses in the Victorian State Rose Garden at Werribee Park and 5,000 in the Adelaide Botanic Garden. Clearly, it cannot claim significance on the basis of size or extent. **Its point of differentiation must relate to its proximity to central Melbourne, accessibility, specialist collection, design impact and interpretation story.**

Between 1912 and 1949 Alister Clark bred and released 122 rose varieties for the hot dry Australian conditions. They were crossbred from imported named rose varieties - which should be displayed as part of their interpretation story. Some varieties became household names – *R.* 'Sunny South' (1918), *R.* 'Black Boy' (1919), *R.* 'Lorraine Lee' (1924) - but many others have been lost.

The Heritage Register citation for St Kilda BG notes that 'the large rose garden dedicated to Australian rosarian Alister Clark, is the only memorial of its kind in Victoria'. This is no longer the case: there is also a small 'Alister Clark Memorial Rose Garden' at Bulla[15], near Clark's former home 'Glenara', which contains all of the 67 Alister Clark rose varieties currently available. The collection includes climbing, pillar, polyantha and hybrid tea bush roses, together with interpretive information. It is open to the public on only 2 days in November each year. The collection at St Kilda BG includes 81 rose varieties, of which only 22 are Alister Clark bred varieties[16].

There is clearly an imperative to improve the representation of Alister Clark bred rose varieties at St Kilda BG, and to promote other points of differentiation (eg. links to central Melbourne, access, specialist collection, design impact, interpretation story). A reduction of the overall size of the Rose Garden, in favour of a featuring of the Alister Clark Memorial Rose Garden, is conceptualised in **Fig. 2.**

Recommendation:

- **Improve the collection of Alister Clark bred rose varieties and their interpretation**

(See *also 'The Alister Clark Memorial Rose Garden', p. 25, and Appendix 2 Alister Clark Rose Varieties* for information on the varieties that are currently commercially available from one specialist nursery.)

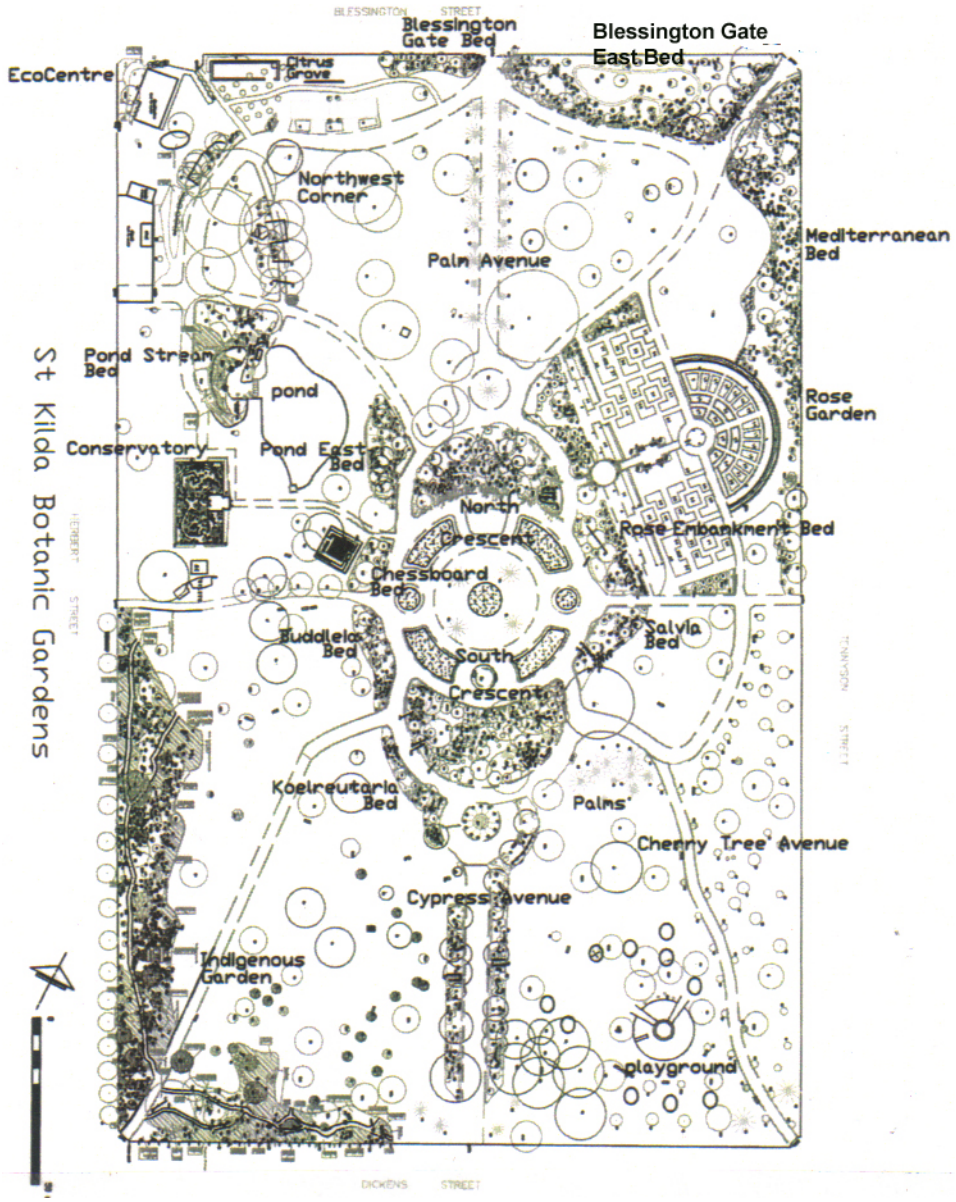

Fig. 1 *Reference Plan shows locations of plant groups described above*

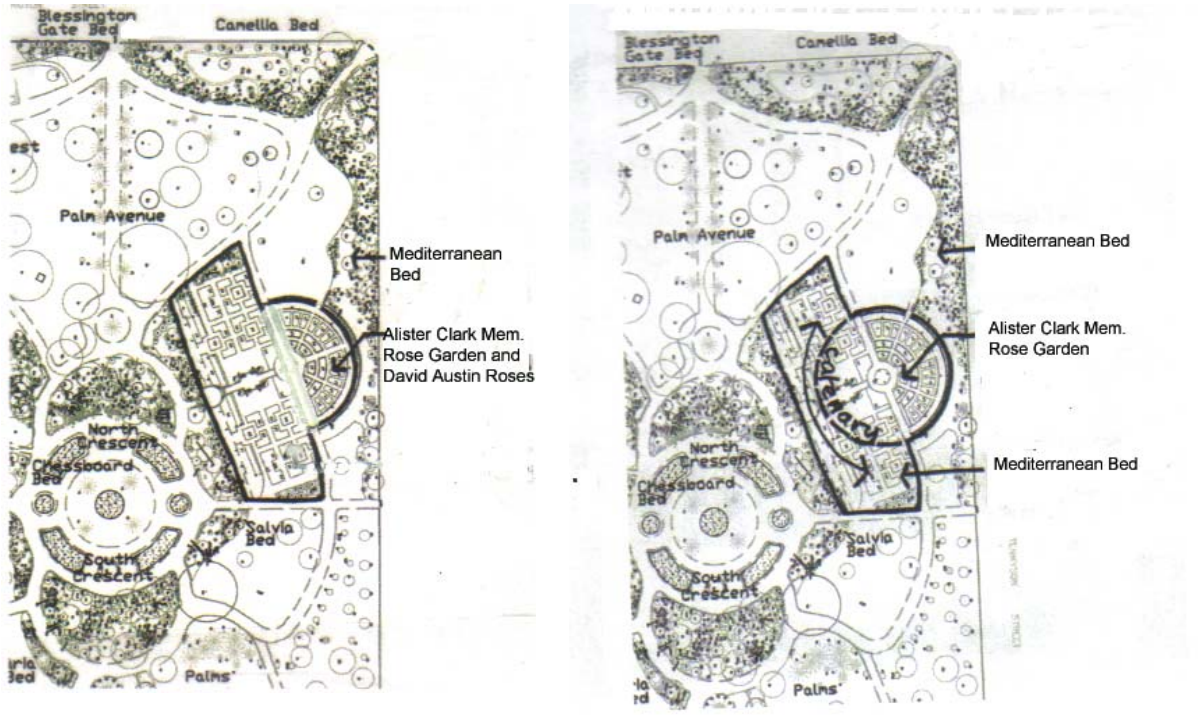

Fig. 2 *Alternative concepts for reduction of the Rose Garden, featuring of the Alister Clark Memorial Rose Garden, David Austin Roses or new Mediterranean Bed*

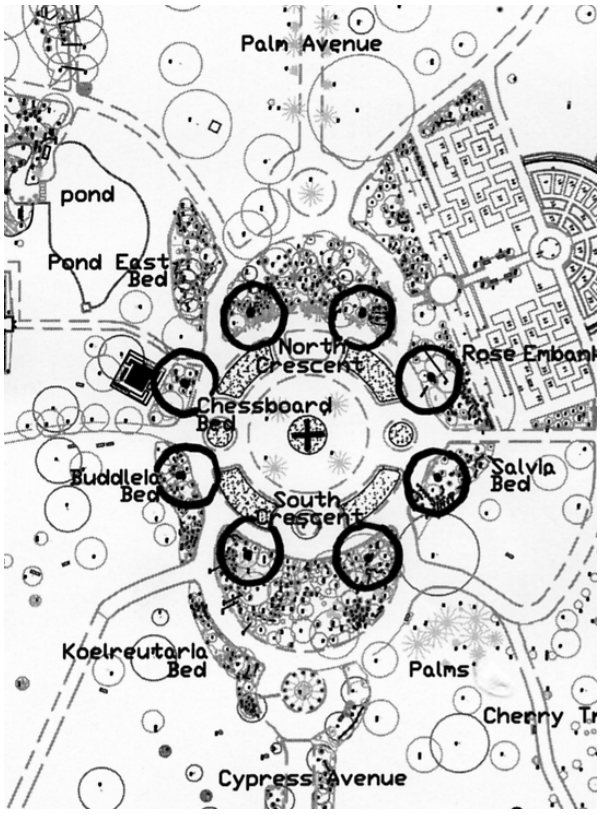

Fig. 3 *Integration of the centre beds by 'red theme' - Brachychiton acerifolius/Stenocarpus salignus/Erythrina sp. - equally spaced between the beds as existing trees decline and age.* Plant new central focus Dracaena draco (Dragon Tree)

Jill Orr-Young Landscape Architects

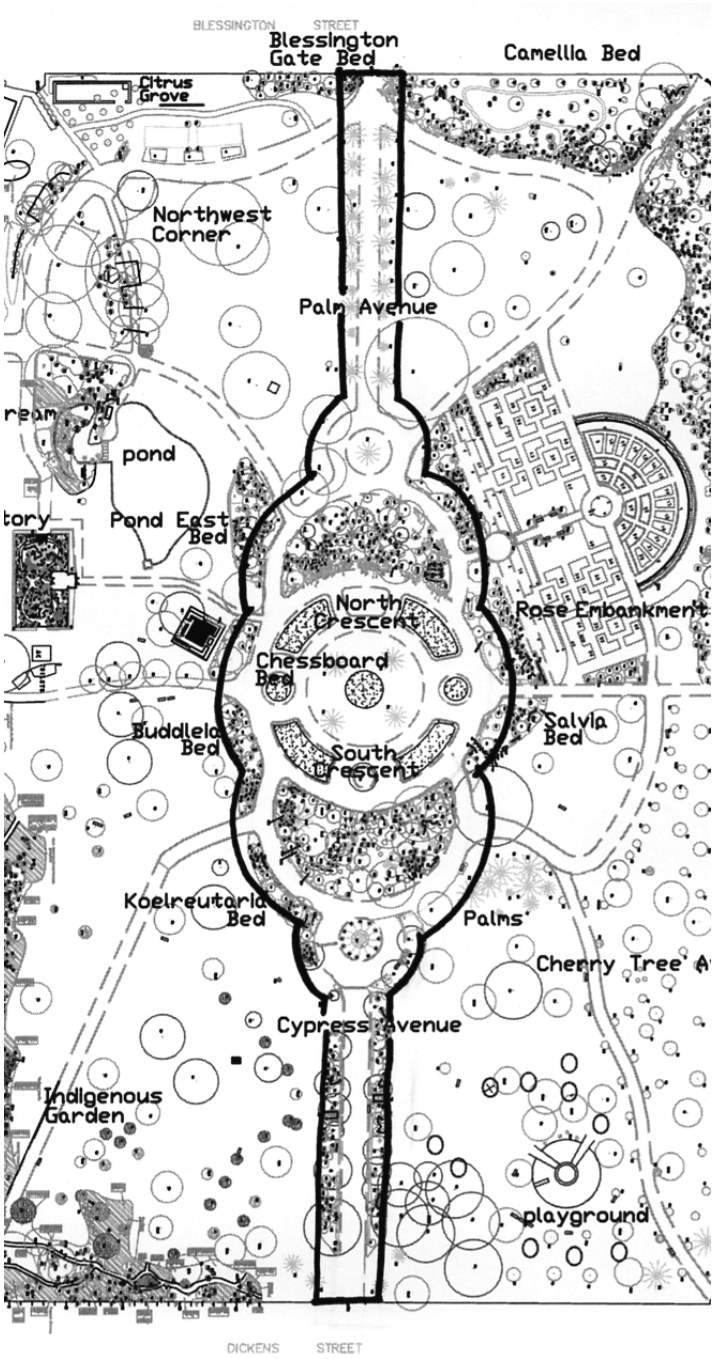

Fig. 4 *The 'central heritage core'*

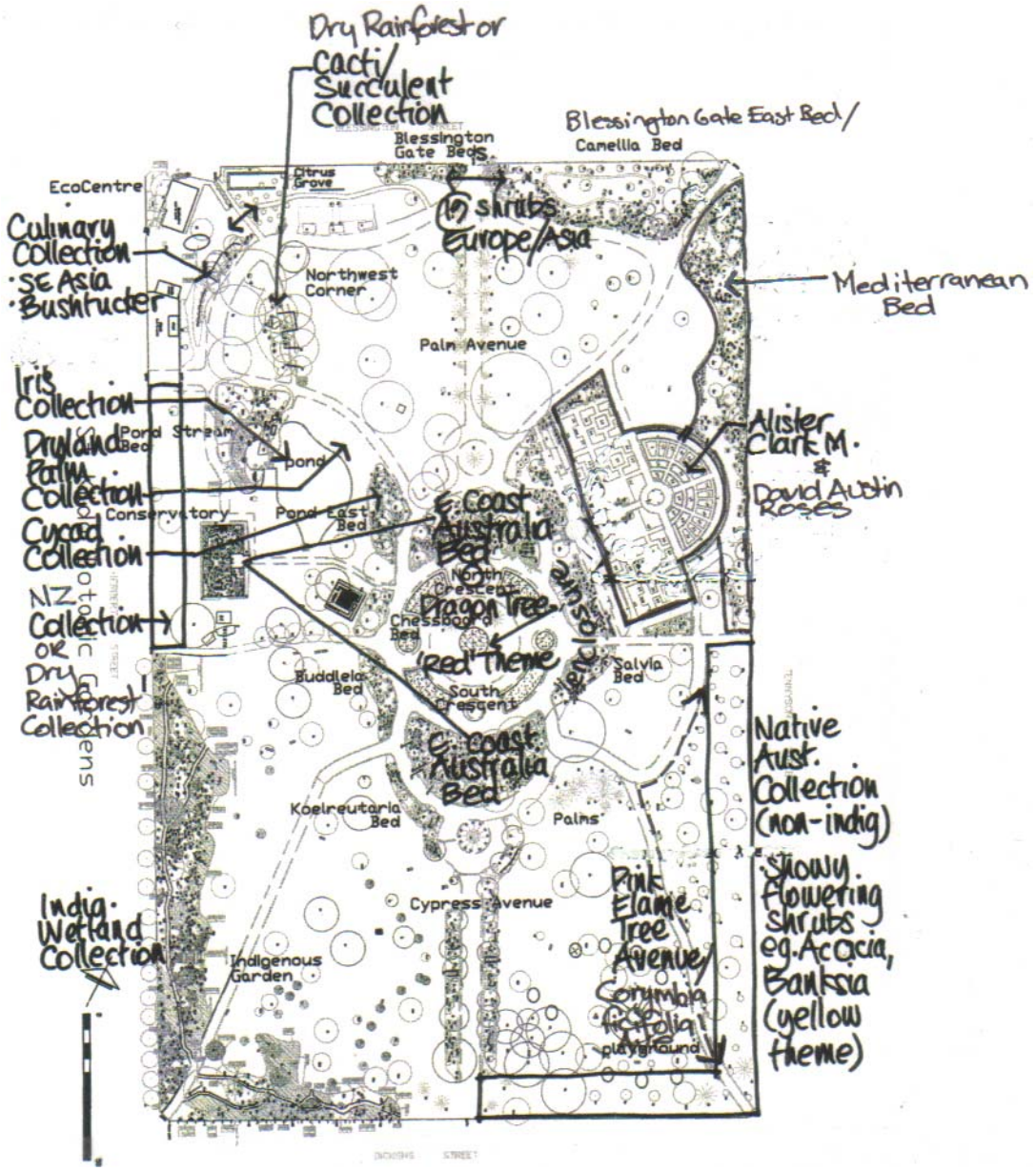

Fig. 5 *Summary proposed existing, new and modified Botanic Collections*

Conclusions
(Part 1 Botanic Function)

Careful management, additions, and removals in key areas can improve the significance of the plant collections. Management actions for the tree collection are recommended in an arboricultural report (*Stephen Fitzgerald Arboriculture, Sept 2007*). This report provides a new data base and plan reference for the tree collection, and an individual number for each tree. As other plant forms have not been addressed in the report, the CoPP plant inventory (March 2005) remains a reference document.

The Opportunities and Recommendations of Table 1 respond to the existing conditions, the botanic role, the historical framework, and renewed cultural vitality. They provide a basis for the development of a 'Living Collections Policy' (as recommended in SFA, Sept 2007, Para 6.4), which may identify additional opportunities.

As Melbourne enters an era of expected climate change, the higher air temperatures and lower rainfall will influence plant choices. In considering plant replacements and additions, it is prudent to look at the habitat distribution and acclimatisation records for particular species. The Adelaide Botanic Gardens provides a useful reference model, due to a historically hotter, drier climate and its strategies for water conservation.

Melbourne's annual average rainfall is 650mm with the last few years being below average. Climate change shall bring prolonged periods of drought and new planting should reflect low water use plants. Consider adopting Royal Melbourne Botanical gardens guidelines of avoiding plants requiring water over 800mm annually.

Summary Recommendations for Part 1

- **Develop a Living Collections Policy that includes consideration of the recommendations and opportunities identified for the garden areas in Table 1[17] and Figs. 1 - 5**

- **Secure plant collections against theft and vandalism by improved boundary fencing, in conjunction with the retention of a security service[18]**

- **Improve enclosure of the 'central space' by tall evergreen planting in the Rose Embankment**

- **In the North Crescent and South Crescent Beds, preserve spatial enclosure and species diversity; retain east coast dry Australia rainforest theme**

- **Develop the indigenous collection by completing its representation of 'Sandbelt' plant species** as described in the *'Indigenous Plants of the Sandbelt, A Gardening Guide for South-eastern Melbourne'*, (2002), **and by labelling and interpretation**

- **Select plant species suitable to Melbourne's climate and resource levels**

- **Remove Cherry Tree avenue and replace with Corymbia and Brachychiton cultivars, suitably spaced**

- **Reassess design elements of the central space when the condition of the Canary Island Palms is known**

- **Select an advanced, well-structured *Dracaena draco,*** (Dragon Tree), **as a spectacular central focus (and future significant tree)**[19]

- **Repair miscellaneous elements that disrupt the layout symmetry ie seats**

- **Replant an Araucaria species opposite the existing Araucaria heterophylla.**

- **Improve the collection of Alister Clark bred rose varieties and their interpretation**

- **Replace lillydale toppings path with red granitic sand eg St Vincent Gardens**

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[8] *St Kilda Botanical Gardens Conservation Management Plan (1996)* Statement of Significance p. 112
[9] Op. cit. pp.30 – 43
[10] Note tree taxa have now been reassessed in a separate report by Stephen Fitzgerald Arboriculture
[11] *(Flindersia bennettiana, Acmena smithii, Pittosporum undulatum, Syzygium leuhmanii, S. australe, Stenocarpus salignus, Tristania conferta, Backhousia citriodora, Ficus coronata, Brachychiton populneus, B. discolour)*
[12] Refer SFA Sept 2007, Para 6.4 for recommendations re Living Collections Policy
[13] Critically review and revise 'Fence and Gates' Project, 2004
[14] *Phoenix canariensis* and *Dracaena draco* are considered symbolic of the Canary Islands. (*Phoenix canariensis* could also be considered symbolic of St Kilda, and is the most prevalent tree in the St Kilda Botanical Gardens.) Both were introduced into Victoria by nineteenth century plant nurseries.
[15] Maintained by the Bulla Garden Club and Hume City Council
[16] 22 Alister Clark bred Rose varieties are listed by CoPP in the Alister Clark Memorial Rose Garden: Blackboy; Cicely Lascelles; Courier; Doris Downs; Glenara; Golden Vision; Jessie Clark; Kitty Kinimonth; Lady Huntingfield; Lady Mann; Lorraine Lee; Marjory Palmer; Mary Gunthrie; Mrs Harold Alston; Mrs Harold Brooks; Mrs Norman Watson; Mrs Richard Turnbull; Nancy Hayward; Restless; Squatter's Dream; Sunny South; Zara Hore-Ruthven
[17] Refer SFA Sept 2007, Para 6.4 for recommendations re Living Collections Policy
[18] Critically review and revise 'Fence and Gates' Project, 2004
[19] *Phoenix canariensis* and *Dracaena draco* are considered symbolic of the Canary Islands. Phoenix canariensis could also be considered symbolic of St Kilda, and is the most prevalent tree in the St Kilda Botanical Gardens. Both were introduced into Victoria by nineteenth century plant nurseries.

Part 2: Cultural Heritage Significance

Overview

It is accepted international best practice to manage heritage places in accordance with the principles of ICOMOS and the Burra Charter (1999), (www.icomos.org/australia/burra.html). The Burra Charter prescribes a *statement of cultural heritage significance* as a 'touchstone' reference for deciding what *fabric* from past layers of development is worth preserving and restoring, and conversely, what *fabric* can be adapted (changed). Conservation policies, as well as a future *vision*, derive from the *statement of cultural heritage significance*.

However, the statement of cultural heritage significance will reflect the cultural bias of the writer/s unless diverse communities are involved in its formulation. By asking communities 'what do you value about this place?' we are often surprised by the diversity of responses that consider both tangible 'objects' and intangible 'experiences', and enrich the future *vision*. The Friends of the St Kilda Botanical Gardens have provided community input to this Future Directions Plan.

Some components of the *statement of cultural heritage significance* will be retained over time in successive re-evaluations, while others may change, and new components may be added. For example, the Gardens' role 'in perpetuating the tradition of Edwardian municipal gardening displays[20]' may never again be sustainable in a context of severe water shortages.

Yet *all of the existing fabric* tells a story about on-going changes in horticultural practice, plant breeding and fashions, recreation preferences, design and maintenance. While we cannot be paralysed by past choices, neither should we seek to change elements for the sake of change.

Two statements of cultural heritage significance have been written for the St Kilda Botanical Gardens - in the *St Kilda Botanical Gardens Conservation Management Plan (1996)*[21] and for the *Heritage Register* of the Heritage Council of Victoria[22]. Both statements include some misinformation (probably because one informed the other), (eg. about the palm avenue and the rose garden, as detailed p.11 and p.24). While the more comprehensive Heritage Victoria statement includes mention of the 'unusually large collection of rare and unusual mature trees', other elements such as *original design intent*, *botanic role* and *plant collections,* which provide the 'integrating framework', are largely ignored in both statements. These shortfalls are addressed in the future directions plan.

Original Design Intent

Introduction

Tilman W Gloystein's association with the St Kilda Botanical Gardens was brief but memorable. In 1860 he won the competition for the design of the Gardens. Although his plan has not been found, it is possible to know a great deal about the original design intent from surviving fabric, newspaper reports of the time, later existing conditions plans, aerial photographs, and Gloystein's background, associates and influences, which have not previously been adequately analysed.

With reference to his professional background (as lithographer, printmaker, architect, sketcher), Tilman Gloystein's contribution to the gardens is likely to have been limited to a beautifully drawn *layout plan* (showing path layouts, placements of principle trees, shrub and flower beds, structures and fences) and the laying out of the Gardens, with little contribution of the necessary *botanical knowledge* or *practical gardening* skills. In parallel, Government Botanist and Director of the Melbourne BG (Müeller) was providing planting advice to St Kilda Council in the period that spanned the competition for the garden's design and early implementation (1859 - 1867).

Design Influences

Gloystein would have been familiar with the Adelaide Botanic Gardens from his time in Adelaide, but also with the Williamstown Botanic Gardens, which opened in January 1860, before he prepared his winning layout.

A comparison of early layout plans shows strong similarities between the St Kilda, Williamstown and Adelaide botanic gardens[23]. These layouts contrast significantly with the later 'type' of layout by William Guilfoyle (eg. Melbourne, Warrnambool, and Horsham Botanic Gardens).

The plans of the Adelaide/Williamstown/St Kilda botanic gardens 'type' demonstrate:

* A rectangular 'boundary' and symmetrical path layout
* A main path aligned north-south, offset by an east-west path
* The axial paths linked by a circular walk projected from the intersection of their axes, and the point of intersection marked by an ornamental feature
* A secondary, more intricate curvilinear path delineating the garden boundaries and joining the axial paths
* 'Arabesque' intricacies in garden bed shapes, bordering paths

(Of the three botanic gardens, the original layout of St Kilda Botanical Gardens is the most intact.)

(See Appendix 5 – Tilman W Gloystein)

Gardens' Layout

Contemporary newspaper descriptions of Gloystein's winning design provide the clues to original design intent:

> *'The only approach to formality is immediately in the centre of the gardens, where he proposes to place a pavilion for a band and which is surrounded by circular walks and beds'*[24]*.*

These circular walks would appear to be those shown in the 1897 MMBW plan[25] as constructed by that time and extant today[26].

The structured geometry of the circular walks was not the complete story, however. Newspaper reports in 1860 provide an additional clue to Gloystein's design intent:

> *'Mr Gloystein's design, although somewhat elaborate, is not marked by that formality so that frequently characterizes plans of a similar kind'*[27]*,* and *'… Mr. Gloystein … wisely discarding merely formal geometric lines, has produced a most elaborate and tasteful design, presenting indubitable evidence of an intimate and correct acquaintance with the true principles of landscape gardening'*[28]*.*

We can assume from this that the extant central path layout which corresponds with the 1897 MMBW plan, was perhaps the only 'formal, geometric' section, and that other paths, intended or removed, were of freer line, including 'the carriage drive of nearly one mile'[29].

The MMBW plan shows a path hierarchy - main paths, secondary paths and minor paths - including a main circuit path around the Gardens' perimeter, and central axis paths with avenues, focal points, enclosure by garden beds, and display beds. It also shows a central 'feature', which by its shape could be a garden bed or fountain pond, rather than the intended band pavilion, which was probably postponed, viz:

> *'Mr Gloystein has adorned the place by a couple of fountains and has selected spots for the erection of hot-houses, a lodge, a superintendent's residence, and other buildings, which it will probably be too costly to carry out at present'.*[30] [31]

Gloystein's plan of 1860 was extensively implemented[32] within a short period, and the garden was opened in November 1861. [33]

Soon after winning the competition, Gloystein's tender for laying out the Gardens according to his plan was accepted. The usual layout method was by surveyor's chain, measuring 66 feet in increments of 100 iron links, and pegs, which had to be maintained by frequent calibration and adjustment. The chain would have been moved along the centre line of the proposed north-south path, and major features of the plan pegged. Thus, the centre of the Gardens, the centres of adjoining circular beds and paths, intersecting paths, specimen trees and avenue trees would have been marked on the ground. Accuracy could be compromised by undulating, uneven or scrubby country, calibration of the chain, or the continued placement of the chain along the centre line. The layout recorded on the 2004/2005 CoPP features plan by modern laser survey and AutoCAD computer drawing methods reflects this laborious layout method in discrepancies. (This is part of the interpretation story and should not be rectified.)

By early 1861, substantial planting and fencing had been implemented, and a tender was let for construction of part of the walks. Two entrances (Blessington Street and Dickens Street) and the principle gates had been established[34], presumably with connecting paths to the central circular walks. In mid-1861 the first plants were made available for the St Kilda BG by Müeller (Melb. BG), and George Brunning was employed as the first gardener. By September 1861, a considerable proportion of walks and paths in the garden had been formed and gravelled, the beds laid out and planted. Although Gloystein's plan probably remained the guiding vision for continued implementation under the Planting Committee[35], there is no record that he had any further input after laying out the gardens in late 1860.

While the 1897 MMBW plan provides insight, it should not be taken as the absolute truth. For example, the straight paths that join the main entrances and side entrances in a diamond configuration on plan are at odds with the earlier newspaper descriptions of curved alignments outside the central geometric layout. Further, the 1931 aerial photograph shows remnants of these paths as curved alignments, which agrees with the descriptions and casts doubt on the accuracy of the MMBW plan in this instance.

Fig. 6 *The 1931 aerial photograph (CoPP collection) shows a complexity of paths. Some appear lighter in sections: this may indicate retopping in a lighter coloured material in the more popular central core and northern sections of the Gardens. The darker paths were probably surfaced with the local red granitic sand, which in a black and white photograph provides little tonal contrast with the lawns. A circuit path can be traced around the Gardens' perimeter, terminating at the southeast section, which was the site of gravel extraction until c.1900.*

Fig. 7 *The later 1942 aerial photograph (CoPP collection) shows that there were minor changes in the previous decade. The loss of an Araucaria 'pair' in the central section is noted; an avenue in the southeast section is developing, and treed lawns feature in the northeastern section where the Alister Clark Memorial Rose Garden would later be conceived.*

Recommendations:

- **Develop interpretive signage about gardens history**
- **Consider a major perimeter path as a boundary to the indigenous plant collection in the southwest section; alignment to accord with plan layout symmetry, archaeological evidence and survey findings. Conduct archaeological investigations in conjunction with implementation of 'new' path alignments**

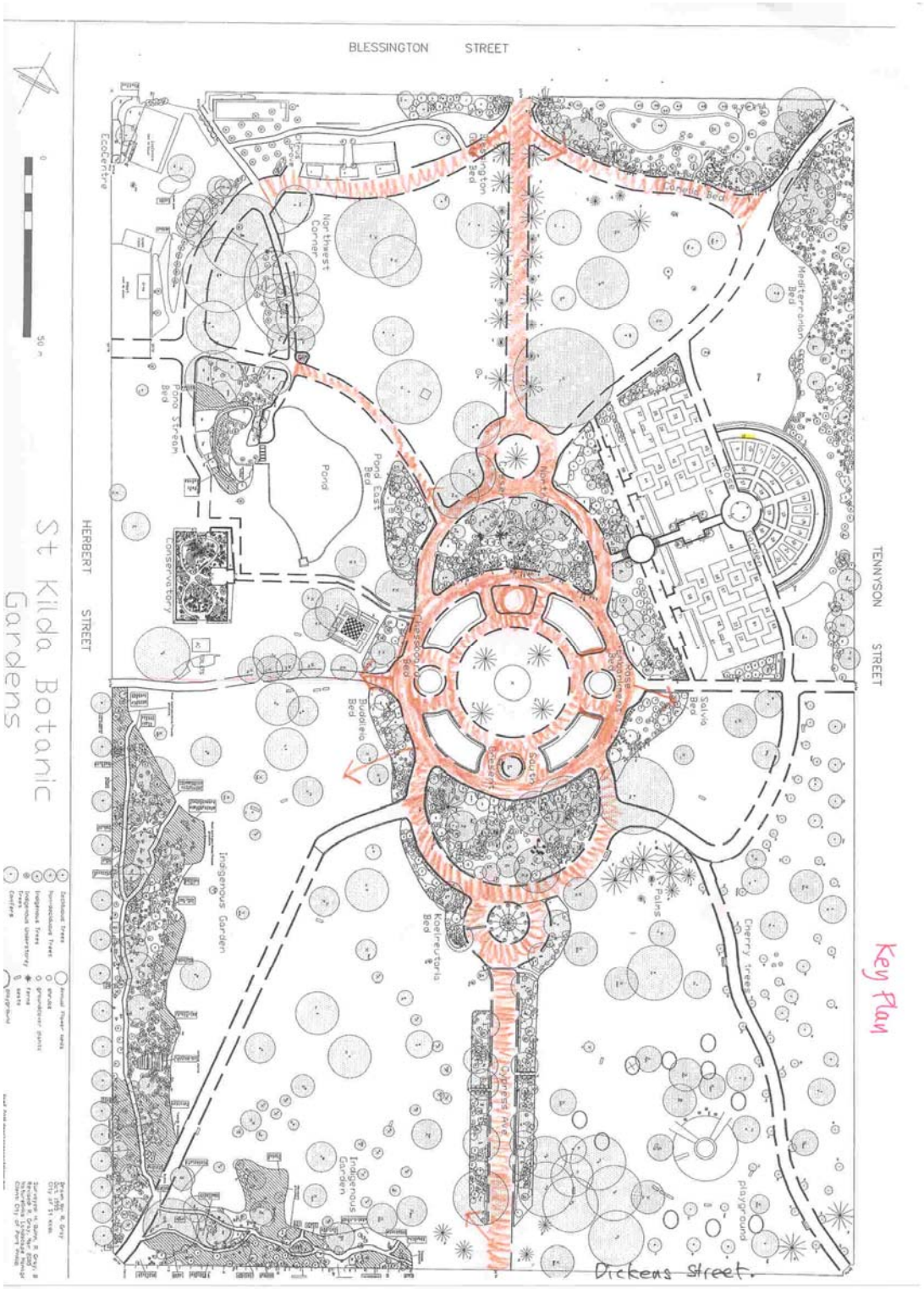


Fig. 8 ***Gloystein's legacy survives in the central layout of the Gardens.***
The CoPP existing conditions plan (above) was overlayed on the 1897 MMBW plan to reveal early paths that are extant (as shown coloured). This section of the Gardens will now be referred to as the ***'central heritage core'****, and further analysis will reveal surviving heritage fabric, materials and design details.*
(See The Central Heritage Core, p.27 - 31, and Appendix 3, Analysis Central Heritage Core.)

Original Design Intent, the Botanic Role and Plant Collections

The St Kilda Botanical Gardens were conceived as a *botanic garden.* The Gardens' close association with the Melbourne Botanic Garden, through Mueller, Government Botanist, and Director of the Melbourne BG until 1873, continued beyond Mueller's era. Plants were still sought from the Royal Botanic Gardens in 1896[36] (and an association continues in 2008).

Mueller promoted the acclimatisation of forest plants, trialled forest plants (especially conifers, both Australian and exotic), and distributed seeds to public institutions throughout Victoria, thus strongly influencing the character of public places.

> *'Like other botanic gardens in Victoria laid out before 1873, the St Kilda Botanic (sic) Gardens originally included many conifers and Moreton Bay Figs, the trees most commonly donated by Mueller to young botanic gardens across Victoria.'*[37]

However, the supply of acorns by the Surveyor General, in April 1862, is the first indication of a plant species. In mid-1862, a shortage of 'forest trees' meant that the planting of avenues was delayed. On site remnants and photo evidence of a Pinetum on the SW side, a line of Quercus associated with a path, and large landmark trees strategically placed (Agathis, Araucaria, Ficus) corroborate original design intent, although most, if not all, appear by their estimated ages to be replacements of original plants (see Appendix 1 – Tree Age Estimates).

Conifers continue to provide a distinctive character in the southern half of the St Kilda Botanical Gardens.

<u>The Palm Avenue</u>

The alternating Mexican Fan Palms (*Washingtonia robusta*) and Canary Island Date Palms (*Phoenix canariensis*) of the main avenue are not an original feature. While it is probable that the main path was planted as an avenue in the 1860s, the species at that time is unknown. The Canary Island Palms appear as young trees in the 1931 aerial photograph (Fig. 6), while the taller Mexican Fan Palms are a later addition. The avenue has been estimated of mixed age c.1930 – 1970 (see Appendix 1 – Tree Age Estimates).

By close comparison, at Williamstown Botanic Gardens the main avenue of Mexican Fan Palms was planted in 1987. It is known to have previously consisted of New Zealand Cabbage Trees (*Cordyline australis*) amongst shrub plantings, while in the early twentieth century it was an avenue of American Cotton Palms (*Washingtonia filifera*) with an additional shrub understorey to 2 metres and grassed margin beside the path.

The Heritage Register notes that 'the interplanting of Mexican Fan Palms with Phoenix Palms in the main avenue is unusual for avenues from that period which generally consisted of a single species.' But it is now clear that the extant avenue is a c.1930s feature, combining layers from different periods and replacement plants. Whilst there is little design integrity in the result, the extant avenue features as a major design element of the Gardens (p.11) and a component of the central heritage core (Fig. 4). *(See also Table 1, 'Lawn Trees', p.9)*

The Alister Clark Memorial Rose Garden

It is probable that the 'rose' was interspersed in beds throughout the Gardens before it was displayed as a separate collection. In 1891, Messrs Brunning & Son, nurserymen, of Brighton Road, St Kilda, donated 50-60 'valuable roses' for the Gardens.[38] In the early 20th century, various focal points in the northeast corner of the Gardens were augmented with roses, eg. the triangular bed at a path junction, and a fountain setting[39].

In 1950, the year following Alister Clark's death, the Alister Clark Memorial Rose Garden was developed to a plan by the Gardens' curator N. T. Scoble. At that time it was the only rose garden in Melbourne[40]. Scoble's plan was an expansive addition to the Gardens, replacing picnic lawns, but was thoughtfully integrated with the existing paths. The layout of the beds repeated the circular geometry of the Gardens' layout.

The Alister Clark Memorial Rose Garden was redesigned to the current layout in 1985. Although less extensive in area, it does not integrate sympathetically with the Gardens by virtue of layout or materials, and remains an intrusive separate element in the Gardens. The path infrastructure visually dominates. However, our emphasis is on improving the living collection of Alister Clark bred roses. *See also Analysis of Existing Plant Collections (Table 1, p.6), Major Design Elements (p.11), Alternative Concepts (Fig.2, p.13) and Alister Clark Rose Varieties (Appendix 2).*

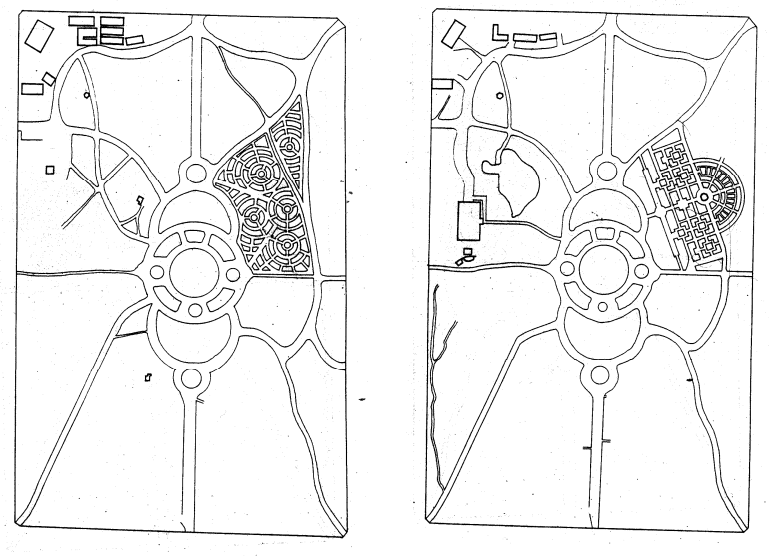


Fig. 9 *The Alister Clark Memorial Rose Garden layout in 1950 (left) and in 1985 - 2008 (right). Although reduced in size, the hard infrastructure of the latter dominates, and subordinates the Rose collection.*

Garden Structures

The Conservation Management Plan lists three surviving structures of significance: the Levi pavilion 1928/9, the birdbath 1928, and the stone drinking fountain c.1910s (now missing its bubbler). Compared with the RBG there is a general lack of structures in the St Kilda Botanical Gardens, and additional garden structures could be accommodated.

From 1873, Mueller's successor at the Melbourne Botanic Gardens, William Guilfoyle, developed in the Melbourne Botanic Gardens a series of over one dozen pavilions, rest houses, summer houses, rotundas and 'temples', in relation to the path system, each with its own distinctive character, associated with a plant theme, eg. The Rose Pavilion (c.1891), The Bougainvillea Rest House (1906), The Rustic Summer House, The Fern Gully Rest House, etc. They were more than a 'picturesque' addition, providing essential cool and sheltered retreats from Melbourne's hot summer sun and unpredictable rain[41]. St. Kilda Botanical Gardens did not benefit from such a development: the Levi Pavilion was donated and constructed in a later period, between the wars, and lacks the Guilfoyle aesthetic touch in its siting, scale, proportions and detailing. Nevertheless, it has been assessed as culturally significant.

Recommendation:
Restore the Levi Pavilion (1928/9) in accordance with the original drawing by W Kelly[42] and integrate with a plant theme.

There is evidence of trellises and simple arches in early photographs of the St Kilda Botanic Gardens (Fig. 10). At the Melbourne Botanic Gardens, a series of large iron archways was introduced during the Mueller era to support climbing plants and assist in *a sequential unfolding of vistas*. The archways highlight entries to the rest houses, (etc.), create a sense of anticipation, and mark points of transition between different sections of the gardens.

There may be opportunities for new support structures to be carefully designed and placed in the St Kilda Botanical Gardens.

Fig. 10 *There is evidence of a simple arch in early photographs of the St Kilda Botanic Gardens (n.d.) (CoPP)*

The Central Heritage Core

The 'central heritage core' is defined in Fig. 8. It is that section of the Gardens that most closely retains its 1860 path layout and design intent. It has been examined (as below) for remnant heritage content. The recommended small 'design interventions' will aggregate to provide a richer visitor experience of the gardens' heritage.

The entrance 'experience' sets the expectations of the visitor:

Main entrance Blessington Street, (*gates of heritage significance*), provides an *introduction to the gardens' symmetrical layout and central avenue.*

- **Note symmetrical design of central core OR**
- **Consider rebalance design symmetry by replacement of missing gate and gate post (to match existing)**
- **Restore existing gates and gate posts**
- **Remove outside signs from view line**

The central avenue

- **Conserve palm avenue, palm focal point and evergreen backdrop**
- **Replace concrete edge** (eg. rock spall, brick, or dethatch grass); (retain red brick channels)
- **Remove (five) rubbish bins from the central view line**
- **Replace the bland and dusty lillydale toppings path surface with a more lively coloured material** (eg. stabilised orange granitic sand – the original local material) **in areas Fig. 8, to interpret original layout**

Ensure attention to details that reinforce the heritage significance:
eg. rock spall edges to shrub beds, grass verges to display beds, (m/s hoop protectors), textural contrasts in planting, viz.



- **Continue rock spall edges to shrub beds** (note that bluestone pitchers, heavy concrete joints and brick walls/pavements are inappropriate in heritage core)

- **Maintain grass verges to display beds with spade edge** (note that grass verges to *shrub* beds, and timber edges to grass verges are inappropriate in heritage core)

- **Provide strong textural planting at garden bed turns** (eg. Trachycarpus or Cycas species)

- **Reinforce the 'forgotten' entrance by design of a new entrance structure and planting treatment**
  (i.e. critically review the design recommendations of 2004)

- **Reform one (central, circular) bed** in accordance with heritage layout
- **Redesign feature beds in central space to respect water conservation imperatives** (eg. species selection, coloured gravels)

The contrast of open space and enclosure is retained by evergreen planting on the western side of the centre, but weakened on the eastern (rose garden) side.

- **Investigate improved enclosure of the centre space by evergreen planting on the eastern side** (conserve conifer/evergreen backdrop on western side)
- **Conserve design enrichment in the contrasts: light and dark, sun and shade, colours, textures** (design)
- **Conserve sunny central lawn space**

Stone Drinking Fountain *remnant* (c.1910s)

This structure was assessed as of *primary significance* in the CMP. The fountain bubbler has since been removed and it's unlikely that it could ever be restored to meet the contemporary standards required of a drinking water fountain, without total reconstruction. It stands as a physical marker of the location of another early twentieth century feature – the Lily Pond (removed post WWII) and at a prominent point where the central axial path joins the circular section of the gardens.

- **Provide signage to highlight significance of structure and investigate feasibility to reinstate as drinking fountain OR**
- **With the assistance of the Friends of St Kilda Botanical Gardens, *adapt* the remnant stone drinking fountain basin as a receptacle for a feature (succulent?) garden.** *This may require the insertion of a separate purpose-built container*
- **Provide an accessible drinking fountain at a new location in the Gardens**

[20] From the Statement of Significance for St Kilda Botanical Gardens, in the *Heritage Register* of the Heritage Council of Victoria
[21] (Statement of Significance p. 112)
[22] See www.heritage.vic.gov.au
[23] St Kilda Botanical Gardens, 1860 plan by Tilman W Gloystein; Williamstown Botanic Gardens, 1856 plan by Edward Latrobe Bateman; Adelaide Botanic Gardens, 1855 plan by George Francis
[24] *Argus*, n.d., c.1860
[25] MMBW detail plan 1381, scale 1:480, held by State Library of Victoria
[26] In the absence of the missing 1860 plan, the MMBW survey plan of 1897 provides the earliest mapped evidence of the Gardens' layout
[27] *Argus*, n.d., c.1860
[28] *Herald*, 29 June 1860
[29] Note that a carriage drive of this length would seem to be impossible within the boundaries of the garden. One mile = approx. 1,603 metres; while the length of the gardens is approx. 325 metres (0.2 miles)
[30] The curator's lodge (now removed) was completed in late 1863 and is shown on the 1897 MMBW plan in the north-west corner
[31] *Argus*, n.d., c.1860
[32] Note that paths were not constructed in the southeast section at this time, as gravel extraction took priority here from 1861, and the pit was not filled until 1900.
[33] Refer to *St Kilda Botanical Gardens Conservation Management Plan*, 1996
[34] These would appear to have been timber gates, as shown in an undated nineteenth century drawing held by Council, as replacement gates were noted in September 1918 (presumably those extant today).

[35] The Planting Committee was still reporting to Council in mid-1885.
[36] Conservation Management Plan, April 1996, p. 16
[37] Heritage Council of Victoria, Heritage Register online
[38] Conservation Management Plan, April 1996, p. 16
[39] Conservation Management Plan, April 1996, p. 21
[40] Conservation Management Plan, April 1996, p. 25
[41] See Duxbury, Ken, *Post Card Memories or more? p. 15 – 20,* in *Australian Garden History Vol. 17 No.1 July/August 2005*
[42] Conservation Management Plan, April 1996, Fig. 54, p. 79

Part 3: Design Guidelines

Design Case Study 1: (Jardin Anglais, Geneva)

These photographs show an incremental loss of design integrity and complexity (in the contrasts of light and shade, texture, subtle detail) over time.
In the top view, the fountain commands its setting, with lush planting extending out to a gravelled surround with comfortable seating. The carefully proportioned floral displays in the adjoining green space echo the central geometry.
The photograph below shows how the strength of the composition and the pedestrian experience is reduced by the changes.

Design Case Study 2: (Adelaide Botanic Gardens)

This simple grouping of Cycads displays the species as a feature in a circular bed, and as part of a cycad collection: a possible consideration for the St Kilda Botanical Gardens.

Design Case Study 3: (Adelaide Botanic Gardens)

This simple arrangement of shade tree, hard surface, seating, and striking floral border has all the components of an attractive seating area, demonstrating 'refuge and prospect', adjacent to a path

Design Case Study 4: (Adelaide Botanic Gardens)

This Mediterranean Garden has been designed as a *collection* of species from the *five* Mediterranean regions of the world. It includes comprehensive plant labelling and interpretation.

Design Case Study 5: (Adelaide Botanic Gardens)

An Araucaria collection crowns a hill as a *landmark* feature. It includes *A. heterophylla, A. columnaris, A. bidwillii.* The photo on the right depicts a remnant *A. columnaris* in an Adelaide park.

Design Case Study 6: (Adelaide Botanic Gardens)

The ‘entrance experience’ sets the expectation of what is to follow. This main entrance introduces a central vista framed by richly textured plant layers which appear as collections throughout the Gardens

Design Case Study 7: (Adelaide Botanic Gardens)

A secondary entrance can also provide an attractive invitation to the Gardens, in this case with textured plants including *Yucca elephantipes* and the red-flowering *Greyia sutherlandii*

Design Case Study 8: (Japanese Iris Garden, Meiji Shrine, Tokyo)

(Japanese Iris Garden, Meiji Shrine, Tokyo)

There is an opportunity in the Pond to develop a major attraction with a new collection of Japanese Irises (inc interpretation), as a 'sister city' project

Part 4: Summary Recommendations

The recommendations summarised below **require further detailed design for implementation.**

General
• Upgrade the existing conditions plan with contours and levels, for future detailed design and to assist in identifying former path alignments
• Undertake extensive tree/shrub labelling in support of the education role of the botanic garden
• Redesign the children's playground with a theme that supports the botanic function of the Gardens
• Provide directional signage for tramming tourists and for the approach from Beach Road
• Provide an accessible drinking fountain at a new location in the Gardens
• Select projects for funding and implementation as a celebration of the gardens" 150th anniversary (see Appendix 4 – Ideas for 2010)
• Select projects for funding and implementation to mark the 2010 'Millennium Seed Bank' biodiversity preservation initiative (eg. development of the new Native Australian collection (Fig. 5)
Central Heritage Core
• At the main entrance Blessington Street, replace of the missing gate and gate post (to match existing) or note symmetry of design, restore the existing (*heritage significant)* gates and gate posts*,* remove outside signs from central view line, *to improve the entrance experience and reinforce design symmetr y*
• Conserve the palm avenue, palm focal point and evergreen backdrop
• Replace concrete edge to palm avenue (eg. rock spall, brick, or dethatch grass); (retain red brick channels)
• Remove (five) rubbish bins from the central view line
• Replace the bland and dusty lillydale toppings path surface with a more lively coloured material (eg. stabilised orange granitic sand – the original local material) in areas Fig.7, *to interpret original layout*
• Continue rock spall edges to shrub beds (note that bluestone pitchers, heavy concrete joints and brick walls/pavements are inappropriate in heritage core)
• Maintain grass verges to display beds with spade edge (note that grass verges to *shrub* beds, and timber edges to grass verges are inappropriate in heritage core)
• Provide strong textural planting at garden bed turns (eg. Trachycarpus or Cycas species)
• Reinforce the 'forgotten' entrance by design of a new entrance structure and planting treatment (i.e. critically review the design recommendations of 2004)
• Repair miscellaneous elements that disrupt the layout symmetry; reform one (central, circular) bed in accordance with heritage layout
• Redesign feature beds in central space to respect water conservation imperatives (eg. species selection, coloured gravels)
• Investigate improved enclosure of the centre space by evergreen planting on the eastern (rose garden) side; (conserve conifer/evergreen backdrop on western side), as contrast of open space and enclosure
• Conserve design enrichment in the contrasts: light and dark, sun and shade, colours, textures (design)
• Conserve sunny central lawn space

• Select an advanced, well-structured *Dracaena draco,* (Dragon Tree), as a spectacular central focus (and future significant tree)[43]
• Investigate restoring remnant stone drinking fountain as a fountain OR with the assistance of the Friends of St Kilda Botanical Gardens, *adapt* the remnant stone drinking fountain basin as a receptacle for a feature (succulent?) garden. *This may require the insertion of a separate purpose-built container*
'New' Paths
• Consider developing a major perimeter path as a boundary to the indigenous plant collection in the southwest section; alignment to accord with plan layout symmetry, archaeological evidence and survey findings.
Archaeology
• Conduct archaeological investigations in conjunction with implementation of 'new' path alignments
Plant Collections
• Develop a Living Collections Policy that includes consideration of the recommendations and opportunities identified for the garden areas in Table 1[44] and Figs. 1 - 5
• Secure plant collections against theft and vandalism by improved boundary fencing, in conjunction with the retention of a security service[45]
• Select plants for suitability to Mediterranean climate, available resources for maintenance and low water needs (less than 800mm annually)
• Provide strong planting themes but avoid temptation to focus on symmetry. Work with existing planting and assess each bed to strengthen future plantings
• Improve enclosure of the 'central space' by tall evergreen planting in the Rose Embankment
• In the North Crescent and South Crescent Beds, preserve spatial enclosure and species diversity; retain east coast Australia rainforest theme
• Develop the indigenous collection by completing its representation of 'Sandbelt' plant species as described in the *'Indigenous Plants of the Sandbelt, A Gardening Guide for South-eastern Melbourne'*, (2002), and by labelling and interpretation
• Reassess design elements of the central space when the condition of the Canary Island Palms is known
• Replant a pair to the existing Araucaria heterophylla. Consider planting A. bidwillii to provide diversity of species
• Improve the collection of Alister Clark bred rose varieties and their interpretation
• Consider the opportunities to modify existing and introduce new botanic collections (per Table 1 and Fig. 5)
• Consider the opportunity to plant a 'circle' of symmetrically spaced, red flowering trees in the outer beds of the central space eg. 'Flame Trees' *Brachychiton acerifolius* (Fig. 3) as existing tree age and decline
New Avenue Planting
• Remove Cherry Tree avenue and replace with Corymbia ficifolia and Brachychiton cultivars suitably spaced
Garden Structures
• Restore the Levi Pavilion (1928/9) in accordance with the original drawing by W Kelly[46] and integrate with a plant theme

[43] *Phoenix canariensis* and *Dracaena draco* are considered symbolic of the Canary Islands. (*Phoenix canariensis* could also be considered symbolic of St Kilda, and is the most prevalent tree in the St Kilda Botanical Gardens. Both were introduced into Victoria by 19th century plant nurseries.)
[44] Refer SFA Sept 2007, Para 6.4 for recommendations re Living Collections Policy
[45] Critically review and revise 'Fence and Gates' document, 2004
[46] Conservation Management Plan, April 1996, Fig. 54, p. 79

References

Cox, Peter (1999), *Australian Roses*, Blooming Books, Melb.

City of Port Phillip, *Divercity* (newsletter), issue no. 33, June/July 2007

Scott, Rob, et al, *'Indigenous Plants of the Sandbelt, A Gardening Guide for South-eastern Melbourne'*, Earthcare St Kilda, 2002

Adelaide Botanic Garden Conservation Study, June 2006

Botanic Gardens of Adelaide, Master Plan Report, July 2006

SFA (Sept 2007), Stephen Fitzgerald Arboriculture, *St Kilda Botanical Gardens Arboricultural Report*

Transformations Journal Issue No. 13 2006, Making Badlands, Places, Past, Disappearance, by Ross Gibson (www.transformationsjournal.org/)

The Fourth Pillar of Sustainability

City of Port Phillip, St Kilda Botanical Gardens, Conservation Management Plan, April 1996

Copies of reports and letters from the St Kilda Council Files, supplied by Friends of the St Kilda Botanical Gardens:

Letter from Dept Lands & Survey 30 Jan 1860 to Town Clerk

Letter from Dept Lands & Survey 4 Feb 1860 to Council

Letter from Tilman W Gloystein 30 June 1860 to Town Clerk

Letter from Tilman W Gloystein to the Planting Committee 6 Aug 1860

Letter 5 Nov 1860 from Mueller to the Town Clerk St Kilda

Letter 27 Mar 1861 from Mueller to the Town Clerk St Kilda

Report No 2 of the Planting Committee to Council 11 Nov 1863

Letter 24/6/1867 from Mueller to

Report of the Garden and Planting Committee 24 June 1867

Specifications of the Duties of the Gardener 8 Oct 1872

Letter to the Mayor from Solicitors for Winfield Attenborough 20 Aug 1877

Letter 16 May 1898 from E O'Sullivan

Letter from Town Clerk 18 May 1898 to St Kilda Police

Police Report of 6 June 1898

Letter to Town Clerk? From R Kimpton Gardener 30/10/1898

Appendices

Appendix 1
Tree Age Estimates

The following tree age estimates by Roger Greenwood were based on visual assessments of likely rates of growth. No additional work has been undertaken to verify this data. Such additional work would include comparative analysis of aerial photos at St Kilda B G and sizes of extant trees in Alma Park and Fawkner Park[1].

None of the extant trees is estimated as pre-1900. John Hawker has commented that

> '*age and ULE are very difficult to determine and that's why, especially in a botanic gardens,* ***plant records*** *should be kept. Possibly the only trees at St Kilda B G that might be pre 1900, are the Moreton Bay Figs (Ficus spp.), Fig avenue, a Monterey Pine, an Aleppo Pine, African Olive, Cork Oak, and one elm, but perhaps they are all c.1905-10'.*

Stephen Fitzgerald interpreted the data on spreadsheets and plan (as follows). He has also cautioned against accepting the age estimates per se. 'When you can see them laid out like this (on plan) it is obvious that they would not be too accurate (e.g. avenues that to most people appear to have been planted at one time have a range of estimated ages). While I did not check them systematically, it was obvious to me that a few were off the mark - eg. 304 (Syagrus palm) is estimated to be only 1970s when it appears to me that it would be 1930-1940s.'

Tree age estimates do not take into account the transplanting of mature specimens from elsewhere. For example, the Canary Island Palm is readily procurable as a mature tree for transplanting. The estimated ages of Canary Island Palms in the Gardens do not ensure a corresponding date for their placement.

[1] Refer Alma Park CMP and Fawkner Park CMP

ID	SPECIES	COMMON NAME	PLANTED	Victorian Heritage Register (VHR) Notes
72	Pinus canariensis	Canary Island Pine	1900	
219	Jubaea chilensis	Chilean Wine Palm	1900	VHR (H1804) tree T7
99	Agathis robusta	Queensland Kauri	1900	
161	Pinus halepensis	Allepo Pine	1900	
796	Ulmus Xhollandica	Dutch Elm	1900	
125	Quercus suber	Cork Oak	1900	
70	Cupressus macrocarpa 'Lutea'	Monterey Cypress (Lutea cv.)	1900	
15	Ulmus procera	English Elm	1900	
147	Angophora floribunda	Rough-barked Apple	1900	
38	Eucalyptus cladocalyx	Sugar Gum	1900	
426	Celtis australis	European Nettle Tree	1900	
18	Ficus macrophylla	Moreton Bay Fig	1900	
6	Pinus canariensis	Canary Island Pine	1900	
9	Elaeodendron croceum	Red Saffronwood	1900	
249	Olea europaea subsp. cuspidata	Common African Olive	1900	VHR (H1804) tree T3
621	Eucalyptus cladocalyx	Sugar Gum	1910	
620	Eucalyptus camaldulensis	River Red Gum	1910	
843	Phoenix canariensis	Canary Island Date Palm	1910	VHR (H1804) tree T12 (1 of 6)
5	Pinus radiata	Monterey Pine	1910	
45	Eucalyptus cladocalyx	Sugar Gum	1910	
513	Eucalyptus cladocalyx	Sugar Gum	1910	
720	Eucalyptus cladocalyx	Sugar Gum	1910	
66	Ficus rubiginosa	Port Jackson Fig	1920	
73	Brachychiton populneus	Kurrajong	1920	
74	Araucaria cunninghamii	Hoop Pine	1920	
76	Corymbia calophylla	Marri	1920	
213	Phoenix canariensis	Canary Island Date Palm	1920	VHR (H1804) tree T12 (1 of 6)
57	Cupressus torulosa	Bhutan Cypress	1920	VHR (H1804) tree T13 (1 of 11)
68	Ficus rubiginosa	Port Jackson Fig	1920	
67	Ficus rubiginosa	Port Jackson Fig	1920	
362	Eucalyptus cladocalyx	Sugar Gum	1920	
687	Eucalyptus cladocalyx	Sugar Gum	1920	
834	Quercus suber	Cork Oak	1920	
323	Ficus rubiginosa	Port Jackson Fig	1920	
210	Phoenix canariensis	Canary Island Date Palm	1920	VHR (H1804) tree T12 (1 of 6)
126	Phillyrea latifolia	Jasmine Box	1920	VHR (H1804) tree T4
211	Phoenix canariensis	Canary Island Date Palm	1920	VHR (H1804) tree T12 (1 of 6)
27	Cupressus torulosa	Bhutan Cypress	1920	
212	Phoenix canariensis	Canary Island Date Palm	1920	VHR (H1804) tree T12 (1 of 6)
7	Ulmus Xhollandica	Dutch Elm	1920	
55	Cedrus deodara	Deodar Cedar	1930	
49	Cedrus deodara	Deodar Cedar	1930	
672	Ulmus glabra	Scotch Elm	1930	
352	Cupressus macrocarpa	Monterey Cypress	1930	
718	Eucalyptus botryoides	Southern Mahogany	1930	
821	Ulmus Xhollandica	Dutch Elm	1930	

146	Sequoia sempervirens	Coast Redwood	1930	
130	Phoenix canariensis	Canary Island Date Palm	1930	
129	Washingtonia filifera	Cotton Palm	1930	VHR (H1804) tree T18
128	Washingtonia robusta	Mexican Washingtonia	1930	VHR (H1804) tree T17 (1 of 9)
171	Eucalyptus cladocalyx	Sugar Gum	1930	
97	Magnolia grandiflora	Bull Bay	1930	
78	Cupressus torulosa	Bhutan Cypress	1930	
80	Cupressus torulosa	Bhutan Cypress	1930	
669	Eucalyptus botryoides	Southern Mahogany	1930	
820	Ulmus Xhollandica	Dutch Elm	1930	
819	Ulmus Xhollandica	Dutch Elm	1930	
671	Eucalyptus cladocalyx	Sugar Gum	1930	
79	Cupressus torulosa	Bhutan Cypress	1930	
643	Eucalyptus cladocalyx	Sugar Gum	1930	
644	Eucalyptus botryoides	Southern Mahogany	1930	
60	Cedrus deodara	Deodar Cedar	1930	
81	Cupressus torulosa	Bhutan Cypress	1930	
851	Washingtonia robusta	Mexican Washingtonia	1930	VHR (H1804) tree T17 (1 of 9)
321	Quercus ilex	Holm Oak	1930	
20	Pinus radiata	Monterey Pine	1930	
861	Afrocarpus falcata	Yellow-wood	1930	
300	Araucaria heterophylla	Norfolk Island Pine	1930	VHR (H1804) tree T16
856	Washingtonia robusta	Mexican Washingtonia	1930	VHR (H1804) tree T17 (1 of 9)
227	Celtis occidentalis	Nettle Tree	1930	VHR (H1804) tree T2
837	Phoenix canariensis	Canary Island Date Palm	1930	VHR (H1804) tree T19 (1 of 11)
854	Washingtonia robusta	Mexican Washingtonia	1930	VHR (H1804) tree T17 (1 of 9)
232	Celtis occidentalis	Nettle Tree	1930	
8	Elaeodendron croceum	Red Saffronwood	1930	
833	Quercus robur	English Oak	1930	
302	Magnolia grandiflora	Bull Bay	1930	
317	Ulmus parvifolia	Chinese Elm	1930	
852	Washingtonia robusta	Mexican Washingtonia	1930	VHR (H1804) tree T17 (1 of 9)
365	Corymbia maculata	Spotted Gum	1940	
364	Eucalyptus botryoides	Southern Mahogany	1940	
355	Cupressus macrocarpa	Monterey Cypress	1940	
353	Cupressus macrocarpa	Monterey Cypress	1940	
850	Washingtonia robusta	Mexican Washingtonia	1940	VHR (H1804) tree T17 (1 of 9)
849	Washingtonia robusta	Mexican Washingtonia	1940	VHR (H1804) tree T17 (1 of 9)
77	Cinnamomum camphora	Camphor Laurel	1940	
848	Phoenix canariensis	Canary Island Date Palm	1940	VHR (H1804) tree T19 (1 of 11)
855	Washingtonia robusta	Mexican Washingtonia	1940	VHR (H1804) tree T17 (1 of 9)
94	Jacaranda mimosifolia	Jacaranda	1940	
2	Ulmus sp.	Elm (unknown sp.)	1940	
137	Laurus nobilis	Bay Laurel	1940	
136	Alectryon subcinereus	Wild Quince	1940	VHR (H1804) tree T1
127	Cedrus deodara	Deodar Cedar	1940	

	Eucalyptus botryoides	Southern Mahogany	1940	
17	Pinus radiata	Monterey Pine	1940	
226	Schinus areira	Peppercorn Tree	1940	
370	Phoenix canariensis	Canary Island Date Palm	1940	
186	Schinus areira	Peppercorn Tree	1940	
369	Eucalyptus botryoides	Southern Mahogany	1940	
188	Eucalyptus botryoides	Southern Mahogany	1940	
572	Phoenix canariensis	Canary Island Date Palm	1940	
375	Salix babylonica var. pekinensis 'Tortuo	Twisted Willow (Tortured Willow)	1940	
372	Schinus areira	Peppercorn Tree	1940	
371	Corymbia maculata	Spotted Gum	1940	
641	Brachychiton acerifolius	Illawarra Flame Tree	1940	
96	Cupressus torulosa	Bhutan Cypress	1940	VHR (H1804) tree T13 (1 of 11)
340	Quercus cerris	Turkey Oak	1940	
781	Magnolia grandiflora	Bull Bay	1940	
327	Afrocarpus falcata	Yellow-wood	1940	
23	Phoenix canariensis	Canary Island Date Palm	1940	VHR (H1804) tree T9 (1 of 3)
215	Eucalyptus camaldulensis	River Red Gum	1940	
717	Eucalyptus botryoides	Southern Mahogany	1940	
46	Phoenix canariensis	Canary Island Date Palm	1940	VHR (H1804) tree T9 (1 of 3)
216	Fraxinus angustifolia subsp. angustifolia	Desert Ash	1940	
829	Cupressus torulosa	Bhutan Cypress	1940	VHR (H1804) tree T13 (1 of 11)
341	Juglans nigra	Black Walnut	1940	
836	Phoenix canariensis	Canary Island Date Palm	1940	VHR (H1804) tree T12 (1 of 6)
59	Cupressus torulosa	Bhutan Cypress	1940	VHR (H1804) tree T13 (1 of 11)
342	Cupressus torulosa	Bhutan Cypress	1940	VHR (H1804) tree T13 (1 of 11)
343	Phoenix canariensis	Canary Island Date Palm	1940	VHR (H1804) tree T19 (1 of 11)
838	Ficus rubiginosa	Port Jackson Fig	1940	
69	Corynocarpus laevigatus	Karaka	1950	
398	Populus Xcanadensis	Grey Poplar	1950	
376	Fraxinus angustifolia subsp. angustifolia	Desert Ash	1950	
191	Ulmus parvifolia	Chinese Elm	1950	
190	Eucalyptus botryoides	Southern Mahogany	1950	
351	Fraxinus angustifolia subsp. angustifolia	Desert Ash	1950	
71	Quercus palustris	Pin Oak	1950	
860	Stenocarpus salignus	Scrub Beefwood	1950	
93	Eucalyptus botryoides	Southern Mahogany	1950	
42	Eucalyptus melliodora	Yellow Box	1950	
715	Eucalyptus saligna	Sydney Blue Gum	1950	
307	Syzygium paniculatum	Brush Cherry	1950	
98	Phoenix canariensis	Canary Island Date Palm	1950	
47	Celtis occidentalis	Nettle Tree	1950	
172	Trachycarpus fortunei	Chinese Windmill Palm	1950	VHR (H1804) tree T10 (1 of 2)
223	Phoenix canariensis	Canary Island Date Palm	1950	VHR (H1804) tree T19 (1 of 11)
847	Celtis australis	European Nettle	1950	
155				

		Tree		
324	Brachychiton populneus	Kurrajong	1950	
16	Pinus radiata	Monterey Pine	1950	
846	Phoenix canariensis	Canary Island Date Palm	1950	VHR (H1804) tree T19 (1 of 11)
132	Picea pungens	Blue Spruce	1950	
148	Quercus palustris	Pin Oak	1950	
328	Rothmannia globosa	September Bells	1950	
32	Ulmus glabra	Scotch Elm	1950	
75	Lagunaria patersonia	Cow-itch Tree	1950	
840	Phoenix canariensis	Canary Island Date Palm	1950	VHR (H1804) tree T19 (1 of 11)
670	Corymbia maculata	Spotted Gum	1950	
359	Cupressus macrocarpa	Monterey Cypress	1950	
187	Ficus macrophylla	Moreton Bay Fig	1950	
360	Corymbia citriodora	Lemon-scented Gum	1950	
348	Cupressus torulosa	Bhutan Cypress	1950	VHR (H1804) tree T13 (1 of 11)
356	Cupressus macrocarpa	Monterey Cypress	1950	
357	Cupressus macrocarpa	Monterey Cypress	1950	
373	Populus nigra 'Italica'	Lombardy Poplar	1950	
122	Ulmus glabra 'Lutescens'	Golden Wych Elm	1950	
214	Phoenix sylvestris	Indian Date Palm	1950	VHR (H1804) tree T6
56	Cupressus torulosa	Bhutan Cypress	1950	VHR (H1804) tree T13 (1 of 11)
218	Phoenix canariensis	Canary Island Date Palm	1950	VHR (H1804) tree T9 (1 of 3)
54	Cupressus torulosa	Bhutan Cypress	1950	VHR (H1804) tree T13 (1 of 11)
680	Acacia melanoxylon	Blackwood	1950	
844	Phoenix canariensis	Canary Island Date Palm	1950	VHR (H1804) tree T19 (1 of 11)
354	Cupressus macrocarpa	Monterey Cypress	1950	
228	Photinia serrulata	Chinese Hawthorn	1960	
231	Cordyline australis	Cabbage Tree Palm	1960	
349	Phoenix canariensis	Canary Island Date Palm	1960	
305	Acacia melanoxylon	Blackwood	1960	
350	Phoenix canariensis	Canary Island Date Palm	1960	
330	Brachychiton discolor	Queensland Lacebark	1960	
222	Trachycarpus fortunei	Chinese Windmill Palm	1960	VHR (H1804) tree T10 (1 of 2)
269	Dracaena draco	Dragon's Blood Tree	1960	
326	Pittosporum undulatum	Sweet Pittosporum	1960	
1	Corymbia citriodora	Lemon-scented Gum	1960	
347	Cedrus deodara	Deodar Cedar	1960	
151	Prunus Sato-zakura cv.	Japanese Flowering Cherry (unknown cultivar)	1960	
412	Dracaena draco	Dragon's Blood Tree	1960	
358	Cupressus macrocarpa	Monterey Cypress	1960	
297	Acacia mearnsii	Black Wattle	1960	
145	Zelkova serrata	Japanese Zelkova	1960	
200	Ulmus minor 'Variegata'	Variegated Elm	1960	
346	Cupressus torulosa	Bhutan Cypress	1960	VHR (H1804) tree T13 (1 of 11)
338	Quercus suber	Cork Oak	1960	

301	Jacaranda mimosifolia	Jacaranda	1960	
163	Prunus dulcis cv.	Almond (unknown cv.)	1960	
839	Phoenix canariensis	Canary Island Date Palm	1960	VHR (H1804) tree T19 (1 of 11)
91	Ligustrum lucidum 'Tricolor'	Tricolor Privet	1960	
824	Fraxinus angustifolia subsp. angustifolia	Desert Ash	1960	
62	Toona ciliata	Red Cedar	1960	
845	Phoenix canariensis	Canary Island Date Palm	1960	VHR (H1804) tree T19 (1 of 11)
841	Phoenix canariensis	Canary Island Date Palm	1960	VHR (H1804) tree T19 (1 of 11)
736	Acacia mearnsii	Black Wattle	1960	
869	Agonis flexuosa	Willow Myrtle	1960	
83	Jacaranda mimosifolia	Jacaranda	1960	
123	Lagunaria patersonia	Cow-itch Tree	1960	
832	Lagunaria patersonia	Cow-itch Tree	1960	
826	Fraxinus angustifolia subsp. angustifolia	Desert Ash	1960	
830	Fraxinus angustifolia subsp. angustifolia	Desert Ash	1960	
827	Fraxinus angustifolia subsp. angustifolia	Desert Ash	1960	
866	Catalpa bignonioides	Indian Bean Tree	1960	
3	Corymbia citriodora	Lemon-scented Gum	1960	
825	Fraxinus angustifolia subsp. angustifolia	Desert Ash	1960	
133	Pinus patula	Patula Pine	1960	
14	Corymbia citriodora	Lemon-scented Gum	1960	
4	Corymbia citriodora	Lemon-scented Gum	1960	
831	Lagunaria patersonia	Cow-itch Tree	1960	
808	Acmena smithii	Lilly Pilly	1970	
809	Acmena smithii	Lilly Pilly	1970	
810	Acmena smithii	Lilly Pilly	1970	
811	Acmena smithii	Lilly Pilly	1970	
812	Acmena smithii	Lilly Pilly	1970	
295	Cordyline australis	Cabbage Tree Palm	1970	
202	Salix Xreichardtii	Pussy Willow	1970	
368	Fraxinus angustifolia subsp. angustifolia	Desert Ash	1970	
366	Fraxinus angustifolia subsp. angustifolia	Desert Ash	1970	
865	Cupressus sempervirens	Italian Cypress	1970	
345	Cedrus deodara	Deodar Cedar	1970	
296	Cordyline australis	Cabbage Tree Palm	1970	
813	Acmena smithii	Lilly Pilly	1970	
65	Erythrina Xsykesii	Common Coral Tree	1970	
828	Fraxinus angustifolia subsp. angustifolia	Desert Ash	1970	
325	Quercus ilex	Holm Oak	1970	
25	Juniperus virginiana	Pencil Juniper	1970	
782	Washingtonia robusta	Mexican Washingtonia	1970	
29	Acacia melanoxylon	Blackwood	1970	
313	Hymenosporum flavum	Native Frangipani	1970	

205	Betula pendula	Silver Birch	1970	
857	Butia capitata	Jelly Palm	1970	VHR (H1804) tree T8 (1 of 3)
842	Phoenix canariensis	Canary Island Date Palm	1970	VHR (H1804) tree T19 (1 of 11)
19	Araucaria cunninghamii	Hoop Pine	1970	
203	Salix Xreichardtii	Pussy Willow	1970	
304	Syagrus romanzoffiana	Queen Palm	1970	
822	Acmena smithii	Lilly Pilly	1970	
22	Acacia implexa	Lightwood	1970	
862	Syzygium australe	Brush Cherry	1970	
436	Metrosideros excelsa	New Zealand Christmas Tree	1970	
224	Ficus rubiginosa	Port Jackson Fig	1970	
225	Fraxinus angustifolia subsp. angustifolia	Desert Ash	1970	
204	Salix Xreichardtii	Pussy Willow	1970	
293	Prunus cerasifera	Cherry-plum	1970	
823	Cupressus macrocarpa 'Saligna Aurea'	Monterey Cypress 'Saligna Aurea'	1970	
534	Acacia mearnsii	Black Wattle	1970	
589	Acacia mearnsii	Black Wattle	1970	
237	Picea pungens	Blue Spruce	1970	
167	Quercus palustris	Pin Oak	1970	
239	Taxodium distichum	Swamp or Bald Cypress	1970	
165	Liquidambar styraciflua	Liquidamber	1970	
403	Archontophoenix cunninghamiana	Bangalow Palm	1970	
244	Ulmus parvifolia	Chinese Elm	1970	
236	Lagerstroemia indica	Crape Myrtle	1970	
160	Ligustrum lucidum 'Tricolor'	Tricolor Privet	1970	
158	Corymbia ficifolia	Red-flowering Gum	1970	
154	Corymbia calophylla	Marri	1970	
248	Malus ioensis	Prairie Crabapple	1970	
134	Quercus palustris	Pin Oak	1970	
438	Euonymus japonicus 'Aureovariegatus'	Vargiegated Spindle Tree	1970	
260	Dracaena draco	Dragon's Blood Tree	1970	
435	Euonymus japonicus 'Aureovariegatus'	Vargiegated Spindle Tree	1970	
108	Betula pendula	Silver Birch	1970	
286	Cordyline australis	Cabbage Tree Palm	1970	
290	Cordyline australis	Cabbage Tree Palm	1970	
374	Corymbia maculata	Spotted Gum	1970	
289	Cordyline australis	Cabbage Tree Palm	1970	
377	Quercus palustris	Pin Oak	1970	
378	Quercus palustris	Pin Oak	1970	
288	Cordyline australis	Cabbage Tree Palm	1970	
86	Acmena smithii	Lilly Pilly	1970	
103	Macadamia integrifolia	Macadamia Nut	1970	
287	Cordyline australis	Cabbage Tree Palm	1970	
402	Archontophoenix cunninghamiana	Bangalow Palm	1970	
385	Cussonia spicata	Cabbage Tree	1970	
541	Acacia mearnsii	Black Wattle	1970	
88	Morus alba 'Pendula'	Weeping Mulberry	1970	
401	Syagrus	Queen Palm	1970	

	romanzoffiana			
557	Acacia mearnsii	Black Wattle	1970	
230	Zelkova serrata	Japanese Zelkova	1970	
400	Diospyros whyteana	Bladder-nut	1970	
793	Cordyline australis	Cabbage Tree Palm	1980	
258	Cordyline australis	Cabbage Tree Palm	1980	
256	Magnolia Xsoulangeana	Saucer Magnolia	1980	
233	Photinia serrulata	Chinese Hawthorn	1980	
221	Butia capitata	Jelly Palm	1980	VHR (H1804) tree T8 (1 of 3)
246	Cinnamomum camphora	Camphor Laurel	1980	
242	Ailanthus altissima	Tree of Heaven	1980	
12	Glochidion ferdinandi	Buttonwood (Cheese Tree)	1980	
220	Butia capitata	Jelly Palm	1980	VHR (H1804) tree T8 (1 of 3)
241	Cinnamomum camphora	Camphor Laurel	1980	
10	Glochidion ferdinandi	Buttonwood (Cheese Tree)	1980	
166	Acer campestre	English or Field Maple	1980	
790	Cordyline australis	Cabbage Tree Palm	1980	
195	Quercus palustris	Pin Oak	1980	
87	Hymenosporum flavum	Native Frangipani	1980	
189	Quercus palustris	Pin Oak	1980	
184	Prunus Sato-zakura cv.	Japanese Flowering Cherry (unknown cultivar)	1980	
183	Prunus Sato-zakura cv.	Japanese Flowering Cherry (unknown cultivar)	1980	
178	Prunus Sato-zakura cv.	Japanese Flowering Cherry (unknown cultivar)	1980	
176	Prunus Sato-zakura cv.	Japanese Flowering Cherry (unknown cultivar)	1980	
174	Prunus Sato-zakura cv.	Japanese Flowering Cherry (unknown cultivar)	1980	
82	Eriobotrya japonica	Loquat	1980	
107	Ginkgo biloba	Maidenhair Tree	1980	
199	Morus nigra	Black Mulberry	1980	
164	Pyrus calleryana	Callery Pear	1980	
162	Prunus Sato-zakura cv.	Japanese Flowering Cherry (unknown cultivar)	1980	
263	Ceratonia siliqua	Carob Tree	1980	
150	Prunus Sato-zakura cv.	Japanese Flowering Cherry (unknown cultivar)	1980	
135	Ulmus glabra 'Camperdown'	Camperdown Elm	1980	
138	Acmena smithii	Lilly Pilly	1980	
144	Zelkova serrata	Japanese Zelkova	1980	
143	Zelkova serrata	Japanese Zelkova	1980	
140	Zelkova serrata	Japanese Zelkova	1980	
168	Quercus palustris	Pin Oak	1980	
124	Ginkgo biloba	Maidenhair Tree	1980	
24	Acacia implexa	Lightwood	1980	
28	Acacia implexa	Lightwood	1980	
34	Acacia melanoxylon	Blackwood	1980	
35	Corymbia citriodora	Lemon-scented Gum	1980	
40	Acacia implexa	Lightwood	1980	
41	Acacia implexa	Lightwood	1980	

44	Allocasuarina torulosa	Forest Oak	1980	
51	Bursaria spinosa	Sweet Bursaria	1980	
58	Dracaena draco	Dragon's Blood Tree	1980	
84	Eriobotrya japonica	Loquat	1980	
789	Cordyline australis	Cabbage Tree Palm	1980	
217	Chamaerops humilis	Mediterranean Fan Palm	1980	VHR (H1804) tree T11
792	Cordyline australis	Cabbage Tree Palm	1980	
794	Cordyline australis	Cabbage Tree Palm	1980	
795	Cordyline australis	Cabbage Tree Palm	1980	
797	Cordyline australis	Cabbage Tree Palm	1980	
799	Liriodendron tulipifera	Tulip Tree	1980	
814	Acmena smithii	Lilly Pilly	1980	
816	Acmena smithii	Lilly Pilly	1980	
817	Cordyline australis	Cabbage Tree Palm	1980	
818	Cordyline australis	Cabbage Tree Palm	1980	
787	Cordyline australis	Cabbage Tree Palm	1980	
339	Trachycarpus fortunei	Chinese Windmill Palm	1980	
318	Azara microphylla	Chin-chin	1980	
681	Bursaria spinosa	Sweet Bursaria	1980	
382	Prunus lusitanica	Portugese Laurel	1980	
381	Sophora toromiro	Toromiro	1980	
864	Gleditsia triacanthos	Honey Locust	1980	
379	Ficus coronata	Creek Sandpaper Fig (Sandpaper Fig)	1980	
786	Cordyline australis	Cabbage Tree Palm	1980	
361	Lophostemon confertus	Brush Box	1980	
785	Cordyline australis	Cabbage Tree Palm	1980	
868	Syagrus romanzoffiana	Queen Palm	1980	
872	Cordyline australis	Cabbage Tree Palm	1980	
604	Eucalyptus sp.	Eucalypt	1980	
329	Cordyline australis	Cabbage Tree Palm	1980	
322	Brachychiton populneus	Kurrajong	1980	
320	Prunus lusitanica	Portugese Laurel	1980	
319	Prunus lusitanica	Portugese Laurel	1980	
367	Fraxinus angustifolia subsp. angustifolia	Desert Ash	1980	
675	Acacia melanoxylon	Blackwood	1980	
696	Eucalyptus pauciflora	Snow Gum	1980	
740	Allocasuarina torulosa	Forest Oak	1980	
428	Corynocarpus laevigatus	Karaka	1980	
743	Acacia melanoxylon	Blackwood	1980	
422	Magnolia figo	Port Wine Magnolia	1980	
545	Acacia implexa	Lightwood	1980	
588	Allocasuarina littoralis	Black She-oak	1980	
565	Acacia implexa	Lightwood	1980	

518	Bursaria spinosa	Sweet Bursaria	1980
574	Acacia mearnsii	Black Wattle	1980
783	Ulmus parvifolia	Chinese Elm	1980
503	Banksia integrifolia	Coast Banksia	1980
784	Washingtonia robusta	Mexican Washingtonia	1980
504	Banksia integrifolia	Coast Banksia	1980
505	Banksia integrifolia	Coast Banksia	1980
407	Cordyline australis	Cabbage Tree Palm	1980
564	Acacia melanoxylon	Blackwood	1980
640	Acacia sp.	Wattle	1980
636	Bursaria spinosa	Sweet Bursaria	1980
281	Cordyline australis	Cabbage Tree Palm	1980
266	Cordyline australis	Cabbage Tree Palm	1980
275	Lophostemon confertus	Brush Box	1980
283	Crataegus phaenopyrum	Washington Thorn	1980
268	Yucca sp.	Yucca	1980
280	Cordyline australis	Cabbage Tree Palm	1980
273	Betula pendula	Silver Birch	1980
279	Cordyline australis	Cabbage Tree Palm	1980
292	Pinus sylvestris	Scots Pine	1980
276	Magnolia grandiflora	Bull Bay	1980
291	Cordyline australis	Cabbage Tree Palm	1980
294	Jacaranda mimosifolia	Jacaranda	1980
298	Aesculus hippocastanum	Common Horse Chestnut	1980
267	Cordyline australis	Cabbage Tree Palm	1980
175	Prunus Sato-zakura cv.	Japanese Flowering Cherry (unknown cultivar)	1990
53	Melaleuca styphelioides	Prickly-leaved Paperbark	1990
277	Cordyline australis	Cabbage Tree Palm	1990
177	Prunus Sato-zakura cv.	Japanese Flowering Cherry (unknown cultivar)	1990
131	Calodendrum capense	Cape Chestnut	1990
274	Eucalyptus sideroxylon	Red Ironbark	1990
247	Ilex cornuta	Chinese Holly	1990
688	Eucalyptus melliodora	Yellow Box	1990
173	Prunus Sato-zakura cv.	Japanese Flowering Cherry (unknown cultivar)	1990
261	Jacaranda mimosifolia	Jacaranda	1990
739	Acacia melanoxylon	Blackwood	1990
264	Cupressus torulosa	Bhutan Cypress	1990
149	Prunus Sato-zakura cv.	Japanese Flowering Cherry (unknown cultivar)	1990
141	Zelkova serrata	Japanese Zelkova	1990
791	Cordyline australis	Cabbage Tree Palm	1990
566	Acacia implexa	Lightwood	1990
37	Acacia melanoxylon	Blackwood	1990
255	Arbutus canariensis	Canary Island Strawberry Tree	1990

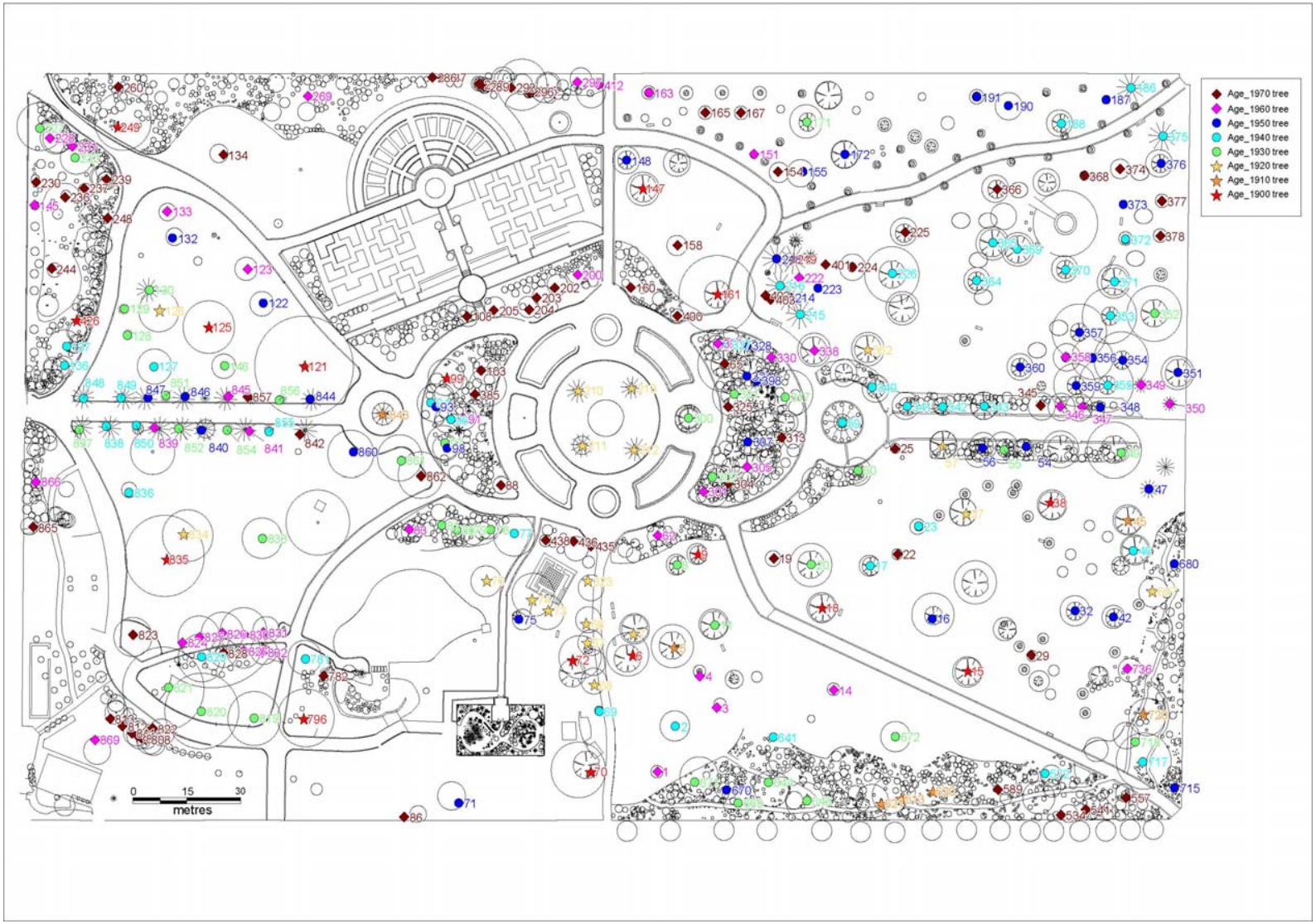
139	Zelkova serrata	Japanese Zelkova	1990	
159	Taxodium distichum	Swamp or Bald Cypress	1990	
689	Acacia melanoxylon	Blackwood	1990	
397	Pseudopanax lessonii	Houpara (Coastal Five Finger)	1990	
259	Pittosporum undulatum	Sweet Pittosporum	1990	
181	Prunus Sato-zakura cv.	Japanese Flowering Cherry (unknown cultivar)	1990	
152	Prunus Sato-zakura cv.	Japanese Flowering Cherry (unknown cultivar)	1990	
859	Quercus aff. canariensis	Algerian Oak	1990	
306	Prunus lusitanica	Portugese Laurel	1990	
521	Acacia melanoxylon	Blackwood	1990	
310	Archontophoenix alexandrae	Alexandra Palm	1990	
815	Acmena smithii	Lilly Pilly	1990	
527	Allocasuarina torulosa	Forest Oak	1990	
332	Elaeocarpus reticulatus	Blueberry Ash	1990	
602	Bursaria spinosa	Sweet Bursaria	1990	
334	Hymenosporum flavum	Native Frangipani	1990	
639	Banksia marginata	Silver Banksia	1990	
335	Hymenosporum flavum	Native Frangipani	1990	
363	Angophora costata	Smooth-barked Apple	1990	
234	Ginkgo biloba	Maidenhair Tree	1990	
540	Eucalyptus botryoides	Southern Mahogany	1990	
238	Crataegus sp.	Hawthorn	1990	
182	Prunus Sato-zakura cv.	Japanese Flowering Cherry (unknown cultivar)	1990	
299	Michelia doltsopa	Michelia	1990	
157	Ulmus pumila var. pumila	Siberian Elm	1990	
592	Melaleuca ericifolia	Swamp Paperbark	1990	
192	Quercus palustris	Pin Oak	1990	
193	Quercus palustris	Pin Oak	1990	
867	Lagerstroemia indica	Crape Myrtle	1990	
198	Alectryon subcinereus	Wild Quince	1990	
194	Quercus palustris	Pin Oak	1990	
196	Quercus palustris	Pin Oak	1990	
611	Acacia implexa	Lightwood	1991	
622	Allocasuarina littoralis	Black She-oak	1991	
692	Eucalyptus camaldulensis	River Red Gum	1991	
52	Cupressus torulosa	Bhutan Cypress	1992	VHR (H1804) tree T13 (1 of 11)
519	Bursaria spinosa	Sweet Bursaria	1992	
531	Acacia melanoxylon	Blackwood	1992	
694	Eucalyptus melliodora	Yellow Box	1992	
530	Acacia melanoxylon	Blackwood	1992	
142	Zelkova serrata	Japanese Zelkova	1992	
529	Acacia melanoxylon	Blackwood	1992	
109	Viburnum odoratissimum	Sweet Viburnum	1992	
111	Viburnum odoratissimum	Sweet Viburnum	1992	
520	Bursaria spinosa	Sweet Bursaria	1992	
590	Melaleuca ericifolia	Swamp Paperbark	1992	

243	Viburnum odoratissimum	Sweet Viburnum	1992
635	Allocasuarina littoralis	Black She-oak	1992
308	Araucaria bidwillii	Bunya-Bunya Pine	1992
606	Acacia melanoxylon	Blackwood	1992
110	Viburnum odoratissimum	Sweet Viburnum	1992
180	Prunus Sato-zakura cv.	Japanese Flowering Cherry (unknown cultivar)	1992
587	Acacia melanoxylon	Blackwood	1992
549	Acacia melanoxylon	Blackwood	1992
112	Viburnum odoratissimum	Sweet Viburnum	1992
425	Ilex kingiana		1992
185	Prunus Sato-zakura cv.	Japanese Flowering Cherry (unknown cultivar)	1992
630	Banksia integrifolia	Coast Banksia	1993
631	Banksia integrifolia	Coast Banksia	1993
399	Acmena smithii	Lilly Pilly	1993
632	Banksia integrifolia	Coast Banksia	1993
544	Acacia implexa	Lightwood	1993
798	Eucalyptus camaldulensis	River Red Gum	1993
411	Harpephyllum caffrum	Kaffir Plum	1993
153	Prunus Sato-zakura 'Tai Haku'	Japanese Flowering Cherry (Tai Haku cv.)	1993
282	Prunus lusitanica	Portugese Laurel	1993
634	Bursaria spinosa	Sweet Bursaria	1994
617	Acacia melanoxylon	Blackwood	1994
599	Acacia melanoxylon	Blackwood	1994
598	Acacia melanoxylon	Blackwood	1994
591	Acacia melanoxylon	Blackwood	1994
102	Podocarpus henkelii	Henkel's Yellow-wood	1994
674	Eucalyptus camaldulensis	River Red Gum	1994
101	Ligustrum lucidum	Shining Privet	1994
39	Eucalyptus camaldulensis	River Red Gum	1994
316	Paulownia tomentosa	Chinese Empress Tree	1994
156	Ulmus pumila var. pumila	Siberian Elm	1994
679	Eucalyptus melliodora	Yellow Box	1994
170	Prunus cerasifera cv.	Cherry-plum (unidentified cultivar)	1994
36	Acacia implexa	Lightwood	1994
873	Brachychiton acerifolius	Illawarra Flame Tree	1995
609	Acacia melanoxylon	Blackwood	1995
608	Acacia melanoxylon	Blackwood	1995
605	Acacia implexa	Lightwood	1995
391	Archontophoenix cunninghamiana	Bangalow Palm	1995
648	Acacia implexa	Lightwood	1995
387	Bursaria spinosa	Sweet Bursaria	1995
594	Acacia melanoxylon	Blackwood	1995
312	Hymenosporum flavum	Native Frangipani	1995
21	Cedrus libani	Cedar of Lebanon	1995
271	Arbutus unedo	Strawberry Tree	1995
119	Cercis siliquastrum	Judas Tree	1995
104	Pittosporum crassifolium	Variegated Karo	1995

	'Variegatum'		
262	Dais cotinifolia	Pompon Tree (South African Daphne)	1995
440	Sophora microphylla	Kowhai	1995
650	Eucalyptus sp.	Eucalypt	1995
270	Quercus ilex	Holm Oak	1995
415	Ligustrum lucidum	Shining Privet	1995
272	Arbutus unedo	Strawberry Tree	1995
284	Prunus lusitanica	Portugese Laurel	1995
285	Prunus lusitanica	Portugese Laurel	1995
92	Syzygium paniculatum	Brush Cherry	1995
595	Melaleuca ericifolia	Swamp Paperbark	1995
437	Toona ciliata	Red Cedar	1995
607	Melaleuca ericifolia	Swamp Paperbark	1996
628	Bursaria spinosa	Sweet Bursaria	1996
417	Malus ioensis 'Plena'	Bechtel Crab	1996
43	Eucalyptus camaldulensis	River Red Gum	1996
420	Malus ioensis 'Plena'	Bechtel Crab	1996
418	Malus ioensis 'Plena'	Bechtel Crab	1996
571	Eucalyptus camaldulensis	River Red Gum	1996
169	Acer griseum	Chinese Paperbark Maple	1996
13	Eucalyptus melliodora	Yellow Box	1996
577	Acacia melanoxylon	Blackwood	1996
344	Acacia melanoxylon	Blackwood	1996
419	Malus ioensis 'Plena'	Bechtel Crab	1996
245	Ulmus parvifolia	Chinese Elm	1997
515	Banksia integrifolia	Coast Banksia	1997
229	Celtis occidentalis	Nettle Tree	1997
331	Toona ciliata	Red Cedar	1997
678	Allocasuarina verticillata	Drooping She-oak	1997
877	Citrus Xlimon	Lemon	1998
682	Acacia melanoxylon	Blackwood	1998
633	Banksia marginata	Silver Banksia	1998
874	Citrus Xlimon	Lemon	1998
871	Syagrus romanzoffiana	Queen Palm	1998
858	Tilia cordata	Small-leaved Linden	1998
652	Acacia implexa	Lightwood	1998
654	Banksia marginata	Silver Banksia	1998
753	Eucalyptus sp.	Eucalypt	1998
876	Citrus myrtifolia	Myrtle-leaf Orange	1998
207	Viburnum odoratissimum	Sweet Viburnum	1998
585	Acacia melanoxylon	Blackwood	1998
502	Eucalyptus camaldulensis	River Red Gum	1998
100	Macadamia integrifolia	Macadamia Nut	1998
117	Cercis siliquastrum	Judas Tree	1998
118	Cercis siliquastrum	Judas Tree	1998
113	Pistacia chinensis	Chinese Pistacio	1998
120	Cercis siliquastrum	Judas Tree	1998
208	Viburnum odoratissimum	Sweet Viburnum	1998
209	Viburnum odoratissimum	Sweet Viburnum	1998
514	Acacia implexa	Lightwood	1998
333	Hymenosporum flavum	Native Frangipani	1998

507	Banksia marginata	Silver Banksia	1998
265	Olea europaea	Olive	1998
26	Cupressus torulosa	Bhutan Cypress	1999
875	Citrus Xparadisi	Grapefruit	1999
653	Acacia implexa	Lightwood	1999
240	Paulownia tomentosa	Chinese Empress Tree	1999
626	Banksia marginata	Silver Banksia	1999
660	Acacia implexa	Lightwood	1999
661	Acacia implexa	Lightwood	1999
642	Acacia implexa	Lightwood	1999
629	Eucalyptus radiata	Narrow-leaved Peppermint	2000
33	Eucalyptus polyanthemos	Red Box	2000
405	Abies nordmanniana	Caucasian Fir	2000
393	Acacia pendula	Weeping Myall	2000
807	Acmena smithii	Lilly Pilly	2000
197	Betula pendula	Silver Birch	2000
638	Allocasuarina verticillata	Drooping She-oak	2000
235	Michelia doltsopa	Michelia	2000
421	Ligustrum japonicum	Wax-leaf Privet	2001
432	Acacia implexa	Lightwood	2001
433	Acacia implexa	Lightwood	2001
434	Acacia implexa	Lightwood	2001
31	Eucalyptus pauciflora subsp. pauciflora	Snow Gum	2001
802	Acmena smithii	Lilly Pilly	2001
805	Acmena smithii	Lilly Pilly	2001
804	Acmena smithii	Lilly Pilly	2001
801	Acmena smithii	Lilly Pilly	2001
803	Acmena smithii	Lilly Pilly	2001
806	Acmena smithii	Lilly Pilly	2001
800	Acmena smithii	Lilly Pilly	2001
423	Ulmus parvifolia	Chinese Elm	2002
751	Eucalyptus cladocalyx	Sugar Gum	2002
429	Ilex aquifolium cv	Common Holly (unknown cultivar)	2002
89	Magnolia grandiflora	Bull Bay	2002
662	Acacia implexa	Lightwood	2002
380	Eucalyptus saligna	Sydney Blue Gum	2003
649	Acacia implexa	Lightwood	2003
618	Acacia implexa	Lightwood	2003
61	Koelreuteria paniculata	Golden Rain Tree	2003
627	Eucalyptus mannifera	Red Spotted Gum	2003
430	Pinus pinaster	Maritime Pine	2003
50	Bursaria spinosa	Sweet Bursaria	2003
506	Eucalyptus camaldulensis	River Red Gum	2004
658	Acacia implexa	Lightwood	2004
413	Crataegus sp.	Hawthorn	2004
659	Acacia implexa	Lightwood	2004
406	Cupressus sempervirens	Italian Cypress	2004
878	Malus sp. cv.	Apple or Crabapple (unknown cultivar)	2004
879	Malus sp. cv.	Apple or Crabapple (unknown cultivar)	2004
424	Pyrus calleryana	Callery Pear	2004
880	Malus sp. cv.	Apple or Crabapple (unknown cultivar)	2004
665	Acacia implexa	Lightwood	2004
673	Acacia melanoxylon	Blackwood	2004
881	Malus sp. cv.	Apple or Crabapple (unknown cultivar)	2004
414	Cupressus	Italian Cypress	2004

	sempervirens		
870	Stenocarpus sinuatus	Firewheel Tree	2005
388	Corymbia ficifolia	Red-flowering Gum	2005
613	Eucalyptus sp.	Eucalypt	2005
747	Eucalyptus radiata	Narrow-leaved Peppermint	2005
746	Eucalyptus radiata	Narrow-leaved Peppermint	2005
744	Eucalyptus radiata	Narrow-leaved Peppermint	2005
427	Ceratonia siliqua	Carob Tree	2005
439	Schinus areira	Peppercorn Tree	2005
404	Metasequoia glyptostroboides	Dawn Redwood	2005
928	Wollemia nobilis	Wollemi Pine	2006
408	Ceratonia siliqua	Carob Tree	2006
882	Malus Xdomestica	Apple	2006


Age_1970 tree
Age_1960 tree
Age_1950 tree
Age_1940 tree
Age_1930 tree
Age_1920 tree
Age_1910 tree
Age_1900 tree
0
15
30
metres

Appendix 2
Alister Clark Rose Varieties

The on-line catalogue (www.mistydowns.com.au) lists 60 varieties of Alister Clark bred Roses and provides descriptions of the characteristics and provenance of each.

Of the 122 rose varieties that Alister Clark bred at 'Glenara' near Bulla, north of Melbourne, for hot dry Australian conditions, and released between 1912 and 1949, many have been lost to cultivation.

The collection at St Kilda BG displays only 22 Alister Clark bred rose varieties, including eighteen marked (*) below as well as 4 varieties not catalogued by Misty Downs Nursery: *'Doris Downs', 'Golden Vision', 'Mrs Harold Brooks', 'Zara Hore-Ruthven'*.

Thus, 42 Alister Clark roses varieties available from Misty Downs Nursery are not represented in the Alister Clark Memorial Rose Garden collection at St Kilda BG.

Agnes Barclay	**Amy Johnson**	**Australia Felix**	**Baxter Beauty**
1927	1931	1918	1938
			
Black Boy*	**Borderer**	**Cherub**	**Cicely Lascelles***
1919	1925	1923	1937
			
Cicely O'Rorke	**Countess of Stradbroke**	**Courier***	**Daydream**
1937	1928	1923	1939
			

Diana Allen	Dividend	Edith Clark	Editor Stewart
1939	1931	1928	1922
			
Fairlie Rede	**Flying Colours**	**Gladsome**	**Glenara* No 14**
1937	1940	1937	
			
Gwen Nash	**Harbinger**	**Hatchell Brown**	**Janet Morrison**
1920	1923		1936
			
Jessie Clark*	**Kitty Kinninmonth***	**Lady Huntingfield***	**Lady Mann***
1915	1922	1937	1940
			
Lady Medallist	**Lorraine Lee***	**Lorraine Lee Clg**	**Mab Grimwade**
1912	1924	1924	1947
			

Madge Taylor	Margaret Turnbull	Marjorie Palmer*	Mary Guthrie*
1930	1931	1936	1929
			
Milkmaid	**Mrs Albert Nash**	**Mrs Fred Danks**	**Mrs Harold Alston***
1925	1929	1951	1940
			
Mrs Hugh Dettman	**Mrs Maude Alston**	**Mrs Norman Watson***	**Mrs Oswins Gigantia**
1930	1930	1930	
			
Mrs Richard Turnbull*	**Nancy Hayward***	**Nora Cunningham**	**Peggy Bell**
1945	1937	1920	1929
			
Pennant	**Princeps**	**Queen of Hearts**	**Restless***
1941	1942	1920	1938
			

Ringlet	Scorcher	Sheila Bellair	Squatters Dream*
1922	1922	1937	1923
			
Suiter	**Sunlit**	**Sunny South***	**Tonner's Fancy**
1942	1937	1918	1928
			

Appendix 3

ANALYSIS – Existing Conditions
CENTRAL HERITAGE CORE from north → south

JILL ORR-YOUNG
creating magical public places
(03) 9521 9929


1.

Main Entrance –
Heritage gates
missing gate → unbalanced symmetry


2.

Central Avenue (Palms)
Focal Point (Palm)
Evergreen background planting creates mystery
Bins in view-line
Lilydale toppings bland & dusty (original surface under?)


3.

Poor edge detail (concrete edge is a discordant element)


4.

Palm focal point
- poor edge detail
- fragmented backdrop (loses 'mystery')
- Agathis imp't.


5.


6.

Good edge detail (local rock – sandstone spalls with brick channel)
sympathetic to heritage


7.

multiple rock types ok.
(drystone edge)


8.

m/s hoops to edge
good combination of contrasting textures (rock edge & planting) & colours


9.

- harsh rigid detailing
- lack of plant diversity

1.

ANALYSIS - Existing conditions contd.

JILL ORR-YOUNG
creating magical public places
(03) 9521 9929


10.

seating alcove with free stone edge brick surface and type of seat not suited to heritage core


11.

free stone edge corner needs stronger planting statement


12.

central open space 'the heart of the gardens' grass verges continue heritage detail conifers important backdrop needs display planting enrichment (colour & texture)


13.

dark conifer backdrop ~~+~~ bright grass verges continue heritage detail (contrast plant light + sun shade) seats and lawn popular displays removed for watering restrictions weak centre


14.

brick edge laid back (good detail)


15.

timber edge to grass edge is too dominant


16.

good detailing


17.

free-standing rock edge (mixed types) O.K.
grass verge not appropriate there (continue rock edging).
needs stronger corner planting


18.

good plant choice for shady area. (strong colour & texture light reflecting strappy leaves).

ANALYSIS - Existing Conditions contd.

JILL ORR-YOUNG
creating magical public places
(03) 9521 9929


19.

Seating alcove, but detailing not successful (see 24.)


20.

poor detailing does not support heritage values


21.

good conifer background planting, rock edges, texture contrast central focus (Palm)

(this section mirrors other)


22.

poor detailing (b/s pitcher edge)

planting good textures possible additional contrast layer between


23.

Trachycarpus focus - excellent corner treatment reinforces heritage values. (rock edges, plant textures conifers)


24.

seating alcove + setting conifers & textures rock edges, but concrete dominates shrub enclosure


25.

detail interesting (use of rock, plant textures, turn of path) (perhaps not the best place for a path!)


26.

rock edge, but concrete dominant missing plants (needs textural contrast)


27.

good textures (rock & planting) : detail not perfect but interesting

ANALYSIS – Existing Conditions contd.

JILL ORR-YOUNG
creating magical public places
(03) 9521 9929


28.

forgotten entrance
poor detailing,
needs stronger
statement


29.

seating alcove
rock edges
textures
(seat rigid)


30.

interesting
informal entry
to lawn area
(narrow path,
shrub enclosure)
rock edges
(higher at ends)


31.

loss of edge
dominance of bins


32.

bins need alcove setting
and 'backing'


33.

stone drinking
fountain in state
of decay


34.

good textural
contrast & colour
(flowers)


35.

Japonica could
feature as linear
edge
(rose garden?)


36.

Camellias could
feature (rose garden?)

ANALYSIS - Existing Conditions contd.

JILL ORR-YOUNG
creating magical public places
(03) 9521 9929


37.

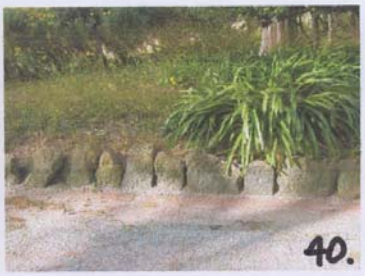
Edges weakened


38.

Edge planting needs better definition


39.

grass verge (?)
timber edge too dominant


40.

successful rock edging (b/s)


41.

outer grass verge not appropriate
weak corner


42.

central space popular seating area
b/s block edge not appropriate
good textural contrast, grandeur of conifers


43.

central space looking towards rose garden (backdrop depleted)
central bed weak
beds not planted


44.

lily dale toppings are dusty surface material
outer grass verge not appropriate (rock edge better)


45.

timber edge too dominant
corner weak

ANALYSIS - Existing conditions contd.

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46.


47.


48.

dry stone edge
(local stone)
corner planting
weak

good colour contrasts
in planting
evergreens
dominant
~~Agathis~~
corner/enclosure weak on
east side

Appendix 4
Ideas for 2010

In 2010, the St Kilda Botanical Gardens will attain its 150th anniversary.

Ideas for how the anniversary might be celebrated have been discussed. Rather than provide one big budget item, a number of small design 'interventions' could provide 'something for everyone', while integrating the whole. The diverse ideas noted below aim to provide an element of 'delight', as an 'event' or 'work'.

Performance	Choir of Hard Knocks (CD, DVD), associated new planting of Flame Trees
Art installations	Ephemeral art eg. Andy Goldsworthy (UK), David Wong (Melb) Associated post cards
Artist in Residence	
Structures	There is a lack of structures (cf. RBG) - Shade structures (eg. Bougainvillea Pavilion) Trellis (eg. French example) Entrance gates (provide an expectation, an interpretation, the start of an experience)
Interpretation	More than just signage - an experience, part of the design fabric … (*see definition, below*) eg. Alister Clark Memorial Rose Garden (*collection*)
Storytelling	Recordings
Film/movies	In conjunction with the St Kilda Film Festival?
Internet database	eg. Rose Collection
Photo collection	A snapshot of people and place
Planting	Collections A new plant collection
Conservatory	Role change/modification? eg. floor space for informal meetings, seats and tables

Interpretation *is a means of communicating ideas and feelings, which help people understand more about themselves and their environment. There are many different ways of communicating these ideas, including guided walks, talks, drama, displays, signs, brochures and electronic media.*

Interpretation is the key to understanding ourselves and who we are.

Interpreters draw on a range of philosophies, principles, frameworks and techniques to connect their audiences at an intellectual and emotional level with places, people and events.
Interpreters analyse the research, survey the landscape, interrogate the environment, frame the big questions, conceptualise the experience and select the tools. They deal in stories, ideas and experiences. They explain, guide, reveal, arrange, question, share and provoke. They engage with people. There is no single formula.

(Definition by Interpretation Australia Association)

Appendix 5
Tilman W Gloystein

To understand original design intent, and recognise it in the extant *fabric* of the St Kilda Botanical Gardens, it is necessary to ask, 'who was Tilman W Gloystein, what was his background, his experience of (botanic) gardens, and his network of influence?'

My current research has revealed additional biographical information for Gloystein, and connections with the 1840s – '50s German diaspora to South Australia, Ferdinand Müeller (botanist), the Adelaide Botanic Gardens and Melbourne Botanic Gardens.

A Brief Biography of T W Gloystein

3 Dec 1816	Tilman Wilhelm Gloystein born Bremen, Germany
27 Oct 1849	Departed Hamburg, Germany, on the passenger ship 'Alfred'
31 Jan 1850	Arrived at Port Adelaide, South Australia, aged 33
1850	At Freeman Street, Adelaide (work); as lithographer
c. 1850	Active as lithographer, printmaker, architect, sketcher
1860	**Won competition for overall design of the St Kilda BG,** from 10 entries (prize 10 pounds); Of Lonsdale Street
1866	Of 82 King Street Melbourne
28 Nov 1877	Admitted to Kew Asylum: age 61, single, architect, previous abode Emerald Hill, mental disorder melancholic, in fair health, Protestant, Germany; transferred to the Sunbury Asylum (28 Jun 1878), condition 'not improved'
22 Jan 1894	Died in the Sunbury Asylum, aged 77 years, from Uramie poisoning (result of inquiry), profession 'not known', buried 24 Jan 1894 Sunbury Cemetery, C of E section

Gloystein *Lithographer* *Printmaker* *Architect* *Sketcher*	Tilman Wilhelm Gloystein, (1816 – 1894) Born Bremen, Germany; Arrived Adelaide 31 Jan 1850, aged 33; Won competition for overall design of the St Kilda BG, 1860; was appointed to lay out the garden, but by 1861 local nursery proprietor George Brunning was contracted as gardener
Müeller *Pharmacist* *Botanist* *Explorer* *Scientist* *Author*	Sir Ferdinand Jakob Heinrich von (Baron von Müeller), (1825 – 1896) Born Rostock, Germany; Sailed from Bremen, Germany; Arrived Adelaide 15 Dec 1847, aged 22; arr. Melbourne 1852; Appointed Government Botanist Victoria 1853 – 1896; Appointed (first fulltime) Director of the Melbourne BG (1857 – 1873)[2]; Exchanged seeds and plants throughout Australia and overseas
Schomburgk *Botanist* *Gardener* *Explorer* *Historian* *Author*	Dr (Moritz) Richard Schomburgk, (1811 – 1891) Born Freyburg, Germany; Arrived Adelaide 1849, aged 38; Appointed (second) Director Adelaide BG, 1865[3]; Visited and corresponded with Müeller in Melbourne, obtained collection of plants from him; Imported the Palm House (a Victorian glasshouse)[4] from Bremen, Germany, 1875; (restored 1995); Advocated the establishment of forest reserves

Gloystein, Müeller and Schomburgk arrived in Adelaide from Germany at about the same time. Müeller and Gloystein both moved to Melbourne within a few years.

Müeller was the most influential scientist in Melbourne, already Government Botanist and Director of the Melbourne Botanic Garden when Gloystein won the competition for the design of the St Kilda BG. **Gloystein was clearly highly skilled in drawing and design, but his skills are not known to extend to botany or gardening. His design for the St Kilda BG would always rely on the knowledge of a botanist for detailed design and a practical gardener for implementation**[5].

[2] Melbourne BG established 1846

[3] Adelaide BG established 1855, opened 1857; Schomburgk was organising the purchase of plant material from Germany for the garden as early as Oct 1855

[4] Schomburgk recommended the addition of a palm house built of iron in Bremen (approved 1874). A focus of the garden since opening in 1877, it is of international significance, the only one of its kind extant in the world. It was designed by German architect Gustav Runge using sophisticated engineering techniques, and manufactured by Johan Friedrich Höper of Bremen, Germany. In keeping with conservation objectives, it now houses an endangered arid flora collection from Madagascar (once part of Gondwanaland). The plants are watered by light misting, which also minimises the risk of corrosion of the ironwork.

[5] There is no known correspondence between Gloystein and Müeller (ref. Müeller correspondence project, RBG).

Schomburgk's work and life closely parallels Müeller's. Both men were influential leaders, with connections to important scientific institutions in Germany, and developed their respective capital city botanical gardens along scientific lines. They set up herbaria, promoted the introduction and acclimatisation of plants and seeds of economic importance, and the distribution and exchange of plants.

Müeller's association with the St Kilda BG predates the 1860 competition and Gloystein's winning design. His offer of assistance in supplying plants for the Municipality was formally acknowledged by Council in June 1859[6], before the first moves for a botanic garden and selection of the site in September 1859. His correspondence deals with the supply of plants for the Gardens from 1860 to 1867[7], covering the period of the first planting in May 1861, the official opening in November 1861, and the late 1860s, by which time the nursery at the St Kilda Botanical Gardens was itself producing large numbers of plants for use in the Municipality. (Müeller's possible influence in conceiving the idea of the botanic garden, selecting the site, advising on an inception strategy through a Planting Committee and design competition, and early establishment, can be surmised, but is unknown.)

Design Influences: ***The Adelaide Botanic Gardens (opened Oct 1857)***

From his time in Adelaide, Gloystein would have been familiar with the initial layout of the Adelaide Botanic Gardens, as shown in its early development in the 1855 plan (below) by gardens' superintendent George Francis. Several features invite comparison with the St Kilda Botanical Gardens:

Initial development in the south-west corner (top-right), (approximately 10 acres/4 ha of the original 40 acres site) features:

* an indented entrance
* a symmetrical path layout, the main path aligned north-south and offset by an east-west path
* both paths linked by a circular walk projected from the intersection of their axes, with the centre of the circle intended as an ornamental focal point
* a more intricate curvilinear boundary path complementing the axial paths
* boundary hedges and shelter-belts extensively planted, and adjacent beds trenched for planting.
* the old indigenous trees (mainly *Eucalyptus camaldulensis*) left in place (as shown on plan by green dots).

[6] Letter to Town Clerk from Müeller 29 June 1859 (mentioned in Conservation Management Plan, April 1996, p.12

[7] Copies of Müeller correspondence held by CoPP

Francis introduced exotic plant collections, but also included Australian plants throughout the Garden. In 1856, he established a separate section for Australian flora, as four large connected circles, with plants grouped by geographical region, on a river flat of $1^{1/2}$ acres, east of the main path. The flat could be viewed from higher land, and the geometric layout of the 'Australian garden' was compatible with the flat topography.

In his recent publication, Aitken (2006)[8] has noted that *the circular motif* gave the Gardens great distinctiveness, and that the shape was probably inspired by the circular garden in Regent's Park London. He also noted that the circular planes of the theodolite and compass were an obvious choice for Francis, an accomplished surveyor.

However, 'the circular motif had much wider meanings and usage'. Aitken speculates that 'in the context of a botanic garden, Francis may have seen the circle as an appropriate expression to represent *the circle of learning*, a concept derived from classical Greece'. Further, 'for Francis, the botanic garden was *a living text*, and circles could symbolise and present the bountiful properties that plants had to offer.' Apart from Francis' known familiarity with the Regent's Park plan and with the surveyor's tools of trade, his conceptual thoughts on the circular motif are unknown.

[8] Aitken, Richard (2006), *Seeds of Change, An Illustrated History of Adelaide Botanic Garden,* published by the Board of the Botanic Gardens and State Herbarium, Adelaide Botanic Garden

Sources:

(1) Gloystein Death Certificate, Registry of Births Deaths and Marriages (Victoria), Registration Number 4031

(2) International Genealogical Index, record of birth (www.familysearch.org)

(3) Public Record Office Victoria, VPRS 8236P1 Register of Patients (VA 2843) Sunbury, 1877-1920 (p.20); and VPRS 7680 P1 Register of Patients (VA 2840) Kew, 1871-1919 (p56)

(4) Kerr, J. (Ed).* The Dictionary of Australian Artists, Painters, Sketchers, Photographers and Engravers to 1870, *Melbourne: Oxford University Press, 1992. (p.305)

(5) Australian Dictionary of Biography – Online Edition:
Müeller, Sir Ferdinand Jakob Heinrich von [Baron von Müeller] (1825 – 1896)
Schomburgk, Moritz Richard (1811 – 1891)

(6) Letters from Müeller to City of St Kilda (5 Nov 1860, 27 March 1861, 24 June 1867), copies held by CoPP

(7) Adelaide Botanic Gardens (http://www.environment.sa.gov.au/botanicgardens/)

Further Research Required (for interpretation purposes):

Public Record Office Victoria (Victorian Archives Centre Reading Room)

Gloystein, Patient Record VPRS 7405/P1 Case Books of Male Patients

Gloystein, Admission Warrants – Male Patients VPRS 8259/P1
(Admission No. 1625, 28 Nov. 1877)
Gloystein, Inquest into death 22 Jan 1894 (by H Clarkson)

State Library South Australia

Passenger List – ship 'Alfred', Hamburg to Port Adelaide, 31 Jan 1850 (ships log, Gloystein: occupation? travelling alone?)

South Australian Newspapers, c. 1850s (any mention of Tilman Gloystein, of Freeman Street, Adelaide, as Lithographer, Printmaker, Architect, Sketcher)

Gloystein, movement to Victoria (c.1850 – 60)
Gloystein, activities in Victoria
Gloystein, burial at Sunbury Cemetery, C of E section, 22 Jan 1894

RBG
1860 Plan of St Kilda BG (copy may have been sent to Müeller by City of St Kilda, c.24 June, 1867)

APPENDIX 6

COMMUNITY CONSULTATION FEEDBACK
Monday 8 July 2009 and Saturday 13 July (5 hrs consultation)

COMMUNITY COMMENTS	HOW COUNCIL RESPONDED TO ISSUE
Principles and values	
• The Plan is light on landscape values • Add principle – healthy tree collection • Add principle – creating mystery • Add principle – heritage, harmony, mystery • Add values – value landscape and aesthetics of gardens • Botanical and heritage aspects of equal importance • **Values** [what we regard as important] • A major community open space, a green area and refuge in a dense suburban setting • An area for passive, and low level unorganised active, recreation • A site of visual diversity • A site of heritage significance • A welcoming setting; a site allowing reasonably unrestricted and therefore equitable access • A site of local botanical interest at and limited botanical/scientific significance • A community resource for diverse activities, recreational social and cultural • a resource for community education • **Principles** [broadly, what we want to achieve] • Maintain as public open space in perpetuity • Maintain character and cultural heritage significance, while accepting the inevitability of continuing changes in detail • Ensure modifications to hard structures	• Additional principles and values added to future directions plan to reflect comments (highlighted in green) • Principle of healthy tree collection already present

COMMUNITY COMMENTS	HOW COUNCIL RESPONDED TO ISSUE
reflect and integrate with cultural value principles, and with existing structures in design, style, colours, materials etc • Maintain and increase botanical diversity • Maintain a healthy tree collection, with a spread of tree ages, through appropriate culling and replanting, recognizing visual values, climatic constraints and the sequence of tree growth and maturation. • Recognise and accommodate climatic constraints (particularly water availability) and adapt to them through plant content management, and appropriate engineering interventions • Maintain visual diversity and the concept of a matrix of visual precincts • Minimise or eliminate visually inappropriate/incongruous elements • Provide for passive recreation through appropriate but discreet facilities (lawn areas, discreetly placed rubbish bins etc.), and for limited, unorganised active recreation (open grass areas for play, a path network etc.) • Foster community and cultural activities, including education activities • Manage cultural resource conflicts through appropriate events management (public and private), major events booking systems etc. • Provide a high quality setting through attention to detail in garden, lawn and facility maintenance. • Maintain an appropriate level of security, particularly through night-time Garden closures.	
Signage	
• Interpretive signage. Letting landscape speak and excite people. Needs to be an element of curiosity and discovery rather than giving a whole lot of information • Provide information in leaflets in conservatory rather than interpretive signs • Install unobtrusive plant labels. Build on	• Signage has minimal reference in Plan. It is referred to in plant labels and interpretive signs for indigenous garden p –17. Label for stone fountain p 32 is also referred to in Plan • A ‘draft’ signage strategy is

COMMUNITY COMMENTS	HOW COUNCIL RESPONDED TO ISSUE
existing style not new • Plants move and change so signs need to respond to this and be easy to move • Plant labels must only be scientific and date of planting • One information sign at conservatory (perhaps) that is directional • Interpretive signage – inflexible, obtrusive. Does not allow for evolution of planting and interrupting to experience of gardens • Regulatory signs – other ways eg web site etc. They do not work • What is the difference between a park and botanical gardens? (This could be highlighted to encourage better behaviour eg kids not running through garden beds) • Do not like regulatory signs. If we must have them, should be a little board near entrance • Signs such as 'this is a neighbourhood garden. A place of rest and contemplation. Please enter in the spirit of community and as a special place to enjoy." • Signs outside gardens – not in • Promote educational uses of plants i.e. understand the life cycle of bulbs, organise school seed collecting for propagation.	under development for open space, including the Botanical Gardens, and the community consultation provided an opportunity to obtain feedback from the community about signage in open space and the gardens • In summary, the community wanted limited signs to obtain enough information without domination in the landscape • The public want minimal 'do not' type signs • The gardeners were approached to provide information on most requested subjects. Certain plant species were the most asked subject and plant labels are proposed to be developed for the most requested plants • Discussions that some historical information and regulatory signage could be placed on sign outside gardens near Tennyson/Dickens Street entrance seemed to meet need of most people to balance needs and minimal signs, whilst having some information • Leaflets could provide effective means to distribute information from conservatory. • Signage to be addressed with furniture and signage budget
Eco centre	
• Entrance from Herbert Street to Eco centre – need to break down fence and have steps to building – make more welcoming. • Eco centre looks uncared for - needs to be made more inviting, paint inside	• The Eco centre was not a focused part of the Plan, apart form direction for planting in this area e.g opportunity on p. 8 • 'Fit for purpose' and presentation of Eco centre was

COMMUNITY COMMENTS	HOW COUNCIL RESPONDED TO ISSUE
• Eco centre should be relocated elsewhere eg West Beach and given to Friends of Gardens etc • Eco centre needs to be improved inside and marketed. Needs to bring the public in. Currently crowded and intimidating – hard to know what's going on. Clean up and market renewables better. Could house environment officer and community volunteers. It is a wasted opportunity • Eco centre – not good use of 'fit' with gardens. Poor presentation. Poor colours. Kitchen looks like bachelor pad • Redevelop the Eco centre, needs more use, more youngsters	not part of this project. This feedback has been given to the relevant department.
Management and Security of Gardens	
• Need more maintenance staff • Adhoc or continuous management? • Management should be in house not contract • Need a ranger to patrol over weekends – particularly with wedding • Security a massive issue • Gates often left opened • Gardens not for commercial use. Ceremonies acceptable but people also use as a reception eg loud music, rubbish, generators etc • Weddings – must be policed otherwise no point having regulations • Charge users to have someone come in at designated time to clean up, move on and lock up after ceremonies • Free parking an issue at night. People park around there at night to 'go out' and come back at 3am to collect cars – loud and noisy • Could the parking have restrictions from 9pm to midnight like elsewhere? • Like wedding and unobtrusive music	• Discussions held with meeting and events regarding weddings • Bookings are only taken for ceremony NOT reception • Alcohol, whilst not prohibited, is not promoted (if asked directly, client told one glass of champagne in plastic cup acceptable with all rubbish carried out) • No amplification permitted • Cost has recently been increased, it is less than that charged for Royal Melbourne Botanical Gardens but deemed not of same size and significance as Melbourne. Cost to have someone present after each wedding possible, but would result in significant cost increases. • It appears that many of the issues raised, e.g loud music is a result of non-permitted activity. This is an issue for local laws and reflects ability or otherwise of local laws to patrol the park each weekend • Resident that raised parking issue advised to contact assist to ensure an official 'pathway

COMMUNITY COMMENTS	HOW COUNCIL RESPONDED TO ISSUE
	request' recorded and appropriate area could respond to issue
Fencing and Gates	
• Fencing could be pulled in from edge to soften – random 'breaks' rather than continuos fence • Look at artist who created gates at Veg Out • Protect community assets – need new fence and improved security	• New fencing is part of five year plan for capital works in the botanical gardens • Style to be similar to Royal Melbourne Botanical Gardens, but higher
Plant / Visual comments	
• Future directions Plan needs to be scientific based. Important that experts direct development, not just general community. The answer from community depends on way the question is asked. • The garden has rhythm and structure in layout and the rest is mystery. We have a tendency to "be informed" • Plan missed on landscape aesthetics • Quality of grass impacts on user experience • Make aesthetics a priority • Tension between dry and irrigation. Do we irrigate and keep collection of plants or go dry? • Need to develop plant collection or go dry • Fantastic to build on role of botanic gardens – scientific • What's happening with the dead palm? Will it be replaced? • Could relocate 'cockatoo' nest (currently in dead palm) elsewhere in gardens • More Autumn colour • Cherry blossoms from the Dickens St end have died off. • No more silly gums near grassy spots or playgrounds. They are dangerous and ugly and labour intensive Some flowering trees – like Jacaranda • Promote more colourful planting in the Playground area. Lady suggested Lilacs, European cottage planting, winter bulbs • Promote pocketing of colour throughout the gardens as areas of interest. • Plant more edible plants, kale, parsley, herbs and promote harvest	• The future direction plan is a strategic document. Input from the community ensures the document is aligned with community values. • Structure, rhythm and mystery to be retained • Landscape aesthetics picked up in values and principles • Grass is subject to water access. The IMAP water plan recommends sewer mining to secure long term non potable water use – but this comes at a significant expense and needs to be considered by Council in context of other organisational priorities. • Irrigation shall be retained, as needs of many suggested plant species higher than average rainfall. However, with climate change, the need to move away from plants requiring greater than 800mm a year is recommended • The future direction plan recommends plant selection based on lower water needs • Dead palm being tested for Fusarium wilt • Retention of Cockatoo hollow to be considered when dead palm removed, so habitat retained • Autumn colour shall be provided in selection of some new specimen trees

COMMUNITY COMMENTS	HOW COUNCIL RESPONDED TO ISSUE
• St Kilda Botanical Gardens is not a private garden but a place people consider their own – a third space • Pond – need plants to improve water quality. Lilies and iris would be good. Keep the 'bog' stream/garden • Would • Would like to see planting on Herbert Street boundary • Agree with new native garden near playground, Tennyson Street boundary • If gardens don't look loved they wont be cared for • Indigenous garden needs more care. Needs regular replanting and care. More Eucalypts needed • Showcase Australian 'cottage garden' plant in centre piece of garden eg correas	• Gums a personal preference – some people love them and other do not. Plan recommends use of some *Corymbia* cultivars for colour and size • Edible plants could be incorporated into Eco centre • The plan addresses colour with many suggested 'opportunities' such as planting Brachychiton and iris in pond • Pond to be redesigned in 2009/10 • Issue of increased maintenance in indigenous garden passed onto gardeners Australian plants such as kangaroo paws have been planted in central core. A mix of suitable low water need plants shall continue
General Comments	
• Ensure gardens do not become 'dumping ground' for art consultancy • Ensure 'cultural vitality' does not become a dumping ground for art. Art should be ephemeral • Heritage and innovation – tension there • Build partnership with friends group. Not as well developed as it could be • People come to the gardens for different experience – this has huge merit on its own • Place for everyone – it meets those needs • + a partner statue for the fountain. Think he needs a nice woman to accompany him + a dog • Seating made of recycled wood • Some water fountains please. Like the one in Glen Eira rd on the corner... in fact they have the same ones with a doggy bowl at the bottom which are even better. • Sprinklers were watering the paths instead of the garden beds – for years. • Introduce Coffee vans located near the glasshouses on weekends. • Introduce more temporary art, music and theatre in the gardens.	• Plan does not recommend art installations • Paint the garden a good example of appropriate art in the garden (temporary) • Plan intends to retain heritage whilst looking to future, as all Botanical gardens do – they are not stagnant but evolving • Friends group now has a main contact in parks and open space to raise issues with • Garden to continue to be a place for everyone • Unlikely that a second sculpture shall be placed in pond – not recommended in plan • Seating to be fit for purpose. However, possible for one of recycled timber seats, particularly as part of future play upgrade • Free water recommended in principles and values • Coffee providers a short stroll down Blessington Street

COMMUNITY COMMENTS	HOW COUNCIL RESPONDED TO ISSUE
• Focus on children specific temporary art, music and theatre. • Discussions about exercise work stations into the gardens, not obvious pieces. • Promote more tai chi. • Promote local school involvement in the gardens. • Have more school groups with specific education of gardens, ecocentre. • Tap into retirees in the area teaching children their horticultural experience and knowledge. • Have wandering minstrels. • A young boy walks his duck at the park in the mornings. A short film of his adventures could promote the gardens. He's about 9 and his name was Giovanni from memory. • Set up a coffee area near the glass houses • Set up a feed the parrots area. • Promote the gardens by wandering reporters. • Provide tables for lunching at. None in gardens currently • Seats best placed opposite each other to invite social interaction	• Issue of temporary art and music to be referred to festivals and events for consideration • Exercise stations are considered an active form of recreation and are a permanent fixture. This type of fixture is best placed in open space other than a heritage garden. • Eco centre to be provided with community feedback and request for more school involvement • Feeding of wild birds not recommended for health of birds • Picnic tables not recommended for botanical gardens – byo picnic blankets
Summary	
• In general, the public were happy with the future directions plan and understood the proposed tree removal and replacement. The overwhelming feedback related to these two issues: • Need more staff to ensure the gardens are maintained to a high standard • Security. Currently inadequate, people very concerned about the lack of gate locking and night time access	• Security partly addressed in Plan by recommendation for improved fencing • Details of times/dates when gates not locked being collated to provide to building maintenance to follow up with contractors • Service standards will be considered as part of Parks Services Contract Review

Future Directions Plan