

KARWARRA AUSTRALIAN PLANT GARDEN

MASTER AND MANAGEMENT PLANS

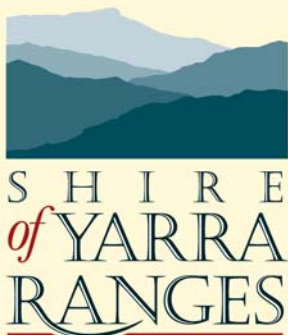
VOLUME 1: INTRODUCTION AND MASTER PLAN

DRAFT

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KARWARRA GARDEN MISSION

“To use Australian plants in a beautiful garden that inspires and educates”

EXECUTIVE SUMMARY

A Master Plan and Management Plan have been prepared to guide the future directions of Karwarra Australian Plant Garden in Kalorama. This report has been prepared on behalf of the Shire of Yarra Ranges in response to the need to form a single, consistent vision for the garden and operational guidelines to define its management. As an Australian native plant garden Karwarra is unique within both the Dandenongs and greater Melbourne Region. This Master Plan and Management Plan document will guide Karwarra's future and role as a beautiful Australian plant garden which inspires and educates.

This report is broken into a number of volumes with the Master Plan and Management Plan forming the first two of these. Additional volumes will address interpretation and marketing and it is anticipated that as future documents are produced they will form new volumes as part of a cohesive management report.

It is vital that these reports are considered in unity as they form different parts of the one document rather than individual entities. The report is important in that it provides a coherent vision for the garden, and makes recommendations on management procedures to allow this vision to be achieved. The four plans produced at this stage should be considered as a single working document in conjunction with the *Arboricultural Report & Management Plan* (2004) carried out by Tree Dimensions and any reports produced as a result of Master Plan recommendations.

In the development of this report the contribution of a number of interested parties was sought. These included stakeholders, members of the Karwarra Garden Master Plan Steering Committee and the general public through a series of consultation meetings and individual interviews. In addition to this a thorough site analysis program was undertaken.

The first of the consultation processes involved the Steering Committee, consultants and members of the Karwarra Garden Advisory Committee and was followed by a community and stakeholder meeting. Both meetings explored various opportunities for Karwarra and established a desired outcome for the garden. Outcomes of the two meetings were generally consistent; however there was some difference in the focus of the two groups. Similar views were raised during individual interviews with stakeholders and other interested parties.

Additional meetings were held with the Karwarra Garden Master Plan Steering Committee. During these meetings the Steering Committee provided additional information as required, feed back on the findings of the site analysis program and inputs to the development of the Master Plan.

The main objective of the Master and Management Plans is the revitalisation of Karwarra Garden and the fulfilment of the garden's mission statement. That is, allowing Karwarra to become a beautiful garden which inspires and educates. The recommendations of the Master Plan are summarised in graphic form in the Master Plan (05-152 MP). They include:

- Redevelopment of the entrance from the Mt Dandenong Tourist Road. This redevelopment will make a strong visual statement through use of striking and

visually attractive gardens and signage. By redeveloping this entrance as a distinctive feature on the Mt. Dandenong Tourist Road, Karwarra's public profile will be increased and problems with site identification and accessibility reduced.

- Upgrading the Karwarra Garden entrance from Kalorama Memorial Reserve. The recently redesigned entrance area makes a positive contribution to Karwarra. It is proposed that this be augmented with visually attractive display gardens, strong interpretative signage and an attractive new fence and gate. This will create a stronger entry statement with a clear sense of arrival which encourages the dispersal of visitors through the remainder of the site.
- Redevelopment of the Central Lawn and Pond area. This area will be enclosed by garden bed plantings to create a more intimate and clearly defined. The pond will be enlarged and defined to increase its impact. The existing lookout tower will be removed, although the large tree stump will be retained. A walkway, modern shelter and gravel beach will be added to the feature pond which will be connected, through the addition of a new pond, to the existing fern gully pond system.
- The surrounds of the Horticultural Hall will be redeveloped to improve the integration of the building with its setting and to provide greater connection to the wider garden. This will include the construction of a terrace on the eastern side of the hall to encourage ease of movement between the hall and garden as well as creating an inviting space for people to relax and passively enjoy the view of Karwarra. Generously proportioned pergolas are to be added at the Hall's two main entrances. These will provide clear definition of entry points, tie the hall into the garden and provide a welcoming entrance.
- Additional Node Points are proposed to be introduced throughout the garden. These will be areas that encourage visitors to slow and stop, and will form spaces suitable for use by classes and school groups.
- The existing path system will be simplified to make the garden easier to navigate and to remove 'dead' areas impede circulation.
- Vegetation will be carefully managed to enhance views into, out of and within the garden.
- Standard construction details and a materials palette will be prepared in order to give the garden greater consistency.
- Older installations will be repaired or replaced to meet current safety standards and the new Karwarra standard details.
- Installations which are in disrepair or not consistent with the Master Plan will be removed. This includes such elements as the pond system east of the hall and the electrical pole adjacent to the lawn area.
- Existing signage will be replaced to permit the development of a standard and distinctive Karwarra signage style with greater impact and aesthetic appeal. This will be gradually implemented throughout the garden.
- Planting areas will be rejuvenated where required and new planting design will take place with respect to the original Kath Deery design, while also being at the cutting edge of Australian native planting design.
- The Nursery will be revitalised. This process will include the establishment of relationships with other local Australian native nurseries, the cessation of commercial propagation and growing-on programs and the redevelopment of the nursery area to have greater impact and be more aesthetically pleasing.

The Management Plan was developed as an adjunct to the Master Plan and details management regimes which will enable Karwarra to fulfil its vision. The primary aim of the management plan is to present a well maintained and managed garden with the capability to attract and educate visitors. Recommendations of the Management Plan include:

- Implementation of a plant collection policy and development of management plans for each of the collections
- Development of a Fire Management Program to aid in the prevention of fire and the mitigation of its effects
- Development of an Emergency Wildfire Management Plan detailing procedures for total fire ban days and response strategies to wildfire outbreak
- Development of a weed management program to address control of existing weed populations and prevention of the establishment of new populations. This also includes the development of a Weed Risk Assessment Procedure (WRAP)
- Development of a Maintenance Plan
- Implementation of an interpretation and education policy to guide the garden's provision of information and its relationship with educational institutions
- Implementation of a Marketing Plan

To facilitate the implementation of the Master and Management Plans a schedule of works and break down of costs have been prepared. As large capital works grants for Karwarra are unlikely, this schedule of works will provide the basis for development of a staged works program that can be achieved through incremental improvements over time, while allowing Karwarra to take full advantage of any funding it may receive.

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PROJECT TEAM AND ACKNOWLEDGMENTS

The Master Plan and Management Plan has been prepared with the assistance and contributions of many individuals, not least of these being the many stakeholders and members of the community who talked to members of the project team, attended the consultation meeting and provided feedback. To all we extend our thanks.

PROJECT TEAM

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1.0 INTRODUCTION

1.1 THE BRIEF

Established in 1965, Karwarra Australian Plant Garden in Kalorama has been owned and managed by the Shire of Yarra Ranges (originally the Shire of Lillydale) since 1989, with the shire recognising the importance of Karwarra as a botanical resource showcasing Australian Plants.

In recent years the development of the garden has been ad hoc, occurring as opportunities arose and funds became available. Significant areas of the garden have become over mature and are in need of renewal. Community awareness of the garden is low and resourcing is poor.

As a result the Shire of Yarra Ranges commissioned John Patrick Pty Ltd in October 2005 to prepare a Master Plan and Management Plan to both document the existing resources of the site and establish its future direction.

This study, the *Karwarra Australian Plant Garden Master and Management Plan*, is the result of an extensive program of meetings, consultation and site analysis. Together with establishment of policies and programs for works it is published as working documents which provide a future direction for the garden and a framework for implementation.

1.2 BACKGROUND

The site which now includes Karwarra was originally the selection of Lillydale surveyor Thomas Hand whose homestead “Mountain Grange” (later destroyed by fire) was built on the approximate site of the current Karwarra Hall c.1880’s. The property continued to be farmed by the family until 1939 when the land was sold to the Shire of Lillydale. The Kalorama Memorial Reserve was then established on the previous Hand property as a recreation facility and memorial to World War Two soldiers. A further two hectares of the site was subdivided by the council into two blocks and sold.

Following requests from the Mt Dandenong Horticultural Society these two hectares were re-purchased for the development of an Australian plant garden in 1965. This land was then leased to the society who had cleared and fenced it and commenced planting by 1968. The garden was officially opened in 1971 following the construction of the first stage of the Karwarra Hall.

A number of prominent designers and horticulturalists were involved in the design and management of Karwarra. The original design of the garden was set out by Ellis Stones in the 1960’s and although very little of this was implemented the garden still features an example of his work located to the east of the hall.

Much of the design and layout of Karwarra as it exists today was the work of Kath Deery who oversaw the extensive development of the garden between 1978 and 1984. Her concept for the garden addressed the eastern, southern and western portions of the site overlooking the Silvan Reservoir and entailed a system of creeks and pools flowing towards the reservoir with narrow, intimate paths and views to the wider landscape.

During this stage the maintenance of the garden was undertaken by the Mt Dandenong Horticultural Society who still maintained the lease of the site.

The lease of the site was resumed by the Shire of Lillydale in 1989 when a full-time gardener was appointed for the first time. The current curator, Marilyn Gray, was appointed in 1992. Following the amalgamation of the Shire of Lillydale into the wider Shire of Yarra Ranges in 1994 the garden continued to be owned and managed by the Shire with council funding being supplemented by nursery sales and revenue from a gate fee. Karwarra has a permanent tenancy arrangement with the Mt Dandenong Horticultural Society for use of the hall.

In recent years a number of features and additions have been made to the garden, including the re-location of the entrance and construction of the gate house to the northern end of the car park, the redevelopment of Kalorama Memorial Reserve and the construction of a pond (by Robert Boyle) and lookout at the centre of the site.

Since 2001 Karwarra has seen some growth in both visitor numbers and revenue with a peak in visitor numbers in the year ending July 2004. However as part of a general trend across the region there has been some drop in visitor numbers within the last twelve to eighteen months. With an annual visitation of 4,337 in the year ending July 2005 Karwarra has a low market share of potential visitors compared to other gardens in the region.

Karwarra's staff and some capital funding are supplied by the Shire of Yarra Ranges; however Karwarra is required to self-fund operational budgets. This is currently achieved through gate takings, nursery sales and hire of the hall, as well as through a number of other revenue sources Karwarra has established. Occasional grants for capital works are received from external sources such as local horticultural societies; however these are not common.

It is unlikely that a large capital funds injection will be available to Karwarra in the near future from either the Shire or other sources. Karwarra is ineligible for many capital grants from authorities as it is not a national park or area of high conservation value and does not fall within the waterways jurisdiction. Some labour and funding may be available from the Shire of Yarra Ranges, but this is likely to be from within operational budgets and with capital works staged over time. Other available avenues for resources include philanthropic gestures, foundations and commercial interests.

The management of Karwarra currently rests with the Shire of Yarra Ranges with the day to day running of the garden being the responsibility of the garden's curator. In addition to the curator's full time position the garden has a rotation of Shire Apprentices for 7 months of the year and a 0.6 permanent part time position for a gardener.

Decision making at Karwarra rests with both the Shire of Yarra Ranges and the Karwarra Advisory Committee which includes representatives from the Shire, Community, Friends of Karwarra and the Mt Dandenong Horticultural Society. This Advisory committee approves all capital works and major modifications to the garden; however it has no official structure or decision making powers.

Traditional Owners

The Karwarra Garden Advisory Committee should explore and develop opportunities to involve the local Wurundjeri people, the traditional owners and custodians of this land, in any of the future developments of this garden.

1.3 LOCATION AND CONTEXT

Karwarra Australian Plant Garden is located on the Mt Dandenong Tourist Road in Kalorama, around 40km east of Melbourne. This road is a prominent tourist route and takes in other destinations such as the William Ricketts Sanctuary and Sky High Restaurant. While Karwarra backs directly onto this road, the entrance is via the Kalorama Memorial Reserve, behind which the garden is situated.

Karwarra is situated on the north-eastern face of Mt Dandenong and looks towards the Silvan Reservoir. As a consequence the site has many potential views; however vegetation growth since the garden's inception has obscured many of these original vistas. The garden is bounded on the north by residential properties and the east by the Mt Dandenong Tourist Road, with both of these boundaries being visually open, although access is restricted by a chain mesh fence. The southern and western site boundaries adjoin the Kalorama Memorial Reserve, with a screened car park to the west and a combination of tennis courts and bushland (May Moon Reserve) to the south.

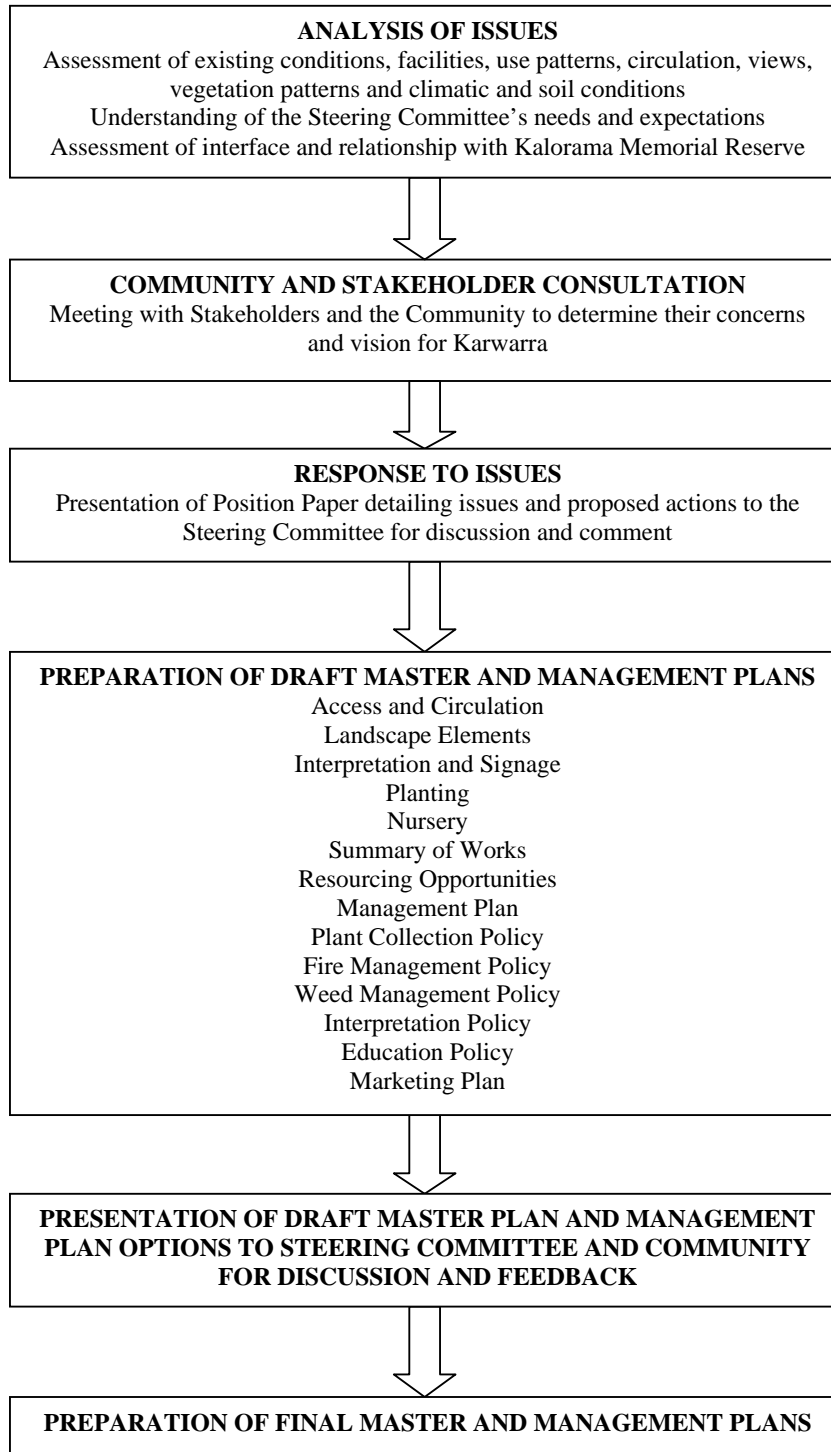
Despite the garden's public park and recreation zoning and its location within the Dandenong tourist region, visitor numbers and awareness of the site is low. Karwarra is unique as the only shire-owned garden in the region, and one of only a few gardens displaying Australian Native Plants in the Melbourne area. However, as Karwarra is under the jurisdiction of the Shire of Yarra Ranges it is currently excluded from the Parks Victoria network of Dandenong's Gardens, and as such from its marketing operations.

This also excludes the site from fully participating in the Parks Victoria network of primarily exotic European gardens in the region. Other public open space in the area includes the adjacent Kalorama Memorial Reserve and the Dandenong Ranges National Park.

2.0 THE STUDY

2.1 METHODOLOGY

This study is the result of an extensive consultation and site analysis program involving the Steering Committee, stakeholders and members of the general public. The methodology used to produce this report is illustrated graphically as follows:



2.2 COMMUNITY AND STAKE HOLDER CONSULTATIONS

In the preparation for the development of the Karwarra Australian Plant Garden Master and Management Plan a thorough community consultation process was undertaken to determine the views and desires of both key stakeholders and the general community. To this end two consultation processes were undertaken. The first of these, a strategic directions meeting, was held on Tuesday November 8th 2005, with contributions by the steering committee, the consultants and members of the Karwarra Garden Advisory Committee. The second consultation was aimed at gaining the input and views of stakeholders and the general community and was undertaken on Tuesday November 29th 2005. In addition to these meetings, interviews with relevant individuals were held to determine more specific information about the operations of Karwarra and its future directions.

The information below summarises the findings of the consultation process. A more detailed report is located at Appendix 1: Community and Stakeholder Consultation Process and Appendix 2: Stakeholder Interviews.

2.2.1 COMMON ISSUES

The two consultation meetings identified desired future directions for Karwarra as well as a number of issues to be addressed in order for the garden to develop in the future. While each meeting raised its own set of unique and important issues some of the issues were common to both consultation processes. Of the issues to be overcome the most pressing were the need to adequately resource Karwarra, to raise the awareness of the garden among the general public and to increase the visibility and impact of the site at the Mt Dandenong Tourist Road entry to the site. All three of these issues were raised by both groups.

Other issues raised included the need to develop policies on botanical and horticultural collections, education and interpretation; the potential for the nursery to be developed further; the need for updated infrastructure and facilities and the potential for the garden to host events. Both groups recognised the importance of these issues, however there was some difference in the emphasis of the two groups.

2.2.2 STEERING COMMITTEE ISSUES

While specific issues may have been touched upon during the stakeholder/community consultation they were primarily the focus of the steering committee. These issues included the lack of visitation, the need to improve garden presentation and the need for a viable and active friends organisation.

2.2.3 STAKEHOLDER/ COMMUNITY ISSUES

A number of unique issues were raised during the stakeholder/community consultation. These were networking opportunities (the only one of these issues considered in any detail by the steering committee), the lack of community involvement and dealing with the physical limitations of the site.

2.2.4 INDIVIDUAL INTERVIEWS

In the most part issues raised during individual interviews reflected those mentioned in the consultation process and could be grouped under similar headings. These included resourcing, increasing awareness, accessibility from the Mt Dandenong Tourist Road,

garden presentation, the friends organisation, networking opportunities and workplace structures. A full list of Individuals interviewed can be found at Appendix 2: Stakeholder Interviews.

2.3 PREVIOUS REPORTS

A number of previous reports on Karwarra have been prepared since the Shire of Yarra Ranges commenced operation of the site. Generally these reports have not provided feasible working documents due to a combination of lack of funding, aggressive and unrealistic timeframes, unrealistic/unattainable goals and a failure of reports to deliver on the outcomes expected by the Karwarra Garden Advisory Committee. Previous reports are as follows:

Management Plan (1995) – Developed by the curator Marilyn Gray. Implementation of the plan has been limited due to constraints in capital and operational budgets. The 2006 Management Plan will supersede this report.

Marketing Review (1999) – Written with the aim of developing appropriate marketing strategies and income streams for the garden. Implementation has been difficult due to aggressive timeframes. Some goals are still not met several years later. The 2006 Marketing Plan will govern the future marketing directions of the garden.

Future Directions Plan (2000) – Developed by Phil McCallum in consultation with stakeholders, garden managers and the Shire in order to establish a vision and objectives for the garden to be achieved by 2005. This report has not been matched by appropriate resourcing and many aims were unattainable within the timeframe and contained a degree of wishful thinking; the 2006 Master Plan would supersede this document.

Review of Planning and Operations (2001) – Developed by the Karwarra Garden Advisory Committee. Written to determine what actions were required to allow Karwarra to fulfil its mission statement; of these a Master Plan was recognised as being of top priority. Many of the proposals of the review are addressed within the Master Plan which will supersede this document.

Nursery Review (2002) – Developed by the Karwarra Garden Advisory Committee. This report addressed the feasibility and importance of the nursery and included recommendations for its management and layout. These recommendations have only been partially implemented, with the report's strong emphasis on the use of volunteers to co-ordinate and run the nursery not having been fulfilled. This document would be considered during any review of the nursery undertaken as a result of Master Plan recommendations.

Strategic Review (2002) – Developed by Australian Landscape Management. This report did not deliver on the outcomes expected by the Karwarra Garden Advisory Committee. The development of the Master and Management Plan was also a recommendation of the Strategic Review; however it is the only recommendation currently being implemented.

Arboricultural Report & Management Plan (2004) – Carried out by David Galway of Tree Dimensions. This report provides a detailed assessment of the trees within Karwarra as well as required management works and timeframes. A number of the

urgent recommendations have already been implemented; however additional works are still required and are to be carried out as part of the Master Plan.

In addition to these reports prepared on Karwarra a Master Plan for the Kalorama Memorial Reserve was also developed by Elizabeth Jacka in 2000, followed by an additional Master Plan by Australian Landscape Management in 2002. As part of Australian Landscape Management's Master Plan an Arboricultural Report was produced addressing the Pines (*Pinus radiata*) at the entrance to Kalorama Memorial Reserve. The report provided three options from partial to complete tree removal. The Kalorama Memorial Reserve Master Plan has been partially implemented, although proposed tree removal has been met with some opposition from local residents and has not taken place.

3.0 STRATEGIC CONTEXT

3.1 OVERVIEW

Karwarra Australian Plant Garden is a public reserve owned and managed by the Shire of Yarra Ranges. The site is affected by a number of policies and council controls with those affecting the Master Plan and Management Plan being outlined below.

3.2 MELBOURNE 2030

Melbourne 2030 – Planning for Sustainable Growth is a major strategic framework planning document released by the State Government in October 2002. It outlines nine key directions for managing metropolitan growth over the next 30 years including the accommodation of up to 1 million additional people.

As part of this planning initiative the Shire of Yarra Ranges has been earmarked for retention as a green wedge to be protected from uncontrolled growth and development. This means that local population growth should not increase dramatically, putting pressure on current facilities (such as Karwarra). However, the region's environmental value has been identified and as the inner city's population continues to expand greater importance will be placed on the tourism value of the Shire's parks and gardens including Karwarra.

3.3 SHIRE OF YARRA RANGES 2020 VISION

The *Shire of Yarra Ranges 2020 Vision* was developed in 1999 and has recently been reviewed. This document aims to present a shared vision for the Shire which is supported by council through its allocation of resources in the annual review of the Corporate Plan. While the original document concentrated on the natural environment, the review brings the community into stronger focus.

The document *Our Vision – Yarra Ranges in 2020* provides an overview to the key themes of the *Vision 2020* and succinctly states the Shire of Yarra Ranges' aspirations and aims. A number of themes are relevant to Karwarra and provide the garden with an opportunity to tap into shire resourcing by meeting Vision 2020 aims.

Key themes of relevance to Karwarra include:

Volunteering

“Volunteering is strong and many participate as volunteers in their local community. A fleet of people have taken on the responsibility of protecting the integrity of either the native bushlands and forests, waterways, the townships and the native and European gardens of the hills”

This theme is relevant to the Friends of Karwarra and the potential they have to take on a greater responsibility for the maintenance, marketing and other aspects of the garden. Of special interest is the reference in the document to the “native...gardens of the hills”, a specific reference to Karwarra as the only garden which meets this description.

It should also be noted that successful use of volunteers in the management of Karwarra is dependant upon an effective management structure.

Healthy and Active

“The community is healthy and active. Its members participate regularly in a range of team and individual recreation activities. A huge variety of active and passive recreation opportunities are available.”...“It is a model for healthy living, where quality leisure and recreational opportunities, together with the environment and natural heritage, encourage a healthy and active lifestyle.”

Karwarra can contribute to this vision through its provision of a unique garden setting providing opportunities for passive recreation activities within the natural environment.

Life Long Learning

“The Community has embraced the concept of ‘life long learning’, and Yarra Ranges is recognised as a ‘learning community’. Learning, in its widest sense, is valued as is the ability of its various learning institutions to meet the needs of this local community and economy.”

This fits into Karwarra’s aim to become a valuable and respected education facility. This may be through relationships with schools at all levels as well as through the use of the Hall as a venue for various classes. Coupled with this is Karwarra’s potential to link both the aims of ‘Life Long Learning’ with that of respecting and preserving the natural environment.

Environment

“It is a model for those who want to show the utmost respect for the environment.”...“Above all else, it is a model of how a community can live, work and play in harmony with the environment”

Karwarra as an Australian plant garden fits this description, and has the potential to provide information and education on both native Australian and locally indigenous plants and sustainable horticultural practices. It also has the potential to provide an environmentally sensitive passive recreation facility.

Visitors

“...it is a model of how a community can live, work and play in harmony with the environment. This is its greatest attraction. This is what draws millions of visitors every year...They come because they are welcome. They come because Yarra Ranges is accessible, information is easily found and the range of experiences is so diverse. They come because it is so beautiful”

Karwarra has the potential to draw visitors to the region, however for the garden to be fully accessible and to fulfill its educational role a number of modifications will need to be made including the development of improved access and interpretative signage.

3.4 PLANNING CONTROLS

Both Karwarra and the Kalorama Memorial Reserve are included in a Public Park and Recreation Zone (PPRZ) under the Shire of Yarra Ranges Planning Scheme with

Karwarra also being affected by the Erosion Management, Wildfire Management and Significant Landscape Overlays.

3.4.1 ZONING

Public Park and Recreation Zone (PPRZ - Clause 36.02)

The purpose of the Public Park and Recreation Zone includes:

- To recognise areas for public recreation and open space
- To protect and conserve areas of significance where appropriate
- To provide for commercial uses where appropriate

A permit is required to construct a building or carry out works. However a large number of works are exempt from this requirement including most of those routinely associated with the maintenance of a public park. This exemption relates to pathways, seating, picnic tables, drinking taps, shelters, barbecues, rubbish bins, security lighting, irrigation, drainage, planting or landscaping and fencing less than 1 metre in height.

Advertising signs are subject to the requirements of Category 4 (Clause 52.05) which applies to sensitive areas where strong amenity controls are required and maximum limitation applies.

3.4.2 OVERLAYS

Erosion Management Overlay (EMO - Clause 44.01)

A narrow strip of land adjacent to Mt Dandenong Tourist Road at the site's east is affected by this control. The purpose of the Erosion Management Overlay is:

- To protect areas prone to erosion, landslide or other land degradation processes, by minimising land disturbance and inappropriate development

A permit is required to construct a building or carry out works as well as to remove, destroy or lop any vegetation. However a number of situations are exempt from this requirement including if the vegetation poses an immediate threat to people or property and as required for bushfire control.

Wildfire Management Overlay (WMO - Clause 44.06)

The purpose of the Wildfire Management Overlay is:

- To identify areas where the intensity of wildfire is significant and likely to pose a threat to life and property
- To ensure that development which is likely to increase the number of people in the overlay area:
 - Satisfies the specified fire protection objectives
 - Does not significantly increase the threat to life and surrounding property from wildfire
- To detail the minimum fire protection outcomes that will assist to protect life and property from the threat of wildfire

A permit is required to construct a building or carry out works associated with a number of uses including an education centre, retail premises and place of assembly. Exemptions apply under the following conditions:

- A building or works consistent with a fire risk management plan, where the fire risk management plan has been prepared to the requirements of the relevant fire

authority and has been submitted to, and is to the satisfaction of, the responsible authority prior to the commencement of building or works

- An alteration or extension to an existing building used for accommodation where the extension represents less than 50% of the floor area of the existing building
- A building or works with a floor area of less than 100 square metres ancillary to a dwelling not used for accommodation

Significant Landscape Overlay – Schedule 9 (SL09 - Clause 42.03)

The purpose of the Significant Landscape Overlay is:

- To identify significant landscapes
- To conserve and enhance the character of significant landscapes

A permit is required to construct a building, carry out works or construct a fence as specified in the schedule to this overlay. A permit is also required to destroy, remove or lop any existing native vegetation and any exotic vegetation over 5 metres in height unless within 2 metres of a legally established building. Exceptions apply for the same situations as those listed under the Erosion Management Overlay including to the removal of ground fuel within 30m of a building.

3.5 SHIRE OF YARRA RANGES POLICIES

3.5.1 CODE OF ENVIRONMENTAL PRACTICE FOR WORKS ON COUNCIL CONTROLLED LAND

The aim of this policy is towards maintaining and enhancing natural values by identifying and responding to environmental issues during design, construction and maintenance works on council controlled land. This policy is split into three sections as detailed below.

Part A – Policy for the Minimisation of Environmental Impacts of Works

This policy requires that all proposed works on council land be subject to an environmental impact assessment process and a ‘statement of compliance’ which responds to any environmental issues identified. The policy encourages the use of ‘Best Practice Operating Principles’ and aims to minimise and remedy any adverse environmental or other impacts caused by development works.

An exemption applies for emergency works, however an environmental impact assessment is still required at a suitable time after the event in order to identify any remedial works required.

The policy also determines that unless otherwise required by either council policy or the needs of a special landscape character, indigenous vegetation is to be used in rehabilitation works. The specific landscape character of the native-exotic section of Karwarra would exempt it from this requirement.

Part B – Best Practice Operating Principles for Planning, Design, Construction and Maintenance of Works

This document lists a number of aims and lists reasons, actions and best practices to ensure these aims are met. The aims of the best practice document are to:

- Promote the environmental sustainability and safe use of the land
- Minimise the risk and impact from fire

- Protect and maintain indigenous vegetation communities and wildlife habitats
- Protect threatened, significant native and exotic species of flora and fauna (as identified in the Yarra Ranges Roadsides Conservation Inventory, and the Flora and Fauna Guarantee Act)
- Identify, maintain wildlife habitat and corridors for indigenous fauna
- Minimise opportunities for new habitats for pest plants and animals
- Prevent further land degradation and improve water quality
- Control and prevent the spread of weeds and soil borne diseases
- Maintain the visual amenity and landscape quality of the site
- Protect the cultural and heritage values, and important trees, both indigenous and exotic

Part C – Environmental Impact Assessment Checklist

Part C provides the Environmental Impact Assessment Checklist which looks at factors such as:

- The type and location of works
- Whether the works will impact any ‘off site’ properties
- Whether works will impact upon any site of cultural, heritage or landscape significance
- Whether works require machinery
- Whether works will cause soil disturbance
- Whether works will impact upon existing vegetation
- Whether works will impact upon existing fauna
- Whether works will impact upon water quality
- Vegetation and wildlife habitat types

3.5.2 SUSTAINABILITY FRAMEWORK

The Shire of Yarra Ranges Sustainability Framework underpins the 2020 Vision. This framework follows four principles; long term rather than short term actions; strengthening communities, developing local solutions in response to wider issues, and working together.

The implementation of Karwarra’s Master and Management Plans will work into the shire’s sustainability framework, focusing on long term outcomes rather than a “quick-fix” and emphasising planned actions in order to achieve results.

3.5.3 WEED MANAGEMENT STRATEGY

The Shire’s *Weed Management Strategy* is to aid in the management and control of environmental weeds and is split into two documents the *Strategic Context* and the *Strategic Plan*. The two documents provide a systematic approach to weed management which targets weeds through a site rather than species based approach. As part of this the Dandenongs have been highlighted as an area of significant concern due to high levels of weed infestation.

The Documents present the key to tackling the weed problem as preventing new outbreaks, containing and reducing current infestations, and all stakeholders fulfilling their responsibilities where it comes to weed control. In the last of these aims Karwarra has the potential to play a key role in the education of the general public, especially local residents, in the importance of weed control on their own properties. However

this potential can only be fulfilled if Karwarra is exemplary in its own approach to weed control.

The *Strategic Context* focuses on general issues and the prioritising of weed control works across the shire as a whole. Due to Karwarra's relatively weed free situation it is unlikely under the current situation that it would receive additional Shire of Yarra Ranges funding to tackle weed control. Therefore it is important that weed control efforts are managed using internal garden resources and that they occur with the aim of over time reducing the levels of resourcing required for weed control.

The *Strategic Plan* is the working document for the *Weed Management Strategy* and covers six goals based on the *Victorian Pest Management Framework* and *National Weeds Strategy* with a list of actions set to achieve these goals. It is this document, and the goals, objectives, strategies and actions set out in it which forms the basis for Karwarra Garden's Weed Control Guidelines.

3.5.4 FIRE MANAGEMENT PROGRAM AND FIRE PREVENTION STRATEGY

The aim of the Shire's *Fire Management Program* is to minimise the occurrence and adverse effect of fire on the community. To this end the program covers a combination of long and short term fire reduction measures including maintenance, community awareness and infrastructure.

This document is reviewed annually in conjunction with the *Fire Prevention Strategy*. The *Fire Prevention Strategy* lists strategies and actions to both prevent fire and minimise its impact for various environments. Sections relevant to Karwarra include 'Places of Assembly and Institutions' for the Hall and 'Natural' for the rest of the site.

4.0 SITE ANALYSIS

4.1 SITE INVENTORY

Karwarra Garden covers an area of two hectares of land sloping to the east and north-east. Landscaped gardens cover approximately 1.2ha while the remaining 0.8ha is composed of indigenous grasses and herbs and regenerating bush land. Over 60% of the site is dominated by the canopy of tall trees typical of the local moist sclerophyll vegetation community – Messmate (*Eucalyptus obliqua*), Narrow-leaved Peppermint (*E. radiata*), Mountain Grey Gum (*E. cypellocarpa*) and Blackwood Wattle (*Acacia melanoxylon*). The soil is deep, red volcanic clay, not overly endowed with nutrients. It has excellent drainage, allowing good root development. It has an average rainfall of 1200mm with mild summers and relatively frost free winters.

While climatically the site has many positive attributes there is a lack of interpretation on the local nature of the site and a general lack of sunlight due to an upper canopy of overgrown plants which restrict light and air movement throughout the site.

4.2 VEGETATION

Eight different vegetation zones based on the nature and layering of plantings were identified on the Karwarra site. Of these zones, six are comprised of exotic native vegetation with various levels of canopy closure and shrub layering. The remaining two zones are comprised of remnant indigenous vegetation.

All vegetation zones have distinct characteristics which are identified on the Site Analysis drawing 05-152 SS VEG.

General findings about the planting at Karwarra:

- Karwarra contains a significant and unique collection of Australian native plants
- Certain genera such as *Telopea*, *Boronia* and *Thomasia* are well represented and form the basis of a unique collection of plants
- Seasonal highlights and spectacular flowering displays such as *Orthrosanthus*, *Boronia* and *Telopea* are features of Karwarra
- Some excellent specimens of indigenous trees and unique Australian native plants remain in the site
- A large percentage of the shrub layer is over-mature and requires maintenance or replacement
- The indigenous areas lack appeal
- There is a general lack of maintenance across the site
- There is a lack of contrast within the planting
- There is a general lack of planting highlights
- Large areas of the site feel shady and over-mature
- There is a lack of documentation of collections
- Specimen displays are very out dated and not effective

4.3 LANDSCAPE ELEMENTS AND FACILITIES

While Karwarra offers a unique landscape opportunity much of the infrastructure and many of the landscape features are tired and run down.

- The new entrance creates a sense of welcome and life
- There are examples of Ellis Stones, Kathleen Deery and Robert Boyle's work
- Many of the more recent landscape installations lack a sense of unity and design (for example the new pond and lookout do not have a relationship)
- The new timber lookout fails to meet correct standards of construction and appropriate safety
- Water features on the site lack visual connection and many of the ponds do not hold water
- There is a general lack of landscape features for people to experience
- There is a poor interface between the main building facility and the landscape
- The indigenous zones lack landscape appeal
- Seats are generally poorly placed
- There is a lack of visitor amenity and those that do exist, with the exception of one toilet, are old and require replacement
- There is a general lack of continuity in landscape elements across the garden
- Pathways are often difficult to follow and there is no logical way to move around the site
- There is very little effective interpretation on the site.
- Many of the landscape features including seats, bridges, ponds are in need of maintenance
- The Nursery is visually uninviting and does not sell many 'unique to Karwarra' plants, stock looks old and past its effective display date

4.4 VIEWS, CIRCULATION AND ACTIVITY NODES

Many of the fine views from Karwarra have been lost. These views were an important part of Karwarra's 'sense of place'. There are three main activity zones within the garden (refer to Site Analysis plan 05-152 SS V).

- There are still some lovely glimpses through the trees to Silvan dam
- There are vantage points where views could be restored
- There are three main activity zones on the site which could be further enhanced
- There is generally a lack of node points and gathering zones throughout the garden
- Karwarra has little presence from the Mt Dandenong tourist road
- Entrance statement and signage is very poor
- The initial experience as you drive up to the main gate is a bleak view of two toilet blocks
- There is a wall of vegetation along the car park entrance
- There is no hierarchy to the path system and consequently no logical way to move around the site
- Disabled access is poorly identified and not properly maintained
- There are a number of poor views which require screening

KARWARRA AUSTRALIAN PLANT GARDEN MASTER PLAN

5.0 MASTER PLAN

Preparation of this Master Plan has been undertaken to conserve, in part, and to enhance the Australian plant garden at Karwarra. The plan is not a new design, but rather one that builds on what is good about Karwarra, while also directing changes that must occur for Karwarra to remain a relevant and vibrant place to visit.

The Master Plan incorporates all the recommendations stemming from the analysis of existing conditions and issues raised during the community consultation process. The Master Plan will become an agreed vision that provides a framework to guide change over the next ten years.

5.1 MASTER PLAN VISION

Karwarra Garden is to be managed to reach and sustain its potential as a significant Australian plant garden of state reputation, enjoyed and used by the community.

Objectives

- To conserve what is important of the ‘Karwarra Character’. This includes the iconic planting design, the special landscape feature areas, the network of paths and specific references to previous designs by Kath Deery and Ellis Stones
- To phase the removal of those elements of the garden that are not working. These will be replaced with appropriate landscape designed spaces that reflect the needs of a contemporary society
- To ensure the garden meets all the appropriate safety standards for public places and provides access to people of all abilities
- To manage and develop the garden based on environmentally sustainable practices
- To ensure the Garden is maintained to a high standard using best practice principles
- To revitalise the Friends of Karwarra and encourage collaborative involvement with appropriate stakeholders

Actions

- Staged implementation of the Master Plan
- Ensure the appropriate management structures are in place to support the implementation of the Master Plan
- Implement environmentally sustainable practices which ensure water efficiency, weed management and an integrated approach to pest control
- Implement a sustained commitment to appropriate levels of maintenance so the garden is always at its optimum
- To review the Master Plan at five year intervals to meet changing needs and circumstances

5.2 CAPITAL WORKS PROJECTS

5.2.1 MT DANDENONG TOURIST ROAD ENTRANCE REDEVELOPMENT

Objective

The entrance must be striking and provide a visual cue to what visitors can expect when they come to the garden. The design must be bold and contemporary to catch the eye of the passer-by. It is imperative that this area is always well maintained and that the location of the garden entrance is identified for visitors.

Issues

- Current planting and signage does not provide any reference point to visitors. Planting is over mature, lacks design and is not well maintained at present. Signage is not consistent with that throughout the rest of the site and has little visual impact
- Dual entrances may cause confusion to visitors, particularly if they are visiting Karwarra for the first time
- Due to its location behind the Kalorama Memorial Reserve, the presence of Karwarra is not apparent from Mt Dandenong Tourist Road
- There is a series of large Pines (*Pinus radiata*) that dominate the entrance and provide a harsh micro climate for growing Australian native plants

Design

The design proposal aims to create visual drama and contrast to the surrounding soft landscape by using a palette of striking Australian native plants laid out in radiating patterns and enclosed by a series of scalloped native hedges. The effect will be an Australian native parterre that will provide a glimpse of what visitors can expect to see when they visit Karwarra.

The intention is to focus only on the one entry point (refer to Master Plan 05-152 MP) and while the other entry will remain open there will be no landscape treatment at this point. By clearly defining the one main entrance off Mt Dandenong Tourist Road, any visitor confusion when entering Karwarra should be minimalised.

Integral to this design is a new Karwarra naming sign that will project out from the planting and provide a clear entrance point for the garden. Secondary directional signs will then lead visitors to the garden, either on foot or by vehicle.

The design also upgrades the pedestrian path from the road entrance to the garden entrance. Similar planting design themes will be used at the beginning of the path, creating a visual link for visitors.

Actions

- The design concept supports the removal of all the pine trees in a staged program over the next five years. Removal should begin from the north east edge and be in accordance with the 2002 Arboricultural report, carried out as part of the Kalorama Memorial Reserve Master Plan
- Prepare plans and documentation and apply for appropriate permits for implementation of the new entrance off Mt Dandenong Tourist Road (refer to Section 5.9 Summary of Works)

- Implement interpretation and signage plan

5.2.2 KARWARRA GARDEN ENTRANCE AND CAR PARK REDEVELOPMENT

Objectives

The Garden entrance should entice and welcome visitors to the garden. Like the Mt Dandenong Tourist Road entrance it should indicate the quality of plants and planting design the visitor can expect in the garden. The gardens in and around the entrance should always be well maintained.

Issues

- The current entrance is overgrown and poorly maintained
- The boundary fence is too high and presents a strong visual barrier
- Although there is ample space for car parking, the garden surrounding it is overgrown and poorly maintained
- The entrance gates are often half closed and create an unwelcoming atmosphere
- The large area of gravel from the gate house to the hall presents as a roadway with very little spatial structure or quality of experience

Design

The design concept for the Karwarra garden entrance includes improving the general planting around the car park and toilets. This will make the approach to the garden more appealing to visitors. The two existing low walls effectively lead the visitor to the entrance and will be further enhanced by better planting design.

The existing gate and front perimeter fence will be replaced with a mild steel fabrication. The gate will be a specifically designed piece that will connect with the native flora of Karwarra. Planting around the immediate entrance will be bold, contemporary Australian native planting using a mix of climbers and ground covers. Planting along the front boundary will be a mix of planting that will allow vistas into the garden, revealing in part what the visitor is going to see. Specific site lines will be opened up to allow views of the buildings within the garden.

As the visitor enters the new gate they will see the office and new display garden. The display garden will be a series of spiralling beds radiating out from a central point; each bed will feature striking planting design associations which will showcase Australian native plant combinations. The idea is that the planting designs will change every few years to provide new experiences for visitors. An option for this area may be to ask several landscape designers to prepare schematic designs for these garden beds. Some of the display beds can be used to display plants for sale, (refer to Section 5.6 Nursery). These areas will need to be purpose built display stands that will sit within the bed areas.

The entrance area will become an important place for visitor information with a series of display boards focusing on the broad themes of Karwarra. Other directional signs and a map board would also be positioned within this area

Actions

- Prepare plans and documentation for the implementation of the Karwarra entrance

- Prepare planting design for car park beds

5.2.3 CENTRAL LAWN AND POND AREA REDEVELOPMENT

Objectives

This is a high profile area of the garden that must be eye catching and enticing; it must draw visitors into the garden. This part of the garden is viewed from key vantage points and therefore needs a focal point of distinct character.

Issues

- There is a poor landscape relationship between the walkway, the existing pond, the gravel area and the lawn
- The pond cannot be seen from any distance and does not provide a focal point
- The sleeper wall and pond in the area surrounding the Tasmanian collection have very poor landscape value
- The current lawn and pond space appears under utilised

Design

The design concept aims to provide a landscaped space that becomes a central focus for Karwarra. The sweeping lawns will create a foreground to internal views of the ponds, while also affording external views of the Silvan Reservoir and beyond, providing relief to the otherwise enclosed character of the garden.

The aim is to create a focal point by enlarging the existing pond, removing the walkway and positioning a designed structure on the pond's far bank. Both the pond and the new structure would be seen as the visitor moves through the garden from the display area towards the hall. The design also creates a lower reed pond which is connected to the fern gully water system (tarns) via a stream rill.

The lawns around the ponds would be carefully sculptured to give the illusion that the pond has always been present and to direct water runoff back into the pond. The top pond should maintain with at least 60% clear water at all times so reflections across the water are maintained. The lawns are an important area for picnics and photographs and provide a contrast to the otherwise dense plantings of Karwarra. The design concept enlarges the existing lawns and enhances their aesthetic appearance.

The proposed structure would be purpose built and specifically designed for Karwarra. It is envisaged it would be used for interpretation and educational purposes. With its proximity to the pond edge it would be an ideal venue for schools to do ponding and other environmental activities, while also providing a venue for outdoor performance such as music and theatre.

Actions

- Prepare detailed plans for the implementation of this project. Separate documentation should be prepared for each stage of the project
- Prepare a brief for the design of the proposed new structure
- Stage the removal of the walkway, the sleeper wall and Tasmanian pond area

5.2.4 HORTICULTURAL HALL TERRACE

Objective

To create paved areas around the hall to improve access for all abilities, and provide vantage points and sitting areas for visitors to enjoy the ambience of the garden

Issues

- Currently there is no paving plinth around the building making access difficult
- Entry/exit points are poorly defined

Design

The design proposal is to create a series of entry spaces adjacent to the hall and a series of terraces to the east of the hall. Main entrances will have a plinth of stone paving and a timber pergola. This will flag the main entry points to the hall and help ground the building within the landscape. The currently unused water tanks would also be removed.

On the eastern side of the hall the design will create a series of stone paved terraces (refer to Master Plan 05-152 MP) that will provide an area for visitors to sit, eat and drink and enjoy the view over Silvan Reservoir. The planting in this area will be mainly small shrubs and ground covers; any trees will be coppiced or removed.

Actions

- Prepare detailed plans for the implementation of the project
- Remove or coppice native exotic trees that interrupt views
- Remove unused tank

5.2.5 ACTIVITY NODES

Objective

To create a series of node spaces within the landscape that become meeting and stopping places, providing a contrast to the otherwise intimate and enclosed character of the existing garden.

Issues

- There are currently very few meeting places within the garden
- Many of the existing seat spots are unappealing and in the shade
- There is a lack of open spaces within the garden to provide variation and interest

Design

The design concept aims to introduce a series of different 'node activity points' within the garden. There would be two types of node points. The first of these are a simple widening of the path system, with three of these points being proposed for the garden (refer to Master Plan 05-152 MP). Each node would be furnished with 'Karwarra' seating and gravel paving, and are positioned in sunny spots suitable for small gatherings.

The second node points are larger and create landscape impact by using grasses or other plants (reeds or ground covers) that provides contrast to the existing planting. These areas would again be in sunny places and within each grassy area would be a defined

meeting place and seating. These nodes would be for larger groups and each space could have its own interpretative theme and or sculptured element. It is envisaged that these places could be used for story telling, performance and education. Stone fire pits, fossil standing stones or plant sculpture are just a few possibilities for these areas.

Actions

- To prepare plans for the implementation of these areas
- To source appropriate stone for use in the larger node points

5.3 LANDSCAPE ELEMENTS AND SITE FEATURES

5.3.1 WATER FEATURES

Objectives

To create the illusion that water was always a feature of this landscape. To rationalise the number of water features across the site so while there may be fewer, they are all fully operational and bring life and movement to the garden.

Issues

- Many small ponds do not hold water and the pumping mechanisms are damaged
- Many of the ponds are too small and lack landscape impact
- Due to lack of light and poor construction there is a lack of plant and animal life in the ponds
- Very few of the ponds can be seen from vantage points within the garden
- The fern gully water rill and ponds appear artificial

Actions

- Remove all ponds to the east of the hall and replace with rock work and planting
- Prepare detail plans for the enlargement of the top pond, subsequent ponds and stream rill (refer to Master Plan 05-152 MP)
- Remove plant material (including trees) that prevent light from reaching the water surface
- Modify and enlarge the two main fern gully ponds
- Introduce native plant life and fish to the existing ponds
- Create beaches, bog areas and reed planting around existing fern gully ponds and stream rill to create unity, provide habitat and hide edges
- Ensure all pond pumps are working efficiently, are accessible for maintenance and are well hidden

5.3.2 VISITOR FACILITIES

Objectives

To create visitor facilities, such as interpretative displays, structures and toilets that meet the needs of a contemporary society and enhance the visual amenity of the garden.

Issues

- Aging buildings and toilet facilities that do not meet the needs of a contemporary society
- Tired and aging infrastructure (seats steps and bridges)
- Lack of budget to renovate the existing buildings
- Tired and outdated display boards and methods of presenting information to the public

Actions

- Implement interpretation plan. This will provide visitor information display boards at specific sites and map boards and directional signage throughout the garden (refer to Section 6.10, Interpretation and Education Plan and separate

volume *Karwarra Australian Plant Garden: An overview of the Logo and imagery of Karwarra Gardens*, January 2006)

- Remove existing shelter facility
- Replace existing seats, steps and bridges (refer to Section 5.8 Furnishing, Lighting and Construction Details)
- Upgrade the existing building by creating stone paving terraces and pergolas at entrance points (refer to Master Plan 05-152 and Section 5.2.4 Horticultural Hall Terrace)
- Prepare detailed plans for renovating male toilet facilities within the garden
- Prepare detailed plans for a new garden structure (refer to Master Plan 05-152 MP)
- Investigate opportunities to run summer theatre or music in the gardens
- Continue to prepare submissions for funding grants

5.3.3 LOOKOUT

Objectives

- To revitalise the central lawn space, creating an area which is a focus point for Karwarra

Issues

- There is an emotional attachment to the current timber lookout
- There is a lack of unity in the current design of the central lawn area with the lookout and new pond not relating well to each other
- The current lookout has a limited useful life expectancy, due to being constructed over a stump that will with time deteriorate.
- The look out does not display the magnitude of the stump it is constructed over to its full potential

Actions

The lookout structure is to be removed with the existing stump included in the proposed redevelopment of the central lawn area (refer to Section 5.2.3 Central Lawn and Pond Area Redevelopment).

5.3.4 ROCKERIES AND STONE WORK

Objectives

To maintain and enhance the existing rockeries in the garden, match rockwork when redeveloping garden areas and introduce the element of stone in other parts of the garden. Acknowledge and interpret the work of Ellis Stones and Kath Deery.

Issues

- Much of the present rock work is overgrown with billowing plant material and consequently cannot be seen
- Lack of clarity about the extent of Ellis Stones' work

Actions

- Remove much of the overgrown plant material and replace it with more suitable low growing and tuft plants that enhance the rockwork rather than cover it up

- Interpret the Ellis Stone rockwork with the appropriate signage
- Use standing stones, stone walling, paving, and mulches wherever possible

5.3.5 ARTWORKS AND SCULPTURE

Objectives

To see both permanent and temporary pieces of art that are provocative and challenging, exploring the importance of Australian plants in our lives.

Issues

Lack of budget to afford artworks

Actions

- To include a small number of permanent garden features that can be designed as one off art pieces (entrance gates, water bowls, standing stones)
- Consider a temporary sculptural exhibition that could occur annually and may explore various environmental themes
- Link in with local school's art departments and artist in residence programs
- Continue to prepare submissions for funding

5.3.6 VIEWS

Objectives

- To increase views into the wider landscape from vantage points within the garden
- To enhance internal garden views
- To open site lines and enhance views into the garden
- To manipulate boundary screenings to provide a sense of enclosure while still advertising the garden's presence

Issues

- Increased shrub and tree growth screening original views
- Limits in tree removal due to location within Erosion Management and Significant Landscape Overlays

Actions

- Re-open original site entrance to re-establish the traditional Karwarra focal point
- Re-establish view lines by selectively removing and pruning trees in line with the 2004 *Arboricultural report & management plan* (refer to Section 5.5.2 Tree Population) and pruning back overgrown shrubs
- Open up views from the Horticultural Hall towards the Silvan Reservoir. This would include coppicing overgrown Dwarf Apple (*Angophora hispida*) and removing the New South Wales Christmas Bush (*Ceratopetalum gummiferum*)
- Open up view line from the existing gum trees and orchid node point through the garden towards the Silvan Reservoir
- Increase views from the redeveloped central lawn area (refer to Section 5.2.3 Central Lawn and Pond Area Redevelopment) into the wider landscape
- Enhance existing view lines within the indigenous area by preventing the establishment of trees and shrubs which may block views

- Carefully consider new tree planting locations so as not to restrict desired view lines
- Redesign the central lawn area in line with recommendations in Section 5.2.3 and Master Plan (05-152 MP) to enhance internal garden views
- Redevelop entrance into Karwarra from Kalorama Memorial Reserve (refer to Section 5.2.2, Karwarra Garden Entrance Redevelopment) to provide an enticing and welcoming entrance view
- Provide adequate screening to northern, eastern and southern site boundaries
- Open view lines through the western boundary from the Kalorama Memorial Reserve into Karwarra.

5.4 CIRCULATION

5.4.1 PATH LAYOUT

Objectives

- To provide a logical and easy to navigate path system
- To increase accessibility for visitors of all abilities
- To allow safe and easy access to all garden paths
- To encourage visitor movement through all areas of the garden to prevent ‘dead’ areas which remain unvisited

Issues

- The current path system is complex and lacking hierarchy, with the result being that paths are numerous and difficult to navigate
- There are no visual or written cues to provide a logical way to move through the garden
- Many paths are not easily trafficable; being overgrown and narrow, with unsafe bridges and stairs
- Areas of the garden have become ‘dead’ due to path closures and lack of circuits. These areas are neither inviting nor easy to navigate
- There is a strong visual pull towards the hall from the main entrance at the exclusion of visitors dispersing throughout the garden
- The wheel chair accessible pathway is not up to standard

Actions

- Rationalise the existing path system in line with the Master Plan drawing (05-152 MP) by enhancing those paths to be retained and allowing the others to become secondary, mulched maintenance paths. This will make the garden easier to navigate
- Re-open the original Karwarra entrance to encourage movement of visitors through this area of the garden
- Remove all paths which lead to dead-ends
- Construct new paths in line with the Master Plan drawing (05-152 MP) and the standard path construction detail (refer to Section 5.8.5, Standard Construction Details)
- Redevelop the entrance and central lawn areas (refer to Master Plan 05-152 MP) to remove the strong visual pull towards the hall, so encouraging movement throughout the garden
- Establish a primary access path 1.5m wide between the two entrances. This path would eventually be of exposed aggregate concrete in line with Section 5.8.4, Materials Palette.
- Enlarge existing paths where required to meet minimum required widths (refer to Section 5.8)
- Provide access paths for visitors of all abilities (refer to Master Plan 05-152 MP) which meet requirements detailed above. These paths would eventually be of exposed aggregate concrete in line with Section 5.8.4, Materials Palette.
- Commence a program of bridge and stair replacement to bring these structures into line with standard Karwarra construction details and required safety standards

- Continue the program of path maintenance to ensure paths are maintained in a safe and easily trafficable condition

5.4.2 ACTIVITY NODES

Objectives

To increase the number of node points within the garden in order to:

- Provide visitors with areas to slow or stop and enjoy the garden
- Provide themed spaces within the garden for use by school and other groups
- Open up new areas of the garden to visitors

Issues

- There are an insufficient number of areas within the garden for people to stop, with the current layout encouraging constant movement
- There is a lack of open spaces within the garden to provide variation and interest

Actions

Develop new node points in line with the Master Plan (05-152 MP) and Section 5.2.5, Activity Nodes.

5.4.3 INTERFACE BETWEEN THE HORTICULTURAL HALL AND GARDEN

Objectives

- To give the hall a greater relationship to the rest of the garden
- To enhance the outdoor/indoor relationship between the hall and garden
- To improve visitor movement between the hall and garden
- To make the hall more welcoming to visitors

Issues

- The hall is not grounded within the garden, as there are no external spaces which provide a relationship between the hall and the wider garden
- There is little to no outdoor/indoor relationship which encourages visitors to move comfortably between the two spaces

Actions

Redevelop area in line with the Master Plan (05-152 MP) and Section 5.2.4, Horticultural Hall Terrace.

5.5 PLANTING

5.5.1 PLANTING DESIGN

Objectives

To create a rich and diverse collection of Australian native plants that provides year round interest for visitors. The collection is to be at the cutting-edge of planting design, always exploring new species and cultivars to grow and utilising innovative horticulture to maximise plant display. At the same time the garden would respect the character of the original Kath Deery design.

Issues

- Current planting is poorly maintained
- There is a lack of contrast in the present planting design
- There is lack of relevance to the home gardener
- There is a predominately shady micro climate

Actions

- The planting areas west of the hall are currently working well and must be maintained to their optimum
- Large areas of the gardens, especially garden beds south of the hall, must be completely renovated
- Organise pruning sessions with friends and apprentices
- Run pruning days to show members of the public how to prune Australian native plants
- Add areas of Australian native grasses and groundcovers to provide relief from shrub masses. New planting design must work with the principles of mass and void (currently there is too much mass and very little void)
- Use display beds to exhibit exciting plant combinations and show case new plants that are available to purchase from Karwarra (refer to Master Plan 05-152 MP)
- Create themed collections that are relevant to people living in the Dandenongs. For example fire resistant plants, groundcover plants for the shade, indigenous food plants. etc (refer to Plant Collection Plan, Sections 6.1 and 6.2)
- Implement new and bold plantings at entrances to Karwarra and renovate planting around the entrance car park (refer to Master Plan 05-152 MP and Sections 5.2.1 and 5.2.2 on entrance redevelopment)

5.5.2 TREE POPULATION

An Arboricultural Report and Management Plan was undertaken for Karwarra in December 2004 and forms the basis of Karwarra's tree management strategy. The report, carried out by Tree Dimensions assessed trees over 4m in height and provided recommendations for their ongoing management. The Arboricultural report is to be considered in conjunction with the Master Plan.

Risk Management

The Arboricultural report highlighted the importance of managing risk within a public open space. By their very nature it is impossible to completely remove risk when dealing with trees; however it may be managed so that it is maintained at what is deemed to be a reasonable and acceptable level. Within spaces open to the public this

involves regular tree inspections and maintenance with either corrective work or tree removal taking place when an unacceptable risk is identified.

Objectives

- Continue to implement the 2004 Arboricultural Report
- To maintain risk at an acceptable level for a public open space
- To maintain the health and vigour of significant trees
- To manage tree numbers to prevent over population
- To manage tree populations so as to establish a broad mix of age groups and allow for succession planting
- To ensure trees to be retained are protected during any development works

Issues

- The risk levels of all trees must be managed in any space open to members of the public
- Karwarra has a large, aging population of trees in close proximity to visitors, and as such has an increased risk level
- Tree populations have been allowed to develop unchecked, so altering the character of the garden
- Currently no replacement strategy exists to manage the tree canopy
- There are no set procedures in place to protect trees during development works

Actions

Develop a Tree Management Plan in accordance with recommendations contained within the 2004 Arboricultural Report. This Management Plan would address the following areas:

- Scheduling of tree inspections and maintenance work as detailed in the Arboricultural report. This is vital for any tree works of high priority in order for risk levels to be managed.
- Development of a tree replacement and planting strategy for the entire garden. This would cover all existing and proposed tree plantings from a landscape perspective and would govern both where seedlings would be allowed to establish and the location and species of new tree plantings. This strategy would be used as a guide in the management of the existing tree population from a whole garden perspective as detailed below and would also allow for the gradual replacement of the tree population over time. By implementing a strategy such as this a mixed generation of trees would be established, so preventing the senescence of the tree canopy within a short time frame.
- Management of the tree population in a way which considers the whole garden situation. This would include tree removal, planting and replacement taking place with consideration to aspects such as to sunlight infiltration and site lines, as well as tree health and risk management.
- The protection of all trees to be retained within the vicinity of any development works. This would include the establishment of Tree Protection Zones and the implementation of Tree Protection Guidelines (as per Appendix 3: Tree Protection During Works). This is vital for any works which involve either the manipulation of ground levels or the construction of new structures.

5.5.3 INDIGENOUS AREA

Objective

- To provide an excellent example of indigenous Kalorama vegetation in a natural setting
- To make this area accessible to visitors

Issues

- Area is comprised of relatively impenetrable vegetation making management difficult
- There is little to attract visitors into the space at present
- There is no interpretation or signage to enhance visitors experience and understanding of the area

Actions

- Retain the indigenous area as natural bushland
- Manage fire risk and weed populations in line with Sections 6.3-6.5 of this report
- Create an informal node point within the indigenous area in line with the Master Plan (05-152 MP)
- Explore the use of indigenous interpretation themes

5.6 NURSERY

Objectives

Selling plants is a very positive way for Karwarra to not only earn money, but also to promote the garden as a place of horticultural excellence. A plant sale earns income, while the growing plant serves as a constant reminder to people about the quality experience they had when visiting Karwarra. Objectives for the nursery should be as follows:

- To improve the quality of the nursery experience at, and consequently increase plant sales from, Karwarra.
- To improve the operations of the nursery
- To look at alternative sites for the nursery

Issues

- Current nursery area lacks space and sun, experiencing very low autumn to spring temperatures which make propagation and growing-on difficult
- Lack of available staff resources
- Current nursery area looks unattractive
- A highly competitive nursery industry where people can purchase quality Australian native plants from other local nurseries
- Lack of readily available local sites for the nursery
- No possibility in the short term to co-tenant the council nursery site

Actions

While it is widely accepted that the present nursery is unsatisfactory, plant sales do contribute to the income base of Karwarra and the KGAC (Karwarra Garden Advisory Committee) is of the opinion that the nursery has potential to make a much bigger contribution to the quality of the visitor experience at Karwarra.

- In the short term (0-5years) explore relationships with a series of local nurseries that could supply Karwarra with plants to sell. In exchange these nurseries would be supplied with stock material for their own commercial use.
Given the current lack of resources this option would remove extra stress on staff to produce plants of high quality and would reduce the amount of space that is required for growing-on. Issues of pot size, quantity of stock, how long stock is held, who delivers and picks up and labelling all need to be resolved.
- Review sale day options.
- Develop a more attractive point of sale area where plants can be sold and visitors can view examples of the plants they may purchase (refer to the Master Plan 05-152 MP and Section 5.2.2, Karwarra Garden Entrance Redevelopment)
- Explore what gives Karwarra a point of difference to other nurseries. E.g. plants sold to be 'Karwarra Plants' that can be seen growing in the garden, expert plant advice given by staff on certain days, labeling options etc.
- In the longer term (3 to 10 years) look at the feasibility of moving the nursery into the indigenous zone of the garden, with a vehicle access point linking the nursery to the service area
- Explore giving management of the nursery to the Friends of Karwarra so allowing them to develop a sense of ownership

5.7 INTERPRETATION AND SIGNAGE

A new interpretation and signage policy and guidelines have been developed for use in and around Karwarra. For full information on this refer to the separate volume *Karwarra Australian Plant Garden: An overview of the Logo and imagery of Karwarra Gardens* (January 2006) prepared by Ian Dalton and Associates.

5.7.1 IMAGERY

Objectives

- To develop a unified and consistent image for Karwarra
- To have this image accurately reflect Karwarra to the public

Issues

- There is a lack of consistent style within Karwarra's signage, website, printed information and stationary
- The current Karwarra Logo does not present a strong "brand" which is readily recognisable or associated with the garden
- The current Karwarra Logo is not used in a consistent manner

Actions

- Design of a new and contemporary Karwarra Logo
- Development of a standard Karwarra identity/branding guide as detailed in *Karwarra Australian Plant Garden: An overview of the Logo and imagery of Karwarra Gardens* (January 2006)

5.7.2 SIGNAGE

Objectives

- To provide visually attractive signage that is clearly identifiable with Karwarra
- To locate signage carefully and usefully

Issues

- Produced with little to no attention to a consistent Karwarra Brand/Emblem/Logo
- Poorly designed in terms of aesthetics, construction and materials
- Location, content and readability have not been fully considered
- The needs of garden visitors have not been fully understood or met

Actions

- Develop a standard suite of signs in accordance with set Karwarra imagery for use in and around Karwarra
- Production of new signage as detailed in *Karwarra Australian Plant Garden: An overview of the Logo and imagery of Karwarra Gardens* (January 2006)

5.7.3 INTERPRETATION

Objectives

- For Karwarra to become an educational reference point with easily accessible information

- For Karwarra to reflect a consistent style
- For visual communication to delight, inform and educate

Issues

- Current interpretative signage is difficult to locate and understand
- Current styles of interpretation are inconsistent and out of date
- Interpretative signage is in disrepair and requires repair or replacement
- Printed material has been prepared with little regard to a design style
- The website is well done, however its focus is on information rather than education

Actions

Karwarra's website is to be updated and new interpretative signs developed in accordance with *Karwarra Australian Plant Garden: An overview of the Logo and imagery of Karwarra Gardens (January 2006)*

5.8 FURNISHING, LIGHTING AND CONSTRUCTION DETAILS

5.8.1 OBJECTIVES

- To provide a consistent style within Karwarra Garden's furnishings and landscape elements in order to provide a sense of rhythm and continuity
- To develop standard designs, in line with the garden style, for individual garden features such as seats, walls and paving
- To ensure that all construction and furnishing details are in line with best practice operations as they relate to accessibility and safety

5.8.2 ISSUES

- There is currently a lack of consistency throughout the garden with varying styles and materials being used
- Where there is consistency within elements, such as seating, they are generally old and in need of repair or replacement
- Bridges and stairs do not provide a level of safety for visitors that is expected in public gardens and require redesign and replacement
- Paths that are to provide access for people of all abilities do not adequately fulfil this role

5.8.3 ACTIONS

A standard palette of materials is to be developed for use throughout the Karwarra garden. Standard construction details utilising this materials palette are to be developed for all new and replacement landscape installations in line with the guidelines in Section 5.8.5 (Standard Construction Details) below.

5.8.4 MATERIALS PALETTE

A standard materials palette is to be developed for use on all new landscape elements, features and furnishings throughout Karwarra. This will link all parts of the garden together and provide a consistency that is currently lacking. The materials palette is to be developed as follows:

Stone

A stone surfacing material would be chosen for use where applicable throughout the garden, with this material having the following features:

- Would be a natural stone
- Would have colour tonings which are pale brown to biscuit
- Would be random cut
- Would provide resistance to staining (or be appropriately sealed)

Timber

A hardwood timber species is to be chosen for use throughout the garden as both a construction material (as in seats and shelters) and as a surface material for elements such as bridges. This material would have the following properties:

- Would be suitable for all construction and surfacing uses throughout the garden
- Would be a native Australian hardwood
- Would be plantation grown

Steel

Steel would be used in a number of applications throughout the garden including seating, signage and the new front fence. All steel would either be cor-ten or mild steel and would be allowed to weather. This material would in time become a feature of Karwarra.

Gravel

The current gravel surfacing of Rocla© Granitic Gravel would continue to be used as required throughout Karwarra

An additional stone aggregate is to be chosen for use in feature areas. This aggregate would be in similar colour tonings to the Granitic Gravel but with a particle size of 25-45mm.

Concrete

In the short term concrete surfaces are not to be used in Karwarra; however specific paths are to be concreted in the medium to long term. A standard exposed aggregate concrete mix is to be chosen. This mix would:

- Be similar in tonings to the granitic gravel and natural stone
- Provide a textured surface to prevent slipping

Mulch

The current Eucamulch will continue to be used on paths in Karwarra. Garden mulch will be provided through mulched leaf and pruning material from the garden as per current practice.

5.8.5 STANDARD CONSTRUCTION DETAILS

Fencing

Fencing in and around Karwarra is to be restricted as much as possible to being used for the definition of the sites boundaries. Internal fencing should be used only as a last resort around areas such as the nursery as such structures are unsightly and restrict visitor movement.

Two types of fencing are to be used. A standard mesh fence (as currently in place) is to be used for the northern, eastern, north-western and southern boundaries and any lower visibility internal fences. For the highly visible boundary interface between Karwarra and the Kalorama Memorial Reserve a new ornamental fence is to be developed. This style of fencing would also be appropriate if a fence is required between the nursery and main entrance.

A standard construction detail is to be developed for the new fence in line with the following guidelines:

- Is to be between 1.2m-1.5m high and of open construction allowing views into the garden
- Is to be constructed of weathered steel (mild or cor-ten in line with the standard materials palette)
- Would be designed to provide visual interest

- Would have new sculptural vehicle gates at the main entrance designed to incorporate patterns of native Australian Plants. These gates would be designed by an Artist or Landscape Architect

Paths

The alignment of paths is detailed in the Master Plan drawing (05-152 MP) and Section 5.4.1, Path Layout. A standard detail for the construction of all new paths is to be developed according to the following guidelines:

- All paths are to be of a minimum 1.2m wide
- Paths that are to be accessible for people of all abilities are to be 1.5m wide and are to be of a maximum grade of 1:20. These paths are to be surfaced with granitic gravel in the short term; however the eventual aim is for these paths to be of exposed aggregate concrete
- All path construction is to adhere to standard safety and accessibility guidelines

Paving

The majority of surfaces in and around Karwarra are to remain gravel with hard paving to be restricted to areas around buildings and garden structures. Standard paving construction details are to be developed for use within Karwarra with these details being in accordance with the Karwarra Materials palette.

Stairs

The use of stairs within Karwarra is to be kept at a minimum, with their use avoided whenever possible. This especially applies to the access track for people of all abilities, where the current practice of not using them at all is to be continued.

The current stair detail used within the garden is inappropriate, and consequently many of the stairs require replacement. A standard construction detail is to be developed for the construction of all new and replacement stairs in accordance with the following guidelines:

- Stairs are to be of solid construction to prevent movement and would be constructed using a gravel surface retained by timber
- All materials are to be in accordance with the Karwarra material palette
- All runs of stairs; especially those relating to the proposed building terrace (refer to Master Plan 05-152 MP and Section 5.2.4, Horticultural Hall Terrace), are to be constructed in accordance with the Building Code of Australia as they relate to dimensions and lengths of flights

Bridges

Bridges are to be continued to be used throughout the garden where paths cross creeks. The number of bridges within the garden will be reduced due to the reduction in both path and creek numbers. The current bridge design is too narrow and does not meet current safety standards. A new standard construction detail is to be developed for all new bridges in accordance with the following guidelines:

- Bridges are to be of a minimum width of 1.5m on standard paths and 1.8m on paths to provide access for visitors of all abilities
- Bridges are to be of timber construction in accordance with the Karwarra materials palette
- Bridges are to utilise an appropriate non-slip surface

- Handrails are only to be used when safety and regulations dictate they are appropriate

Walls

A number of ornamental feature walls are currently installed at the main entrance. Additional feature walls are to be used as appropriate; especially in regards to the retaining and sitting wall surrounding the proposed lower building terrace (refer to Master Plan 05-152 MP and Section 5.2.4, Horticultural Hall Terrace). All new sitting walls are to be in the same style as the existing feature walls.

Pergolas

Two pergolas are to be constructed at entrances to the horticultural hall. These would be to a standard detail utilising the Karwarra materials palette in the selection of timber. Pergolas would have a stone paving base in accordance with the materials palette and be covered with native Australian climbers as appropriate.

Seating

A standard 'Karwarra seat' is to be developed for use throughout the garden, with this seat utilising the standard wood and steel of the Karwarra materials palette.

Seating is to be used throughout the garden and is to be appropriately located. Major seating locations would include view and node points, and at the top and bottom of steep inclines. All seating is to be recessed off the path system so as not to disrupt visitor movement.

Tables

The use of tables and chairs within Karwarra is to be kept at a minimum with their presence to be restricted to key node points including the central lawn and proposed terrace. A standard 'Karwarra table' is to be developed. This table would match the 'Karwarra seat' and would utilise the standard wood and steel of the Karwarra materials palette.

Bollards

Bollards are to be used within Karwarra as an alternative to internal fencing. Standard Construction details are to be developed according to the following guidelines:

- Bollards are to be constructed of standard timber species with steel as appropriate in accordance with the Karwarra materials palette
- Bollards are to be subtle in design and should be as inconspicuous as possible so as not to detract from the garden

Rubbish Bins

Karwarra is to maintain a 'take-in-take-out' policy as relates to rubbish and will therefore not provide rubbish bins within the garden.

Lighting

Access lighting is currently provided between the horticultural hall and the gatehouse and at the entrance to the garden. This is to be increased to include appropriate levels of access lighting within the car park area. This lighting would be in the form of appropriately designed down lighting, placed in unobtrusive positions.

5.9 SUMMARY OF WORKS

The summary of works clearly sets out the priorities for Karwarra over the next 10 years. This is important in order to allow the Master Plan to set realistic goals that can be both afforded and achieved within a given time frame. For this reason the first 12 months is solely about consolidating and improving the horticulture at Karwarra.

There are three main types of works in the development of the Karwarra Garden. The first is the major project works which require specialist skills to implement and often require funding beyond the recurrent budget. These works create significant change over a short period of time. Associated with these works will be the preparation of a project brief, design documentation and a tender process.

The second type of works is the minor projects. These are mainly soft landscaping projects, or minor works that could be done by the in-house landscape team or the horticultural staff. These would often be funded through the recurrent budget. These works create change over a short period of time (e.g. major pruning program, creation of new garden beds).

The third type of works are the ongoing projects, these are projects which require work beyond the general maintenance of the garden. Ongoing works are often projects that due to their scale must be staged over several years (e.g. path works and drainage) or are projects that are continuous by nature and develop over many years (e.g. collection development). These types of works may be funded by either recurrent budgets or external sources.

5.9.1 PROJECT WORKS

Under project works both the major and minor projects are listed under short term, mid-term and long term goals.

Immediate Works: 0-12 months

- Major pruning and clean-up program: remove all dead and unwanted material, heavy prune and coppice appropriate species, prune all other plants
- Implement the maintenance schedule and associated reporting structures
- Develop and implement the Emergency Wildfire Management Plan
- Rationalise the existing path system

Short Term Works: 1-5 years

- Remove the Tasmanian ponds and associated retaining wall and smaller ponds to the south of the hall
- Plant sales: Liaise with other production nurseries about growing plants for Karwarra to sell. A priority should be given to plants that grow at Karwarra. A Karwarra plant label should be developed
- Karwarra entry precinct: prepare detail plans and construct gardens. Includes new gate and fence and closing access to the nursery area
- Entrance car park planting: prepare plans and implement changes
- Mount Dandenong tourist entry point: prepare plans and construct gardens
- Grassy node points: prepare plans and construct garden areas
- Path works & Activity Nodes: prepare plans and install new activity nodes, change pathways and open up the old entrance

- Remove walkway in preparation of central lawn feature, and begin to shape grass area
- Remove power pole and seal off power source
- Remove existing shelter in the south-west section of the garden
- Bring the access for all abilities path up to standard through establishing appropriate maximum grades, widening the path and removing bridges
- Associated Hall works: Prepare plans and construct pergolas

Medium Term Works: 5-10 years

- Associated Hall works: Prepare plans and construct paving terraces to the east of the existing hall
- Disabled access: Construct exposed aggregate concrete path
- Central lawn and ponds: prepare plans and construct ponds and central lawn area
- Pond Pavilion: prepare plans and construct pavilion
- Toilet Facilities: prepare plans and install new toilet
- Investigate the feasibility of having a production nursery on site

Long Term Works: 10+ years

- Proposed new building: prepare plans and construct a new multi purpose building on the site to replace the existing Hall.
- Remove/relocate existing toilet blocks at the Karwarra entrance

5.9.2 ONGOING WORKS

Ongoing works do not have specific time frames associated with them; however planning should be initiated as soon as possible while installation can occur over several years.

- Interpretation plan: prepare detailed plans and implement in stages as funding becomes available
- Upgrade infrastructure: upgrade essential infrastructure such as paths, steps, seats, bridges, lighting, water tanks and perimeter fencing over a number of years
- Collection development: With reference to the collection plan, prepare management plans for all collections. Continue to develop and improve existing plant collections and maintain accurate records
- Irrigation system: Prepare plans and stage implementation of a water efficient irrigation system across the site
- Garden bed renewal: continue to introduce new plants and planting design which falls outside collection development work