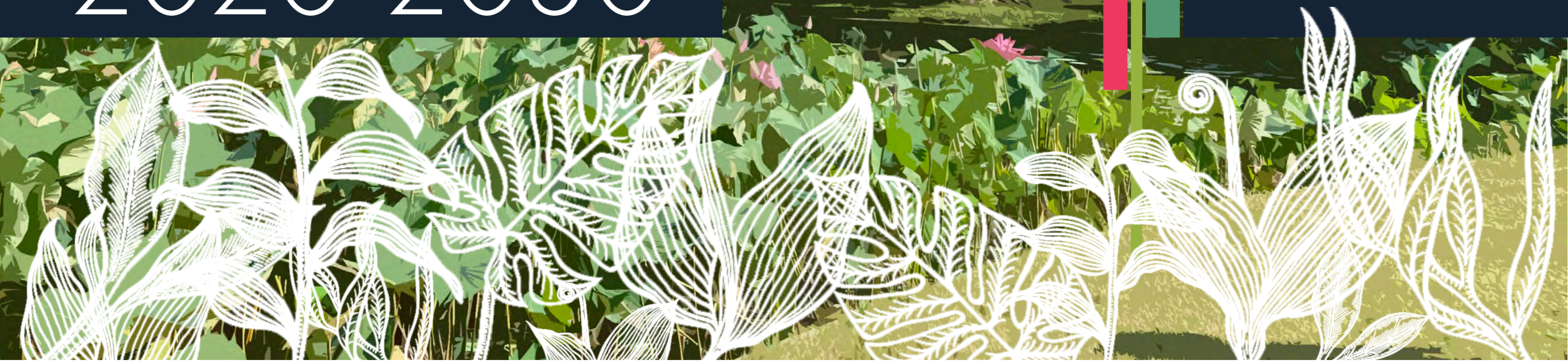




Townsville Botanic Gardens **Masterplan** 2020-2030



Quality Assurance

Townsville Botanic Gardens

Masterplan
2020-2030

Prepared for Townsville City Council

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03

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Revisions

Rev	Issued	Details	Prepared By	Reviewed By	Project Principal
00	01 May 2020	Draft Masterplan	SE	GH	GH
01	22 May 2020	Draft Masterplan Stakeholder Feedback Changes	SE	GH	GH
02	21 August 2020	Final Masterplan	STE	SE	GH
03	2 September 2020	Final Masterplan	SE	GH	GH

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Introduction & Background

1 Introduction

1.1 Purpose

The purpose of the revised Townsville Botanic Masterplan 2020 – 2030 is to provide a rationalised direction for the future development of Queens Gardens, Anderson Gardens and the Palmetum. The Masterplan is intended to identify the necessary renewal, upgrade and new development works required over the next 10 years. The associated cost implications will inform the future budget requirements for the gardens and drive the scheduling of capital works and targeting of funding opportunities over the next 10 years.

The 10 Year Masterplan will:

- Refresh the Vision and Objectives of the 1998 Masterplan (Reaffirmed in the 2005 Update and 2011 Workshop Review);
- Evaluate the issues, concerns, challenges, opportunities and constraints;
- Frame a working plan for the next ten years and beyond which still aims to achieve the ultimate intent of the original Masterplan;
- Develop specific Park Masterplans for the next ten years of development;
- Provide direction on materiality, design palettes and priority works;
- Develop staging of future works;
- Provide cost planning; and
- Develop the living collections of all three gardens.

1.2 Project Timeline

Mar Townsville City Council launched the Masterplanning process in March 2020. It is important to note that at this time, the COVID-19 pandemic restrictions began impacting the running of businesses and the lifestyles of the collective global population. As a result, the original timeline and delivery of the Townsville Botanic Masterplan 2020-2030 was significantly altered.

Council commenced initial community consultation for the three Botanic Gardens via their 'Have Your Say' website for a one month period in March 2020. A summary of this consultation is detailed in section 3.1.

The internal Masterplan process began with the investigation of all relevant background studies (detailed in section 1.3) and a walking site audit of each of the three botanic gardens. Following this, a Strategic Context Analysis was prepared and summarised for presentation at the Masterplan Vision and Objectives workshop.

The Vision and Objectives workshop was a highly-focussed, 2-day design workshop (adapted to an online delivery format) intended to be the primary visioning platform for the Masterplan and the first step in building consensus and ownership of the project. Attendees included representatives from each of the key project sub-consultants, technical working groups, internal and external stakeholders, industry representatives and key decision makers.

Apr The Draft Preliminary Masterplan and Objectives Report was prepared and released for internal stakeholder feedback in April 2020.

Key features of the Draft Masterplan included:

- a summary of the key outcomes from the workshop process;
- a summary of the initial public consultation;
- an overarching draft vision and objectives for

the Masterplan as well as individual visions and objectives for each Botanic Gardens;

- draft future development layout plans for each of the three gardens identifying the required renewal and upgrade works of existing features and the needs for new infrastructure;
- draft indicative costings; and
- draft priority staging plans for each garden.

Jun Following the receipt of internal stakeholder feedback, the Final Draft Masterplan was reviewed and delivered for public consultation by council.

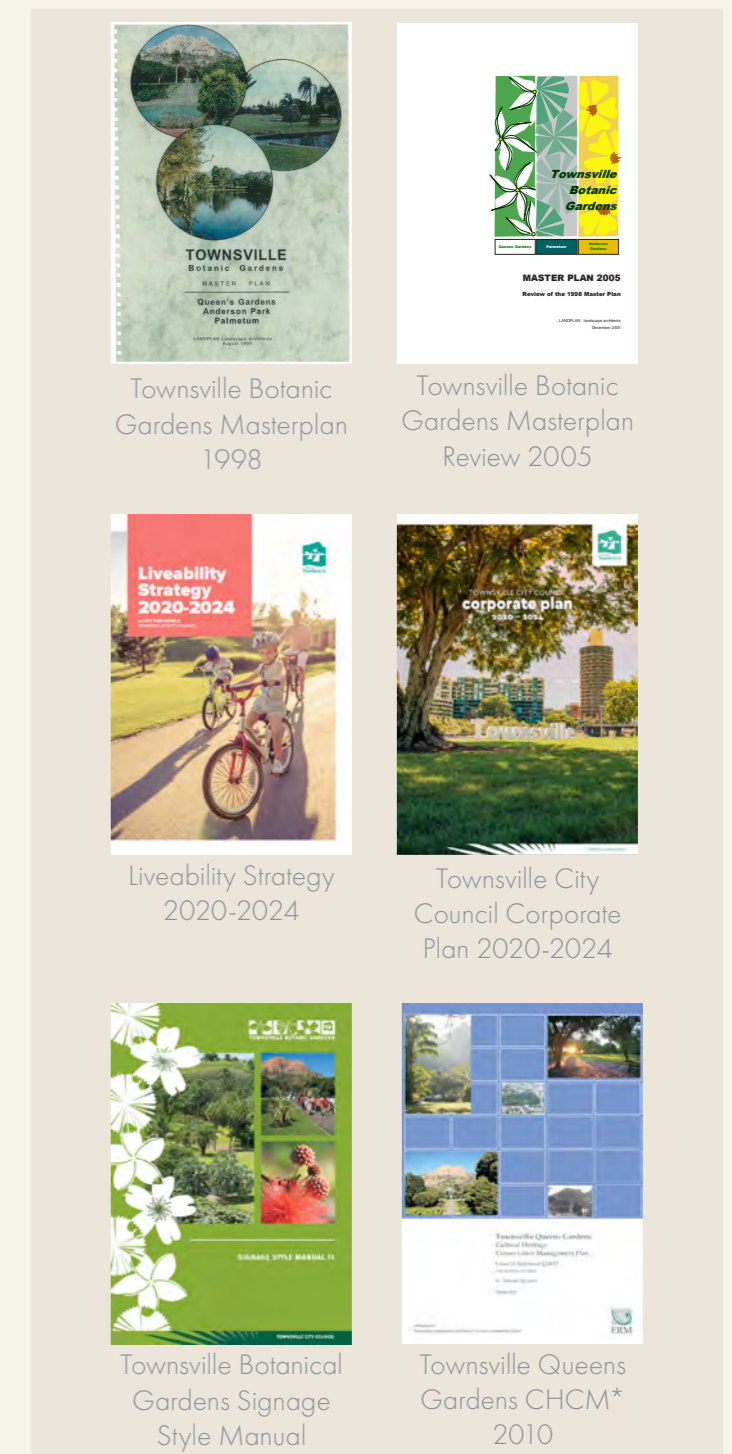
Jul External consultation was delivered over a one month period in July 2020 via Townsville City Council's 'Have Your Say' website. A summary of this consultation is detailed in section 3.2.

Aug The Final Masterplan represents the feedback of the public consultation and council stakeholder review and details a rationalised direction for the gardens' future development.

1.3 Background Reports

In creating the final Masterplan, the following reports have been investigated and provide a background understanding to the project:

- Townsville Botanic Gardens Masterplan 1998;
- Townsville Botanic Gardens Masterplan Review 2005;
- 2011 Masterplan Review Preliminary Investigations;
- Queens Gardens Cultural Heritage Conservation Management Plan 2010;
- City of Townsville - Liveability Strategy 2020-2024;
- Townsville Botanic Gardens Capital Works Needs 2019;
- Townsville City Plan - Landscape Policy;
- Townsville Botanical Gardens Signage Style Manual;
- Anderson Gardens Visitor Centre Scoping Paper 2007; and,
- Anderson Gardens Centre Feasibility Report 2008.



*CHCM: Cultural Heritage Conservation Management Plan

1.4 Evolution of the Current Planning

Set out below is a summary of some of the significant actions that have set forth the masterplanning of Townsville Botanic Gardens. This is not an exhaustive list but it highlights the significant milestones.



2 Site Analysis Overview

Townsville Botanic Gardens was founded in 1969, totalling 51 hectares. It consists of three gardens, each of which has a specific theme. Refer to Sections 6, 7 and 8 for individual site analysis for each garden.

Queens Gardens:

Size: 4ha

Theme: British colonial influence, reflecting on the original 1800s style garden

Established: 1870

Excerpt from 1998 Masterplan:

Queens Gardens is traditionally designed to emphasise the specialised horticultural elements associated with British colonial influence in the tropical areas of the world. This historic link creates the physical and visual characteristics of this well know city park. Queens Gardens is used for a variety of passive recreation and event activities that capitalise on its aesthetic and environment values.

Strategic Context:

- Recognition of its heritage value. Specific emphasis placed on the legacy of botany and horticulture of British exploration and development;
- From the 2010 Conservation Plan it seems that the main 'style' taken up in the late 1800s was that of the Paradise Garden style, which is based on the Persian Garden style;
- Available for events such as weddings and small community gatherings;
- Used for major events as well including Eco Fiesta and Halo (Festival of Lights);
- Supports an aviary, incorporates a playground; and
- Incorporates plant collections including traditional British heritage, rainforest, palms, frangipani garden and significant shade trees.



Anderson Gardens:

Size: 26ha

Theme: Arboreum

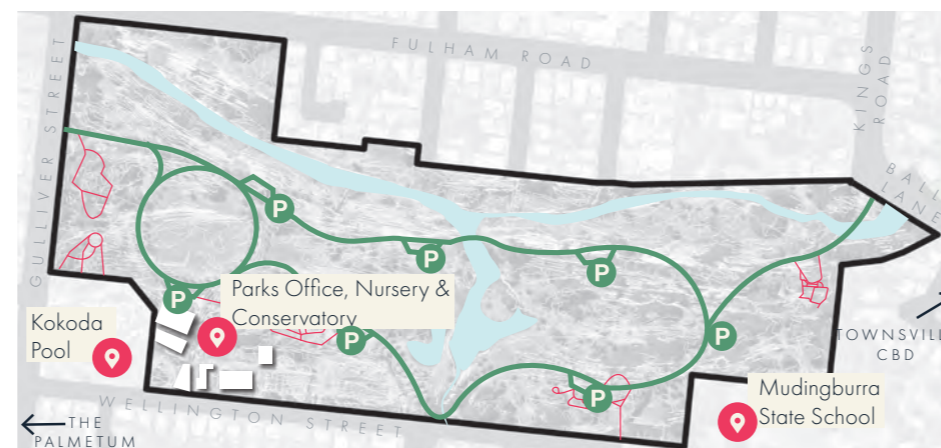
Established: land purchased in 1929

Excerpt from 1998 Masterplan:

Anderson Gardens has a strong emphasis towards a comprehensive regional flora collection. The gardens has failed to gain significant appreciation, recognition and use by the community of Townsville. The park is extensive, with interesting topography and tree massing but currently lacks a discernible overall theme and focus. This site is suited to a regional botanic garden specifically for research and simply consisting of plants of the 'dry tropics'.

Strategic Context:

- It is considered the main core Botanic Gardens of Townsville's three sites, although public perception would be questionable;
- Emphasis on flora of the dry tropic region;
- Conservatory (limited operating times, no obvious theme for its collection);
- Accommodates events and activities, including large scale to intimate wedding ceremonies;
- Used by recreational walkers and joggers alike;
- It functions as a major drainage corridor; and
- Predominantly open grassed areas with tree plantings.



Palmetum:

Size: 21 ha

Theme: Palm Garden

Established: officially opened in 1988

Excerpt from 1998 Masterplan:

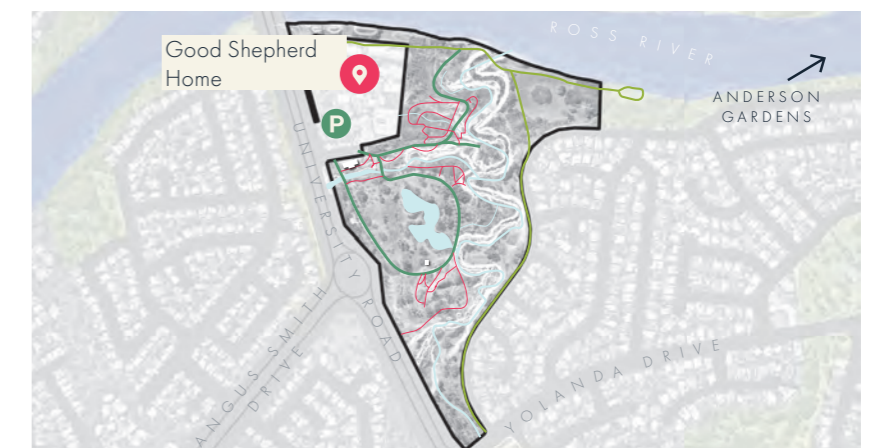
Palmetum is developed to maintain its significance as Australia's premier palm collection and one of the largest and most diverse collections in the world.

It is a diverse and visually interesting site and is widely acknowledged by local residents, visitors and the scientific community.

Consequently, it is well known and regularly used by the public for uses which integrate with and utilise its scientific and botanic value as much as its aesthetic value.

Strategic Context:

- Premier palm collection nationally and internationally;
- Used for events of all scales;
- Has a tearoom facility in Tumbetin Lodge;
- Supports a memorial garden (Blackhawk Memorial) and Sister City Garden;
- Major drainage corridor;
- Some shelters and boardwalks; and
- Interpretative tours.



Context Plan

Legend

- Project Site Boundary
- Major State Road
- Major Local Road
- Townsville Central Business District
- Major Waterway/Water body
- Project Site Location
- + Hospital
- 🛒 Major Shopping Precinct
- 🎓 Tertiary Education Facility
- ✈️ Airport
- 🚆 Railway Station
- 🌳 Notable Open Space
- 🏔️ Natural Landmark
- 🕒 Park Proximities



3 Consultation Summary

3.1 Initial Consultation Summary

The Botanic Gardens Masterplan public consultation aimed to generate inclusive community feedback and guidance on Council’s decision making and planning towards the Botanic Gardens Masterplan for future generations to enjoy. The proposed consultation generated significant community feedback from a wide array of public, user, community and transient groups. This consultation ran from 09 March 2020 through to 03 April 2020 and generated engagement of 108 unique submissions. These submissions were captured through the Have Your Say Townsville platform; engagement with this platform was driven through social media posts as well as onsite collateral at each location.

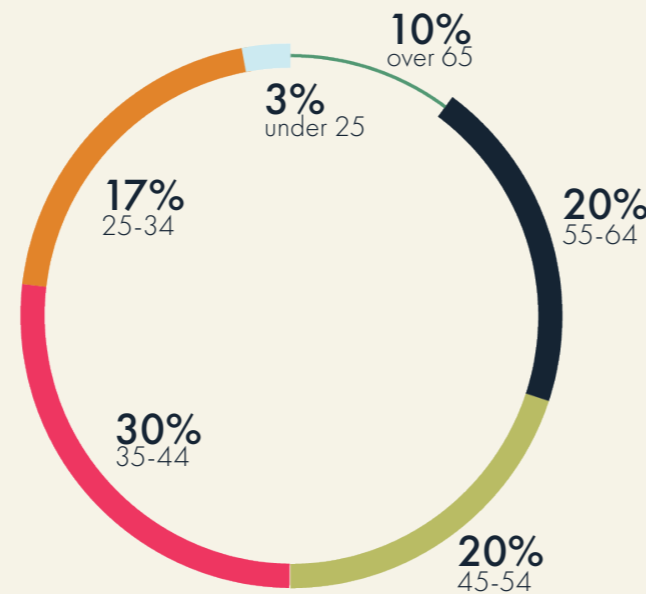
A number of questions were identified as key to sourcing accurate and important information for the development of this Botanic Gardens Masterplan. The questions included:

- What improvements or additions to the Botanic Gardens are most important to you?
- How often do you visit each garden?
- Why do you visit each garden?
- Which of the existing features within each garden do you feel are meeting expectations or require improvement?
- Is there any further feedback for the Botanic Gardens in general?

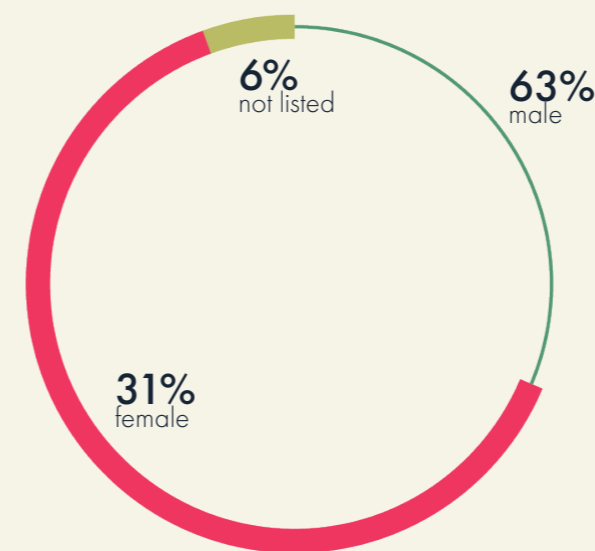
This engagement generated valuable community feedback from key users at the ground level that underpins the fundamental principles of the Botanic Gardens Masterplan.

Overall, this public consultation has found a strong level of support for investment in additional features and facilities within the three gardens. The major focus for improvement was on natural elements, with features such as bins, toilets and accessibility also being considered important.

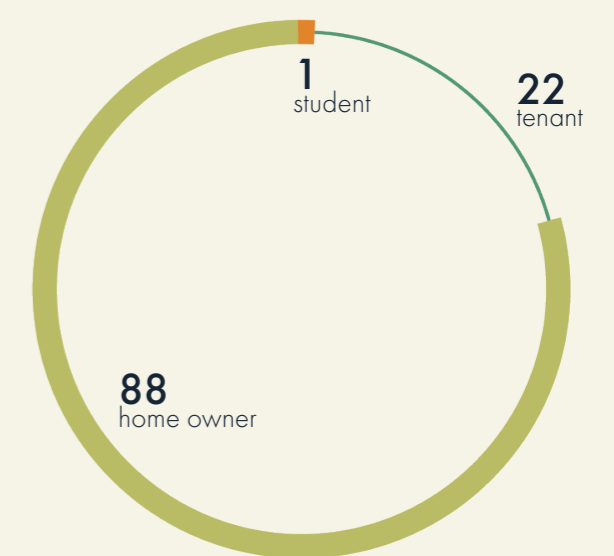
Age of Respondents



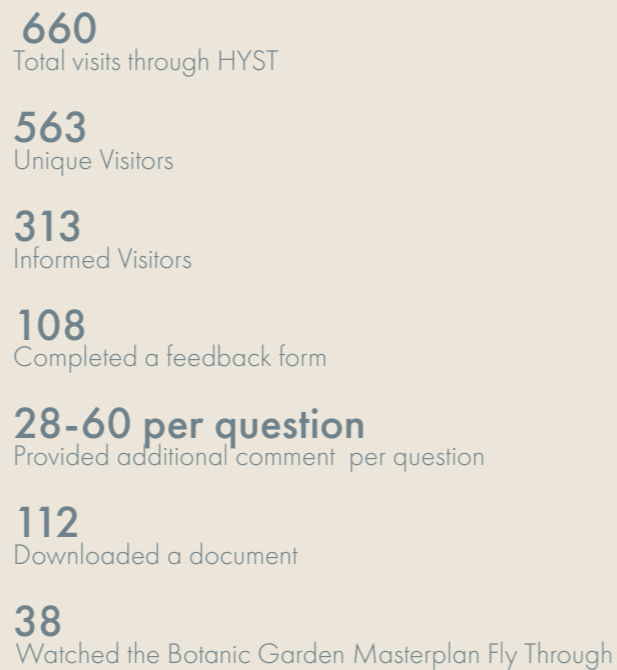
Gender of Respondents



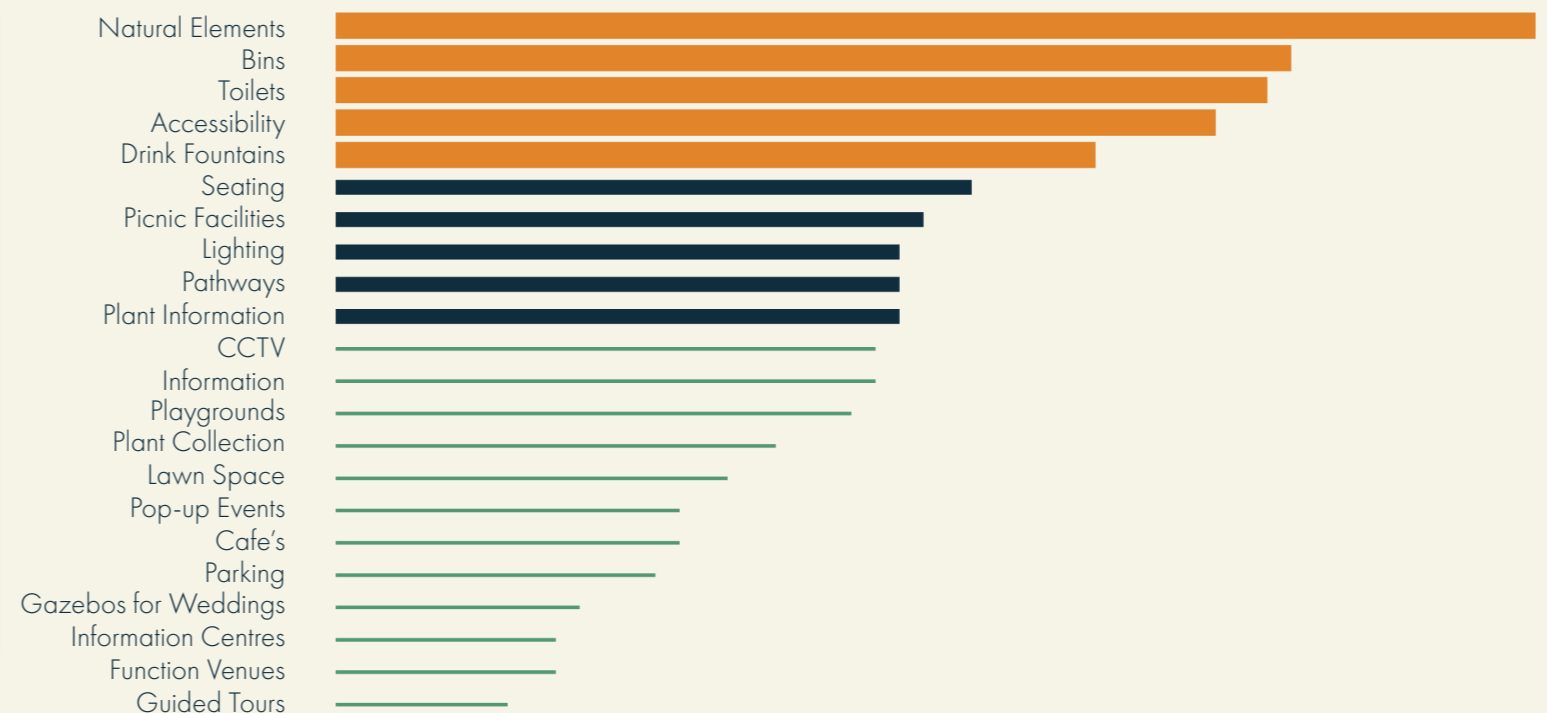
Living Description



Have Your Say Townsville (HYST) Statistics



‘Most Important’ Features ranked by responses

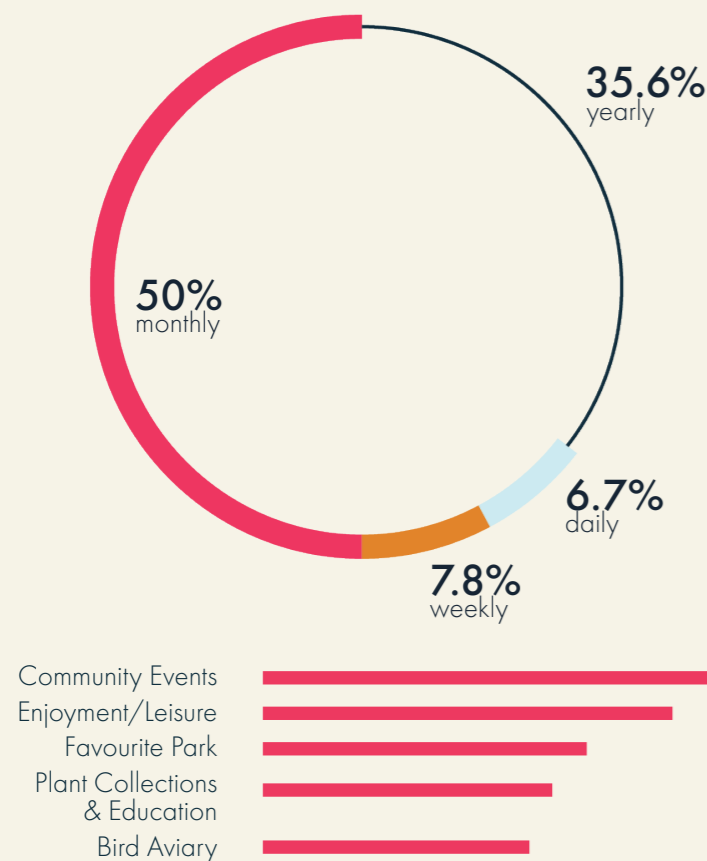


3.2 Queens Gardens

As depicted in the below graphic, Queens Gardens is most often visited on a monthly-yearly basis. Respondents appreciate the gardens for the cool oasis it provides close to the city, the abundance of shade and the many opportunities for photography and quiet reflection it supports.

According to consultation feedback, improvements to toilet facilities, pathways, activation, playgrounds, accessibility and seating/picnic areas are the highest priority for the gardens.

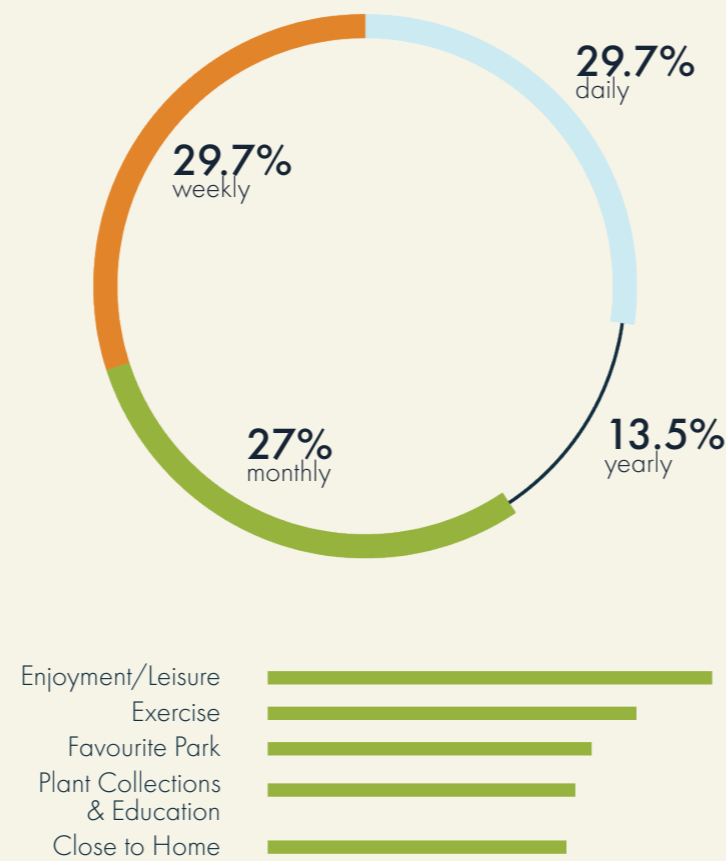
Visitation: When & Why



3.3 Anderson Gardens

Situated in a largely residential context, the Anderson Gardens are frequently visited by neighbouring locals. The gardens are the most frequented of all the Botanic Gardens, with the highest percentage of respondents visiting on a daily or weekly basis for exercise, time in nature or social interaction. Most respondents recognise Anderson Gardens as the premier botanic destination within Townsville.

Many respondents made comments regarding road safety and traffic control, requesting measures to protect users within the gardens. Other comments suggest improvements are required to the garden's toilet facilities, accessibility, conservatory and activation through coffee carts or nature play opportunities.

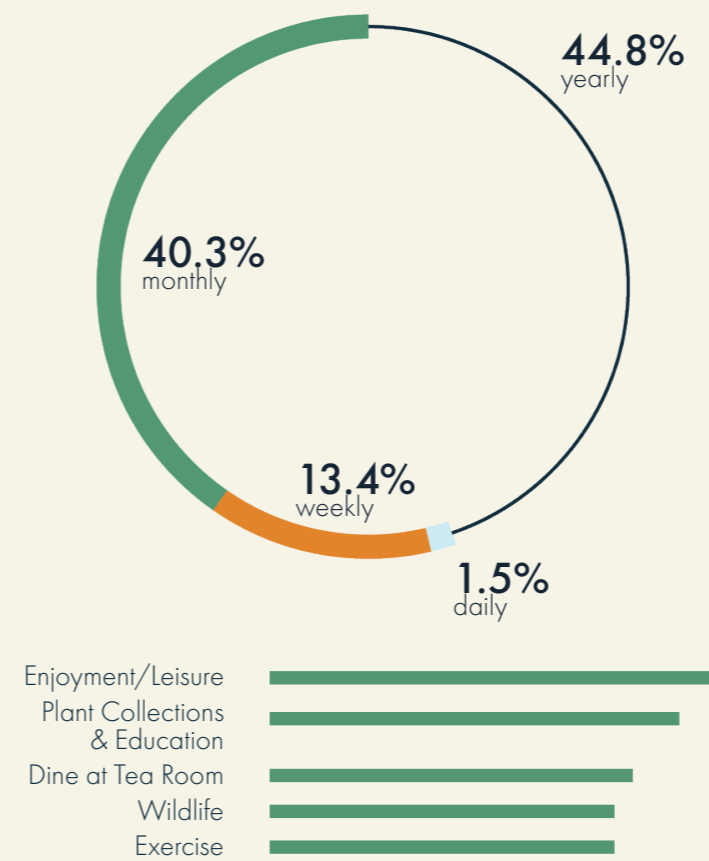


3.4 Palmetum

Palmetum is most often visited on a monthly-yearly basis with very few respondents frequenting the gardens daily.

The Palmetum is highly appreciated for its rainforest setting and tea room. Additionally, respondents note dog walking and proximity to the river as major draw-cards for the gardens.

Comments suggest improvements are required to signage and educational opportunities, family-oriented activities such as tree climbing, picnicking and playgrounds, and accessibility.



"I would like to ensure Anderson Gardens specifically are protected and used. I would be happy for more pop up events to be held there"

"I love that we have [the botanic gardens]. They are a treasure and should be treasured. Good seating options and picnic tables are always appreciated, so make sure they are plentiful and shaded especially in the warmer months."

"I love the rainforest trees. I find them a very soothing and inspiring place and like to sit there and sometimes meditate. I also really loved the rose garden - just a place for ambling around amongst pretty things."

"I like to compare the different styles of the Gardens and their plant collections as well as the birds. It is a welcome oasis in the built up area with a calming feel. Good meeting place with transport around and amongst pretty things."

"Somewhere nice and pleasant to stop and have lunch on a busy day or to have a picnic with friends and family" (about Queens Gardens).

"I am a photographer and it is a lovely place for portraits."

"The kids love the ducks and having the trees to climb and large space to play games with their imagination. We love the large ponds and water lilies."

3.5 Draft Masterplan Consultation Summary

Townsville Council proceeded with the second round of community consultation on the Draft Masterplan for the Townsville Botanic Gardens. The engagement requested feedback in relation to the implemented changes and the overall Masterplan to gather feedback, support and ensure accuracy. This consultation ran for 29 days, from 29 June 2020 through to 27 July 2020 and generated 103 submissions for consideration for the Final Masterplan. These submissions were captured through Council's Have Your Say platform and were driven through social media posts in addition to Stakeholder Engagement key contacts.

A series of questions were included in the consultation and were identified as reconfirming important information for the completion of the Botanic Gardens Masterplan. These questions were:

- Which visions/ strategies do you think are most important?
- Which projects would you like to see delivered in priority order?
- Non-proposal support?
- Additional elements including within plans?
- Any further feedback in general for the Botanic Gardens?

Overall, the community feedback revealed a strong support for investment in additional features and facilities within all three botanic gardens. The major focus for improvements was on infrastructure revitalisation, accessibility, natural elements and education.

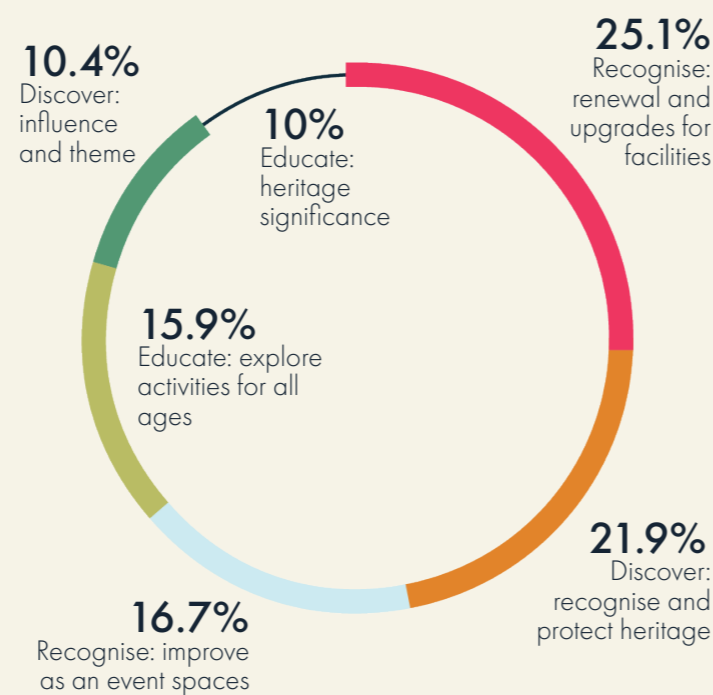


3.6 Queens Gardens

As illustrated below, a clear community priority was revealed when respondents were asked which proposed visions for the Queens Gardens they deemed most appropriate. One quarter of respondents suggested providing renewal and upgrading of the existing facilities was most important, followed relatively closely by recognising and protecting the garden's heritage. Interestingly, despite this, educating users of the garden's heritage significance was deemed the least appropriate vision for Queens Gardens. Building upon the British Colonial influence and Paradise Garden theme was also less favoured.

Support for improving the functionality of Queens Gardens as an event space and exploring activities for all age groups were evenly balanced, each generating one-sixth of the respondent's approval.

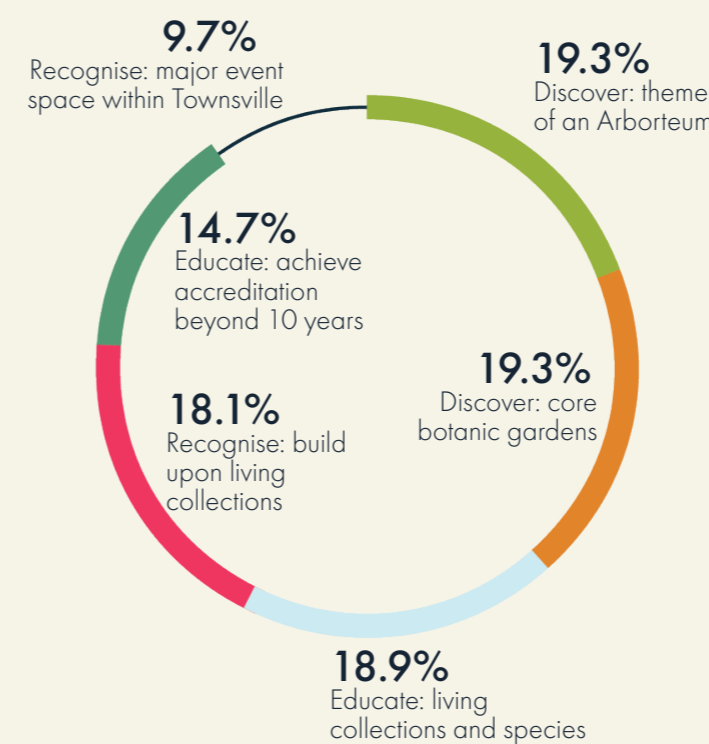
Vision and Strategies most appropriate



3.7 Anderson Gardens

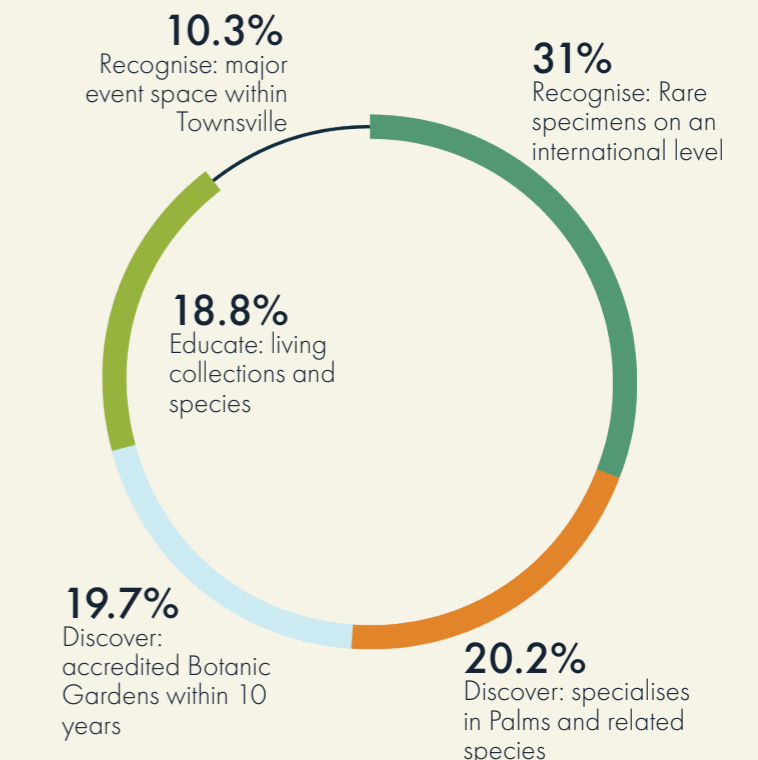
Support for the proposed Anderson Gardens visions and objectives was largely well-balanced and evenly spread. As depicted below, four of the six visions were deemed to be almost equally appropriate by the respondents. These were: creating a Botanic Gardens focusing on the theme of an Arboretum, becoming the core Botanic Gardens and committing to development in the next 10 years, educating users of the gardens and on the importance of living collections and species and building upon the living collections relevant to the Arboretum theme.

Notably, the two most highly-ranked visions were categorised under the "Discover" theme. The lowest ranking vision was to have the Anderson Gardens become one of the major event spaces within Townsville, with one-tenth of the total support provided by respondents.



3.8 Palmetum

The proposed visions and objectives for Palmetum had the most varied support from the respondents with a clear hierarchy of priorities being revealed. As conveyed below, almost one third of support was distributed to continuing the Palmetum as an established collection of rare specimens on an international level. Like both Queens and Anderson Gardens, the lowest-ranking vision and strategy for the Palmetum was becoming one of the major event spaces within Townsville. A relatively equal distribution of support was provided for the remaining three visions and objectives: creating a Botanic Gardens specialising in Palms and related species, becoming an accredited Botanic Gardens within the next 10 years and educating users of the gardens on the importance of living collections and species. These results suggest that the Townsville community value the international prestige of the Palmetum, without necessarily needing to associate the gardens with Botanic accreditation and education.



When viewed holistically, respondents deemed the visions and objectives that were classified under the "Discover" and "Recognise" themes the most appropriate for the gardens. The objectives relating to the "Educate" theme appeared to be lower priorities across the board. Mostly, the visions and objectives that maintained the gardens current purpose, character and reputation were highly supported, often followed by those that focused on enhancing a tangible, direction that was complementary to the gardens existing significance to the Townsville community. Overall, these results suggest that the Botanic Gardens are an already highly-supported asset of the region and future direction should mostly focus on "maintaining the course" assisted by some key, select enhancements.

Project themes most strongly supported to be delivered first



Project locations most strongly supported to be delivered first



Feedback revealed clear priorities for the delivery of the Townsville Botanic Gardens Masterplan. Anderson and Queens Gardens were highly-favoured as projects to be delivered first; with the Palmetum having a significantly lower preference. Positive support was also awarded to projects that focused on repair works and infrastructure revitalisation. Activation strategies such as events and café spaces had quite low priorities in the opinion of the respondents. Interestingly, despite being the lowest supported vision theme per garden, "education" was also positively supported as projects to be delivered first.

Any proposals not supported



Of the concerns raised, just under half of these were in relation to events occurring in the gardens. The remaining concerns captured matters including ongoing maintenance and upkeep, keeping the focus on the plant collections and preserving the natural and peaceful feel of the gardens.

I would like to see...

"more local green festivals held in a rotation of each of the gardens to showcase each of their beauties."

"education and information programs."

"a digital app or similar technology to identify plants, animals or heritage information for each garden."

"the upgrading of the Anderson Gardens conservatory. It is hardly ever open and has lots of potential."

"more labels for the plant and trees in the gardens, especially if they are available locally from nurseries or farms."

"I would hate to see big events like concerts happen in the Gardens. I would hate the beautiful plants to be harmed in any way. Small to medium sized events with measures to protect the garden would be ok."

"Although the history of the garden is important and historic features should be kept, it is important to make the garden relevant to people today."

"[A concern to me is] using Queens Gardens as an event space. Queens Park is more suitable as an open space. Queens Gardens plantings and lawns should be protected from over-use."

"Although I understand why Council would want to use these stunningly beautiful spaces for events, I think it would be preferable to keep at least one event-free and leave it as a peaceful place for people to retreat to. I'd suggest that Palmetum would be the natural choice to be event-free as it has less open spaces than the other two."

"I think events in Queens Garden during our winter months are spectacular and should be continued as much as possible. I love Anderson Park being a tranquil space for dog walking and family picnics. I wouldn't enjoy events being held here."

"I think these projects have considered a lot of improvements and am looking forward to seeing these plans executed. My only concern is ongoing maintenance and upkeep for the facilities and areas provided."

"Growth of the gardens would be lovely. They are a delight to spend time in."

4 Living Collections for the Queens Gardens, Anderson Gardens and Palmetum

4.1 Common issues for the three gardens

All three gardens need to be seen as significant botanical displays. Anderson Gardens and the Palmetum also need to establish and regularly update their plant records and become more involved with education, formal and informal, and/or conservation to better enable them to become accredited botanic gardens. For this, each garden needs a living collection plan and an education plan; and Anderson Gardens and the Palmetum need a conservation management plan.

If it is preferred that all three gardens should be accredited botanic gardens, the most important focus for Queens Gardens (in addition to its quality plant displays) will be the recording and interpretation of the plant collection.

4.2 Summary of Specific Tasks or Themes

Queens Gardens – Horticultural Display – emphasis on the Paradise (Persian) style

The Queens Gardens' current main attributes could be described as horticultural, with the garden having been established as a trial garden for the European settlement and its theme often described as British colonial. Since the start of the Gardens, planting themes seem to have changed with only a few identifiable collections including the trees, palms and roses.

An important period in the Gardens development was when the Paradise (Persian) Garden style was used in the late 1800s. It included the central water feature, the main path axis and possibly the heavy plantings on the edges with open and structured planting beds within the Gardens. This style could be an important focus for the Gardens future development.



Anderson Gardens – Tree Display – An Arboretum

The main botanical attribute currently includes a variety of tropical trees, palms and cycads. Originally planted as an arboretum, the plant form of trees is still strong with some specimens dating back to the late 1800s. The tree collection that has been developed has an emphasis on native and dry tropical trees. Specific collections include Cape York Peninsula flora, Pandanus species and tropical fruit trees. The future development of the collection could primarily involve the expansion of the number of Australian dry tropical trees, which could also assist the tree selection for the Townsville area generally. In regards to the Conservatory, if it is to be replaced, it needs a very strong theme/mission for the collection. At present it is hard to identify.

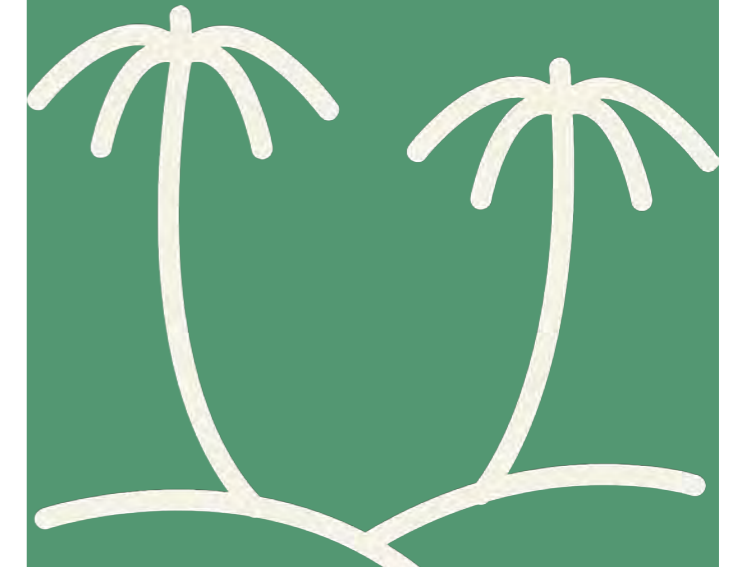
The Anderson Gardens is well placed to be developed as an creditable arboretum given the tree collection it already holds.



Palmetum – Botanical Display – Palms and related families

The main botanical attribute is a very significant palm collection (in both national and international terms) which includes a large Australian collection and several rare and threatened species. The other significant collections include Pandanus and cacti/succulents with the latter a collection that should be reviewed in terms of the agreed theme/mission of the garden. The future development of the collection could look at including plants that are related to palms which could provide, for example, attractive flowering.

The Palmetum is well placed to be developed as a botanic garden given its very strong palm collection, the core of a functioning and creditable botanic garden.





Masterplan





5 Vision & Objectives

5.1 Vision

The Botanic Gardens are Townsville's most treasured gardens celebrating Townsville's unique history, diverse landscape and tropical character.

The vision is to firmly establish the three gardens that make up the Botanic Gardens of Townsville as major cultural institutions and destinations within North Queensland. The gardens will allow users to explore and discover the unique collections, recognise the present and educate the future.

These gardens will allow the community and visitors to engage in nature's diversity; attend events and interact with play spaces, all while learning and caring for our surrounding environment.

Discover

Recognise

Educate



5.2 Objectives

To provide rationalised directions for the future development of the three Botanic Gardens

To acknowledge and build upon the past Masterplans and determine shared goals for the next ten years

To aim for the Palmetum to become an accredited Botanic Gardens in the next ten years

For Anderson Gardens to achieve its vision to be the core accredited Botanic Gardens beyond ten years

To create a unified furniture style across the three botanic gardens; with the exception of Queens Gardens having a bespoke element

To provide an exciting gardens public realm with various multi functional spaces for the community to enjoy



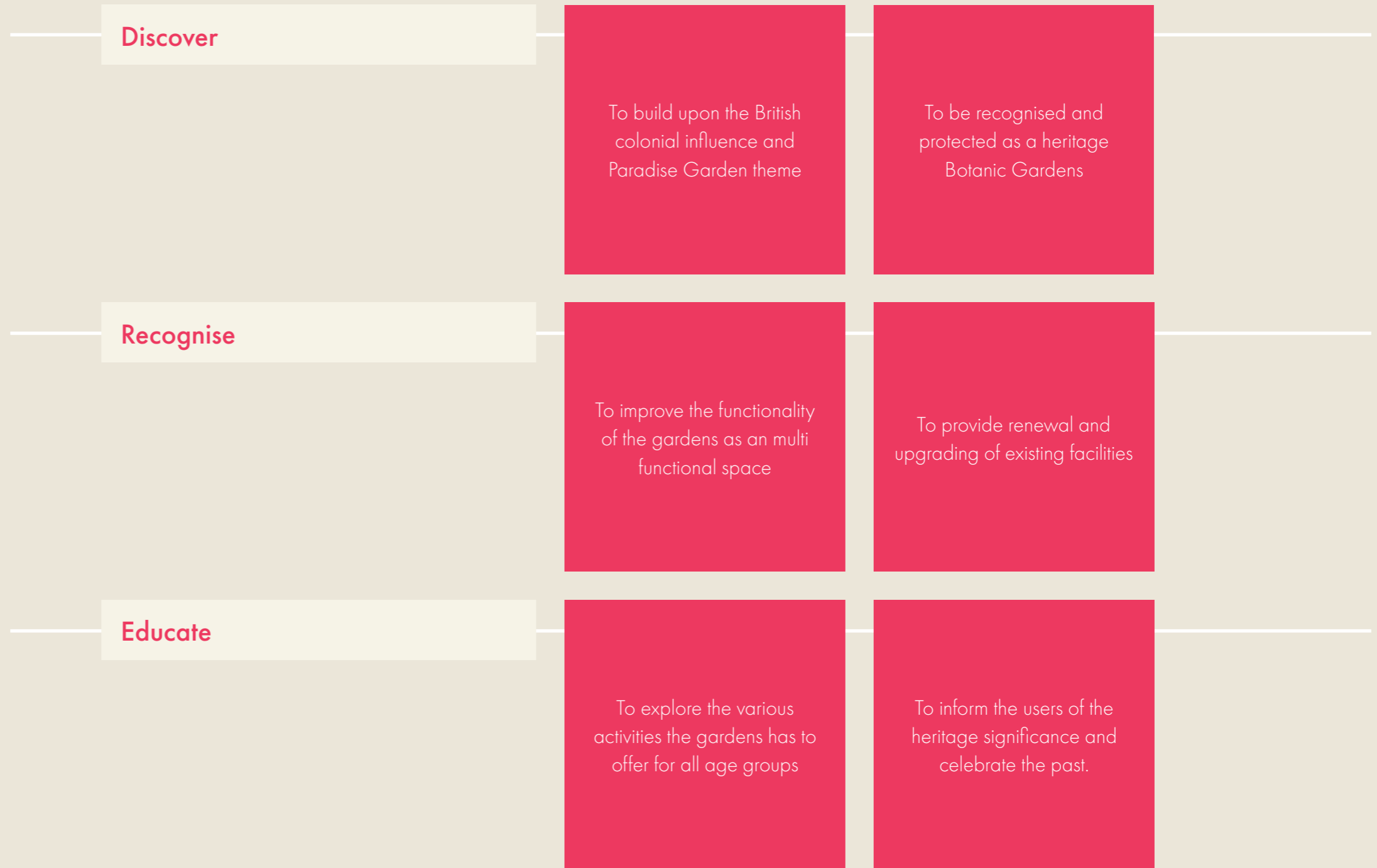
6 Queens Gardens



6.1 Vision

Restore the heritage gardens to their former glory to deliver a safer, surveilled, family focussed destination for all ages to enjoy

6.2 Objectives



6.3 Site Analysis

Summary of Existing Features

Queens Gardens is a nice heritage inspired park with a lovely sense of scale, tropical plantings, open lawn predominantly under beautiful shade trees and rainforest walk. It's gardens and lawns are well maintained but the underlying infrastructure of pathways, fencing, irrigation, playgrounds, furniture and structures, all need refurbishment, replacement and updating.

Its attributes could be described as horticultural, with the garden having been established as a trial garden for the European settlement and its theme often described as British colonial. Since the start of the garden, planting themes have changed with only a few identifiable collections including the trees, palms, frangipanis and roses. An important period in the garden's development was when the Paradise (Persian) Garden style was used in the late 1800s. It included the central water feature, the main path axis and possibly the heavy plantings on the edges with open and structured planting beds within the Gardens. This style could be an important focus for the Gardens future development.

Evaluated against the Masterplan of 1998 and 2005 (and the CHCMP recommendations), not much of this plan has been instigated.

The focus is primarily tending to the gardens and lawns as a park, and maintaining decaying pathways and irrigation. A lot of diverted resources are also contributed to its use as a major event space, including the repair of consequential damage from these events.



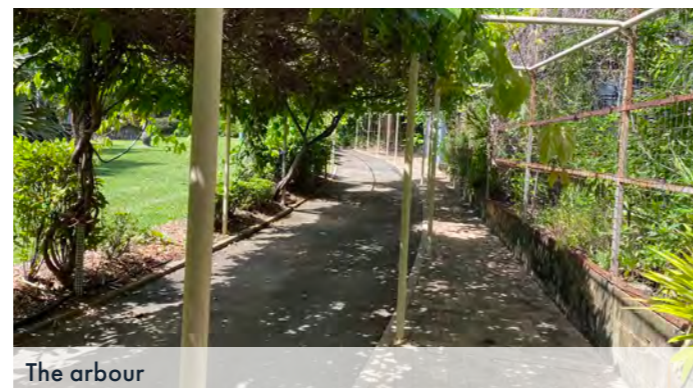
Entrance from Paxton Street



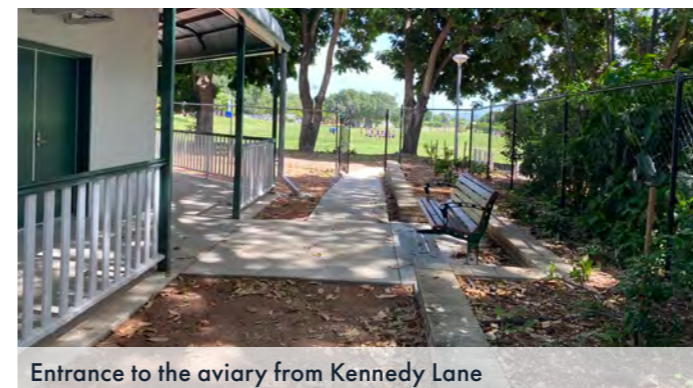
View to Castle Hill from the centre of the gardens



Entrance from Gregory Street



The arbour



Entrance to the aviary from Kennedy Lane



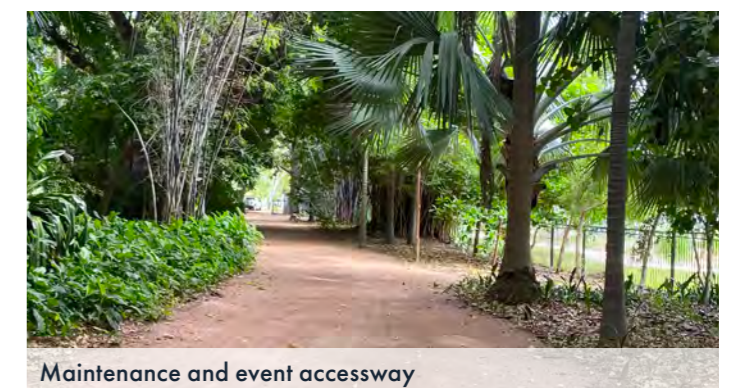
The aviary



Entrance from Kennedy Lane























Playground



Maintenance and event accessway

Existing Site Layout - Queens Gardens

Legend

-  Project Site Boundary
-  Asphalt Pathway
-  Gravel Pedestrian Trail
-  Pedestrian Entry
-  Major Node
-  Parking
-  Chair
-  Table
-  Aviary
-  Herb Garden
-  Raintree Lawn
-  Play Lawn
-  Palm Lawn
-  Events Lawn
-  Maze Lawn
-  Rainforest Lawn
-  Rainforest
-  Frangipani Lawn
-  Succulent Garden
-  Bamboo Cluster



6.4 Living Collections

For the Queens Gardens it is suggested a lesser concentration on a botanical collection and more emphasis on the landscape/heritage, with the restoration of the more formal 'paradise garden' style from the late 1800s being important and any possible 'colonial' links also pursued. Unlike the European gardens, which are often designed for more activity, Paradise/Persian gardens are intended for rest and contemplation which fits with the Garden's location near the city.

Further development of the Garden could include:

- Adding the missing cross axis path and improving the form of the circular pathway
- Reinstating the water feature in the centre of the garden



Arbour (Also Refer 6.4.4.3)



'Paradise Garden' style

Source (T-B): Susan Rushton, Garden Illustrator
NOTE: These exemplar images are indicative only

- Re-establishing the central and seasonal flower gardens so as to attract visitors at different times of the year. Some plants used for such plantings include:

- Roses
- Hollyhock (Althaea)
- Pineapple (Ananas comosus)
- Jackfruit (Artocarpus integrifolia)
- Quince (Cydonia oblonga)
- Hibiscus (Hibiscus rosa sinensis)
- Hyacinth (Hyacinthus)
- Iris (Iris)
- Jasmine (Jasminum auriculatum)
- Oleander (Nerium)
- Lotus (Nymphaea)
- Pomegranate (Punica granatum)

This again is something to be addressed in the collection plan.

- Reducing the palm display
- Reinstalling an arbour or similar shelter for visitor shading (as shown to the right) and associated plants in the centre of the garden

Possible climbing plants for the arbour include:

- Clerodendron
- Hibiscus
- Passiflora
- Bauhinia
- Campsis radicans
- Bignonia
- Muehlenbeckia
- Bougainvillea
- Hardenbergia
- More effective presentation of the aviary with better interpretation and nearby landscaping



Strategies

The Queens Gardens' Vision and Objectives have been translated into several actions, categorised into six strategies. These are:

Upgrade Infrastructure Services

Entries, Fencing and Walls

Circulation and Layout

Play Spaces, Arbour and Furniture

Living Plant Collections

Management and Operations

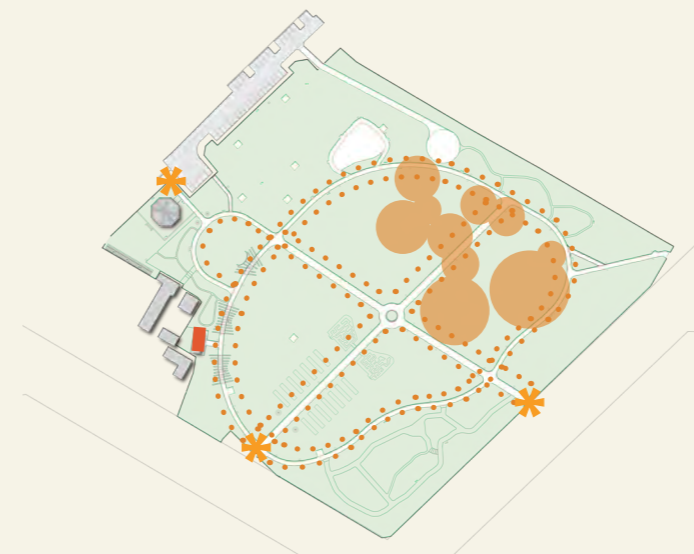


Upgrade Infrastructure Services

6.5.1 Actions – Upgrade Infrastructure Services

Renewing and upgrading the infrastructure services to provide a reliable and fit for purpose system capable of supporting a Botanic Garden and events space, including:

1. Renewing the electrical reticulation including installing 3 phase power.
2. Renewing the irrigation system.
3. Installing potable water points including drinking fountains.
4. Lighting the main axial and circular pathways. Up lighting in trees in the event space. Lighting the main entrances and gates.
5. Installing stormwater along the main axis pathways.
6. Installing a new amenities block (4 female, 4 male cubicles, 2 accessible toilet with parent change tables).
7. Removing the existing toilet block.
8. Installing CCTV.



4 Lighting on the main axial and circular pathways and event space



6 Constructing a new amenities block

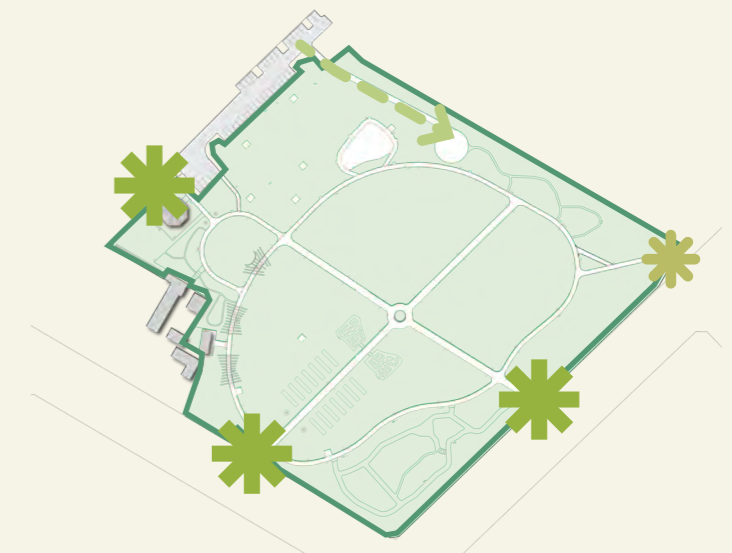
Source (L-R): Reddit, Bevolo, Perello Design & Build, PGH Bricks and Pavers, Ramiro Chavez
NOTE: These exemplar images are indicative only

Entries, Fencing and Walls

6.5.2 Action – Entries, Fencing and Walls

Refurbishing, rationalising and reconfiguring points of entry to provide a heritage-sensitive and accessible gardens, including:

1. Refurbishing the gates to all points of entry (Paxton Street, Gregory Street main entrance and Gregory Street secondary entrance).
2. Upgrading the main entranceway from Kennedy Lane, recognising the gates are heritage listed and should be in line with the Conservation Management Plan (CMP). The heritage stone retaining wall is to remain. New entrance way to the North of the aviary to be provided.
3. Reconfiguring the vehicular events and maintenance entry point and improving the vehicle access road.
4. Upgrading all perimeter fencing to be the same material (black tubular fencing as minimum) to be consistent with CMP.

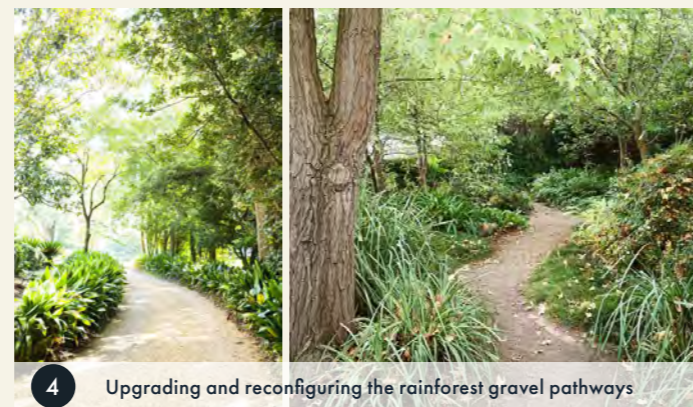
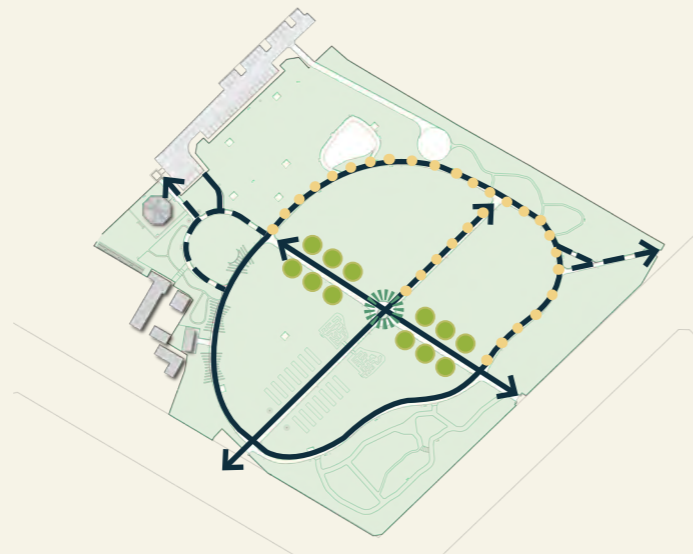


Circulation and Layout

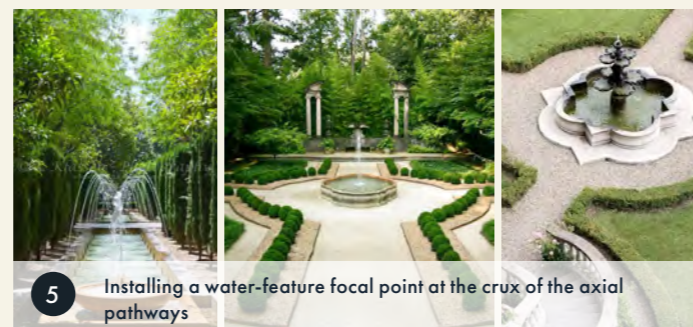
6.5.3 Action – Circulation and Layout

Enhancing and improving the quality of pathway connections and the representation of the Paradise Garden theme, including:

1. Extending the main pathway to form an axial 'cross' layout inline with the 1998 masterplan. The main axial pathway and the circular pathway are to be a high-quality paving material other than the asphalt as it exists. At nodal junctions, differentiation is to be created through material or colour to signal a junction. Some realignment and formalisation of the circular main pathway in the area to the north (adjacent to the event spaces) will strengthen the formality. This should consider the existing trees. Extend the axis pathway through from the focal point to the North East.
2. Realigning and formalising the pathway from Kennedy Lane and place in a new circular pathway around the 'wedding lawn'. Please note: The heritage gates on Kennedy Lane will still be functioning as an entrance way for weddings.
3. Ensuring all hard-finished pathways are DDA compliant.
4. Realigning the rainforest pathway to intertwine with the plants and place in seating. Reconfigure a new access pathway to enhance the experience. Retain rainforest pathways as gravel and where necessary regrade and reconfigure to minimise washouts and erosion.
5. Installing a focal point, either a sculpture or fountain, at the crux of the axial pathways. The focal point should preferably incorporate a water element which is in align with the Paradise Garden theme.
6. Lining the axial pathway from Gregory Street to Kennedy Lane with feature trees.
7. Symmetrically arranging all furniture and shelters along axial pathways.
8. Place feature pavements on entry to the four main entries into the Botanic gardens. This will be an attractive welcoming wayfinding element for users to the Queens Gardens.



4 Upgrading and reconfiguring the rainforest gravel pathways



5 Installing a water-feature focal point at the crux of the axial pathways

Source (L-R): Gabe Hanway, Eve Wilson, Klassen, Pinterest, Brunnen Design
NOTE: These exemplar images are indicative only

Upgrade Infrastructure Services

6.5.4 Action – Play Spaces, Arbours and Furniture

Providing opportunities for all age groups to enjoy the gardens, including:

1. Installing a new playground in a theme that corresponds with the garden (heritage and paradise garden theme) and shade structures. The playground size should be double the existing playground size. A pathway connecting from the main pathway network around the playground space should be provided with additional colourful planting.
2. Furnishing the playground area with additional shelters and picnic settings. This should be in line with a consistent furniture style.
3. Constructing three vine arbours along the circular pathway as illustrated (two near the new amenities block and one uniquely designed arbour for the wedding lawn).
4. Installing drinking fountains in appropriate locations throughout the garden and the playground.
5. Furnishing the garden with seating: two under each arbour and placed at entrances to the collections. See illustrated plan for more detail.
6. Placing in bins. This should be in accordance with the furniture style suite.
7. Placing signage at the entrances. This should be in accordance with unified style guide used throughout the three Botanic Gardens.
8. Providing an information shelter that incorporates a brochure stand and digital interpretive sign (garden and heritage information) at the primary entrance to the gardens. There is opportunities to develop a mobile app and/or a QR code that can be placed at the shelter to inform users about the Botanic Garden.



1 Installing a new heritage and paradise garden themed playground



3 Constructing vine arbours along the circular pathway

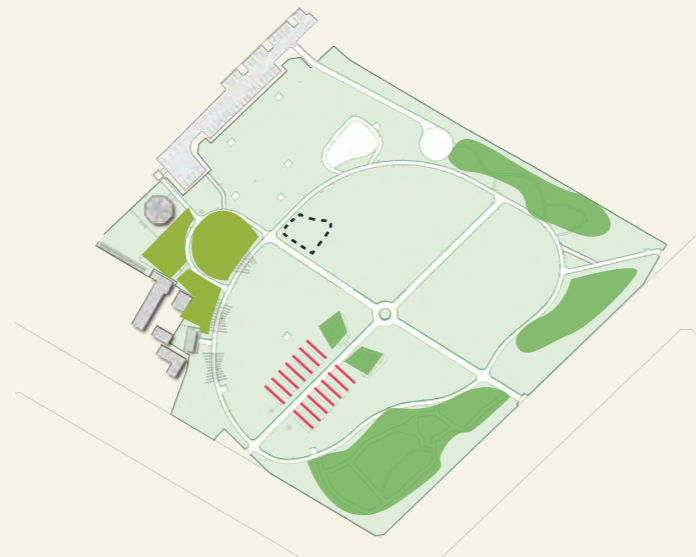
Source (L-R): AILA, unknown, Tensile Design and Construct, Fernando Alda, The Travel Sisters

NOTE: These exemplar images are indicative only

6.5.5 Action – Living Plant Collections

Developing the gardens under a tropical paradise garden theme (introducing lush foliage and colourful flora) to better establish its role as a botanic gardens, including:

1. Preparing a Living Plant Collection Plan.
2. Reinstating the Rose Garden to line the main axis from Paxton Street.
3. Removing the bamboo.
4. Prohibiting the planting of additional palms in the Queens Gardens (excluding within the Rainforest area). Selected and identified Palms can be removed if they are not associated with the existing Palm Garden collection. Please consult Arborist for advice and through the revised CMP.
5. Enhancing the Rainforest area. Planting additional rainforest collections in areas that require a denser population and succession of growth.
6. Maintaining the mazes.
7. Formalising the Frangipani garden with additional trees and new signage to signify the collection.
8. Developing a new sensory garden with an intertwining gravel pathway and two access entrances with signage.
9. Increasing the size of the herb garden with an accompanying new sign on the western side of the lawn area.
10. Removing the succulent garden to create a sensory garden.
11. Installing interpretive signage on all heritage listed items and significant trees and in the living collections. This is a substantial element of the guided tours and will be used for educational purposes. This should be in accordance with a unified style guide used throughout the three Botanic Gardens.



Source (L-R): CountryStyle, Temat Enkel, Carolyn Mullet, Birgit Helbo, Houzz, Front Back Home,
NOTE: These exemplar images are indicative only

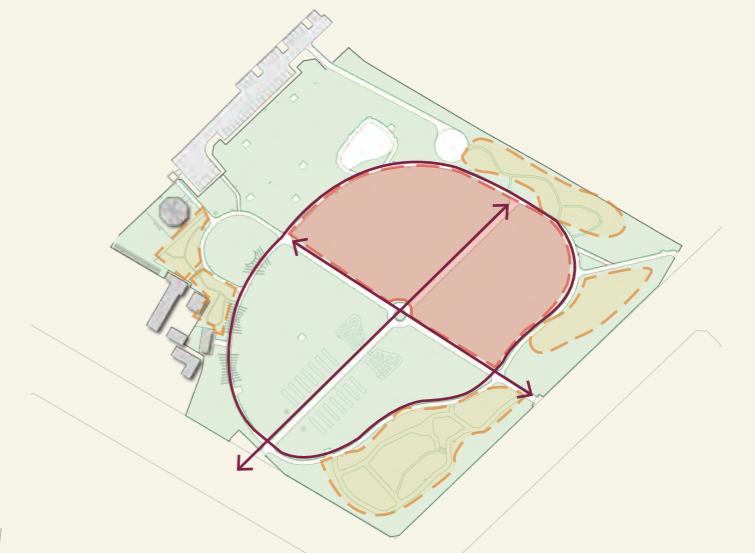


Source (L-R): Architecturaldigest, Dugun, Geckogroup, Kellenberger White, Nuttschell
NOTE: These exemplar images are indicative only

6.5.6 Action – Management and Operations

Establishing essential procedures to maintain and enhance the botanic gardens, including:

1. Stocktaking and recording of living collections.
2. Labelling and interpretation of plants and collections.
3. Developing event management plans.
4. Revising the Conservation Management Plan (CMP) including identification of important tree specimens.
5. Developing a garden tour which can be accessed by the public and education facilities for guided or self-guided interpretation of the collection. Develop a booking system for guided group tours with council staff or garden volunteers. The development of a mobile app can help with self guided tours. Refer to 6.4.4.8.
6. Developing an education plan.



Reference the Living Collections (6.4) section for more detail.

6.6 Masterplan Layout

Please note, this illustrative masterplan is indicative only and does not represent a concept plan or any level of detail design.

Legend

- Event Space
- Seating
- Lighting
- Park Shelter
- 1** Annual bed & Rose Garden
- 2** Rainforest
- 3** Aviary
- 4** Play Equipment
- 5** Events
- 6** Vine Arbours
- 7** Management & Operations
- 8** Tennis Courts
- 9** Wedding Lawn
- 10** Maze
- 11** Focal Point
- 12** Community lawn (Benches & Seats)
- 13** Existing Palm Garden
- 14** Amenity Block
- 15** Herb Garden
- 16** Fragipani Garden
- 17** Sensory Garden
- 18** Information Shelter
- 19** Colourful Planting
- 20** Entry Signage
- 21** Nodal Treatment



6.7 Priority Action and Indicative Staging Plan

High Priority (Focus will be on infrastructure services, circulation and layout, and living plant collections.)

Medium Priority (Focus will be on the entries, fencing and walls & playground, arbours and furniture; and living plant collections.)

Low Priority (Throughout the masterplan process, Queens Gardens upgrades was rated as a high priority. Therefore, there is no actions in the low priority category.)

Action	Strategy	Action
High Priority (2020-2023)		
Upgrade Infrastructure Services		
A1	1	Renew the electrical reticulation including installing 3 phase power
A2	2	Renew the irrigation system
A3	3	Install potable water
A4	4	Lighting on the main axial pathways and circular pathways. Up lighting in trees in the event space. Light main entrances and gates.
A5	5	Install stormwater along the main axis pathways.
A6	6	Install a new amenities toilet block
A7	7	Remove the existing toilet block
A8	8	Install CCTV
Circulation and Layout		
A9	1	Upgrade the main axial and circular pathway formalising the shape and alignment and providing distinguished nodal junctions
A10	2	Realign and formalise the pathway from Kennedy Lane and place in a new circular pathway around the 'wedding lawn'
A11	3	All the hard finished pathways to be DDA compliant.
A12	4	Retain rainforest pathways as gravel. Realign the rainforest pathway to intertwine with the plants and place in seating. Reconfigure a new access pathway to enhance the experience. Regrade and reconfigure the gravel paths to minimise washouts and erosion.
A13	5	Place in a focal point, adding in a water element at the crux of the axial pathways
A14	6	Line the axial pathway from Gregory Street to Kennedy Lane with feature trees
A15	7	All furniture and shelters are to be symmetrically placed along axial pathways
A16	8	Place in feature pavements on entry to the four main entries
Living Plant Collections		
A17	1	Prepare a Living Plant Collection
A18	2	Reinstate the Rose Garden

Action	Strategy	Action
High Priority (2020-2023)		
A19	3	Remove the bamboo
A20	4	No more palms are to be planted in the Queens Gardens
A21	6	Maintain the mazes
A22	8	Place in a new sensory garden
A23	9	Increase the size of the herb garden
A24	10	Remove the succulent garden



Legend

-  High Priority Actions
-  Medium Priority Actions

Action	Strategy	Action
Medium Priority (2023-2026)		
Entries, Fencing and Walls		
A25	1	Refurbish the gates to all points of entry
A26	2	Rationalise the main entranceway from Kennedy Lane
A27	3	Reconfigure the vehicular events and maintenance entry point and improve the vehicle access road
A28	4	Upgrade all perimeter fencing
Playground, Arbours and Furniture		
A29	1	Place in a new playground
A30	2	Place in more shelter areas with tables around the playground area
A31	3	Provide vine arbours along the circular pathway with a specialised arbour in the wedding lawn
A32	4	Place in drinking fountains
A33	5	Place in seating throughout the gardens
A34	6	Place in bins
A35	7	Place signage at the entrances
A36	8	Place an information shelter that incorporates brochure stand and digital interpretive sign at primary entrance to the gardens
Living Plant Collections		
A37	5	Enhance the Rainforest area
A38	7	Enhance the Frangipani garden
A39	11	Interpretive signage and plant labelling

6.8 Cost Planning

The schedule provided is to assist Townsville City Council in formulating the feasibility assessment of works proposed as part of Townsville Botanic Gardens Masterplan 2020-2030. Rates and figures provided are based on industry and best practice standards and does not necessarily reflect a comprehensive cost plan, description of the works or designs to be produced as part of detailed design. Furthermore, all rates shall be deemed to allow for supply and installation unless noted otherwise. The exclusions include; Cost Escalation, Margins and Adjustments, Authority Fees and Charges, Goods and Services Tax, Unforeseen Conditions (eg. Acid Sulfate Soil, Flooding, Asbestos), Topsoil Testing, Maintenance and Consultant Fees.

Action	Strategy	Unit	Quantity	Rate	Amount	
High Priority (2020-2023)						
Upgrade Infrastructure Services						
A1	1	Renew the electrical reticulation including installing 3 phase power	Item	1	\$200,000	\$200,000
A2	2	Renew the irrigation system	Item	1	\$1,400,000	\$1,400,000
A3	3	Install potable water points including drinking fountains	Item	5	\$10,000	\$50,000
A4	4	Light the main axial pathways and circular pathways. Light main entrances and gates.	Item	74	\$5,500	\$407,000
		Up light trees in event space.	m ²	6,300	\$20	\$126,000
A5	5	Install stormwater along the main axis pathways.	m ²	1,225	\$40	\$49,000
A6	6	Install a new amenities block (4 female, 4 male cubicles, 2 accessible toilet with parent change tables). Toilet block approx. 12000 x 8000mm wide and approx. 3000mm high comprising of steel framing, timber facade and shade screening with steel sheet roofing.	PS	1	\$300,000	\$300,000
A7	7	Remove the existing toilet block	Item	1	\$5,000	\$5,000
A8	8	Install CCTV (sitewide).	m ²	41,250	\$5	\$206,250
					Total	\$2,743,250
Circulation & Layout						
A9	1	Extend the main pathway to form an axial 'cross' layout inline with the 1998 masterplan. The main axial pathway and the circular pathway are to be a high-quality paving material other than the asphalt as it exists. At nodal junctions, differentiation is to be created through material or colour to signal a junction. Some realignment and formalisation of the circular main pathway in the area to the north (adjacent to the event spaces) will strengthen the formality. This should consider the existing trees. Extend the axis pathway through from the focal point to the North East.	m ²	2,735	\$450	\$1,230,750
A10	2	Realign and formalise the pathway from Kennedy Lane and place in a new circular pathway around the 'wedding lawn'	m ²	230	\$200	\$46,000
A12	4	Realign the rainforest pathway to intertwine with the plants and place in seating. Reconfigure a new access pathway to enhance the experience. Retain rainforest pathways as gravel and where necessary regrade and reconfigure to minimise washouts and erosion.	m ²	860	\$35	\$30,100

Action	Strategy	Unit	Quantity	Rate	Amount	
High Priority (2020-2023)						
A13	5	Install a focal point at the crux of the axial pathways (sculpture or fountain).	Item	1	\$60,000	\$60,000
A14	6	Line the axial pathway from Gregory Street to Kennedy Lane with feature trees (200L)	Item	18	\$1,000	\$18,000
A16	8	Place feature pavements to the four main entries into the Botanic gardens.	m ²	220	\$450	\$99,000
					Total	\$1,483,850
Living Plant Collections						
A18	2	Reinstate the Rose Garden to line the main axis from Paxton Street	m ²	300	\$100	\$30,000
A19	3	Remove the bamboo	m ²	400	\$50	\$20,000
A21	6	Maintain the mazes	m ²	350	\$20	\$7,000
A22	8	Develop a new sensory garden with an intertwining gravel pathway and two access entrances with signage.	m ²	450	\$100	\$45,000
A23	9	Increase the size of the herb garden.	m ³	420	\$100	\$42,000
		Place in a new sign.	Item	1	\$5,000	\$5,000
A24	10	Remove the succulent garden.	m ²	450	\$15	\$6,750
					Total	\$155,750
					Total Cost High Priority Actions (2020-2023)	\$4,382,850

The schedule provided is to assist Townsville City Council in formulating the feasibility assessment of works proposed as part of Townsville Botanic Gardens Masterplan 2020-2030. Rates and figures provided are based on industry and best practice standards and does not necessarily reflect a comprehensive cost plan, description of the works or designs to be produced as part of detailed design. Furthermore, all rates shall be deemed to allow for supply and installation unless noted otherwise. The exclusions include; Cost Escalation, Margins and Adjustments, Authority Fees and Charges, Goods and Services Tax, Unforeseen Conditions (eg. Acid Sulfate Soil, Flooding, Asbestos), Topsoil Testing, Maintenance and Consultant Fees.

Action	Strategy	Unit	Quantity	Rate	Amount
Medium Priority (2023-2026)					
Entries, Fencing & Walls					
A25	1 Refurbish the gates to all points of entry (Paxton Street, Gregory Street main entrance and Gregory Street secondary entrance).	Item	3	\$100,000	\$300,000
A26	2 Rationalise the main entranceway from Kennedy Lane, recognising the gates are heritage listed and should be in line with the conservation plan. The heritage stone retaining wall is to remain. New entrance way to the North of the aviary to be provided.	Item	1	\$150,000	\$150,000
A27	3 Reconfigure the vehicular events and maintenance entry point and improve the vehicle access road (2500mm wide reinforced concrete path for maintenance/service/catering vehicles only).	m ²	550	\$200	\$110,000
A28	4 Upgrade all perimeter fencing to be the same material (black tubular fencing as minimum)	m	350	\$200	\$70,000
Total					\$630,000
Playground, Arbours & Furniture					
A29	1 Install a new playground in theme that corresponds with the garden (heritage and paradise garden theme). The playground is to be double the size of the existing playground. (Inclusive of planting)	PS	1	\$850,000	\$850,000
	Pathway connecting the playground to the main axial pathway network.	m ²	200	\$140.00	\$28,000
A30	2 Furnish the playground area with additional shelters and picnic settings. This should be in line with a consistent furniture style.	Item	9	\$30,000	\$270,000
A31	3 Construct three vine arbours along the circular pathway as illustrated (2 near the new amenities block and 1 uniquely designed arbour for the wedding lawn)	Item	3	\$100,000	\$300,000
A32	4 Install drinking fountains.	Item	5	\$5,000	\$25,000
A33	5 Furnish the garden with seating: 2 under each arbour and placed at entrances to the collections.	Item	33	\$3,000	\$99,000
A34	6 Place in bins (Single Bin Enclosure).	Item	10	\$3,000	\$30,000
A35	7 Place signage at the entrances in accordance with unified Botanic Garden Style Guide.	Item	4	\$10,000	\$40,000

Action	Strategy	Unit	Quantity	Rate	Amount
Medium Priority (2023-2026)					
A36	8 Provide an information shelter that incorporates a brochure stand and digital interpretive sign (garden and heritage information) at primary entrance to the gardens.	Item	1	\$20,000	\$20,000
	Develop a mobile app and/or QR code	Item	1	\$50,000	\$50,000
Total					\$1,712,000
Living Plant Collections					
A37	5 Enhance the Rainforest area. Plant additional rainforest collections in areas that require a denser population and succession of growth	m ²	3,800	\$25	\$95,000
A38	7 Formalise the Frangipani garden with additional trees (100L) and new signage to signify the collection.	m ²	30	\$300	\$9,000
A39	11 Install interpretive signage on all heritage listed items and significant trees and in the living collections. This is a substantial element of the guided tours and will be used for educational purposes.	Item	20	\$2,500	\$50,000
Total					\$154,000
Total Cost Medium Priority Actions (2023-2026)					\$2,496,000
TOTAL COST OVER 10 YEAR MASTERPLAN					\$6,878,850

7 Anderson Gardens



7.1 Vision

Enhance a flexible community Botanic Gardens with the potential for activation, collections, various spaces to play, rest, congregate and learn. This arboretum will become the main Townsville Botanic Gardens.

7.2 Objectives

Discover

To create a Botanic Gardens focusing on the theme of an Arboretum

To develop towards becoming the core Botanic Gardens with a commitment to building on the core within the next 10 years

To achieve its vision to be the core accredited Botanic Gardens beyond ten years

Recognise

To build upon living collections relevant to the Arboretum theme

To enhance the functionality of the gardens for flexible, community activation

Educate

To educate users of the gardens on the importance of living collections and species

7.3 Site Analysis

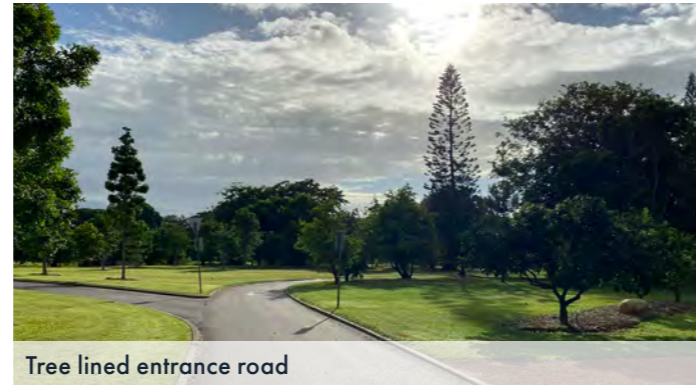
Summary

Anderson Gardens is an extensive linear open space visually dominated by shade trees and palms. A circular lawn space is prominent within the park which, along with the lakes, provide the garden's focal elements. The park has a feeling of an arboretum with its collections of trees. It's a pleasant park; well maintained, but intensive on lawn maintenance. The conservatory and office facilities are in quite poor condition.

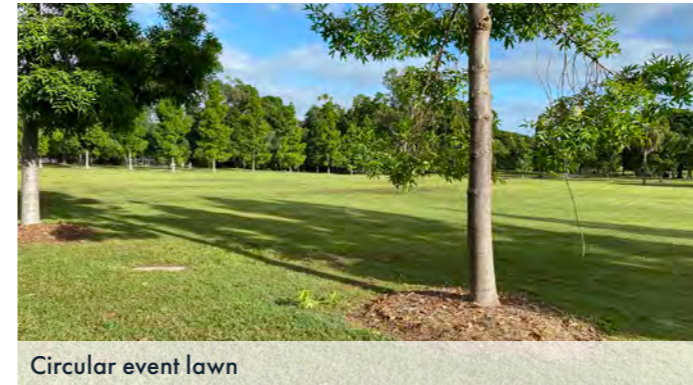
The main botanical attributes include a variety of tropical trees, palms and cycads. Originally planted as an arboretum, the plant form of trees is still strong with some specimens dating back to the late 1800s. The tree collection that has been developed has an emphasis on native and dry tropical trees. Specific collections include Cape York Peninsula flora, Pandanus species and tropical fruit trees. The future development of the collection should primarily involve the expansion of the number of Australian dry tropical trees, which could also assist the tree selection for the Townsville area generally.

Evaluated against the Masterplan of 1998 and 2005, again not much of this plan has been instigated.

The focus is primarily tending to the gardens and lawns as an arboretum.



Tree lined entrance road



Circular event lawn



Cycad collection



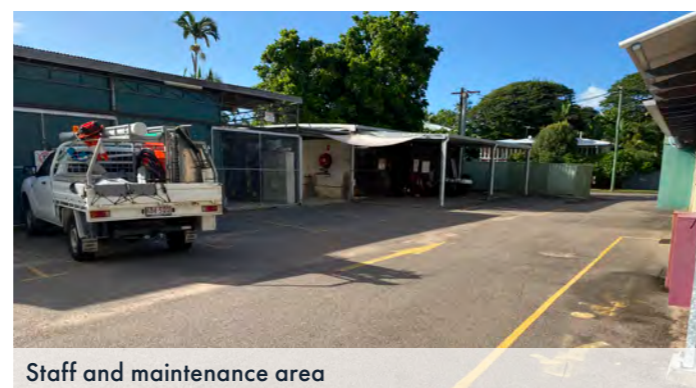
Conservatory



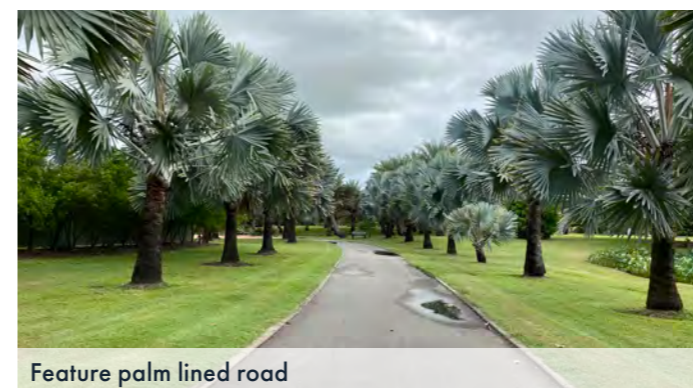
Lake full of lillies



Bamboo collection



Staff and maintenance area

























Feature palm lined road



Significant trees throughout the garden

Existing Site Layout - Anderson Gardens

Legend

-  Project Site Boundary
-  Internal Road
-  Pedestrian Trail
-  Waterway/Water body
-  Pedestrian Entry
-  Major Node
-  Parking
-  Chair
-  Table
-  Bin
-  Legume Tree Collection
-  Proposed Bio Region Collection
-  Queensland Rainforest Collection
-  Water Smart Garden
-  Topical Conifer Collection
-  Tropical Fruit Orchard
-  World Cycad Garden
-  Date Palm Grove
-  Pandanus Collection
-  Palm Collection
-  Bamboo Collection
-  Cape York Peninsula Collection



7.4 Living Collections

7.4.1 Themes and accreditation

From earlier reviews the Anderson Gardens was established as an arboretum (a collection of trees). Since then, it appears that other plantings (e.g. the cycads and conservatory plants) have been included. While having such collections in an arboretum is acceptable, it is not known whether the new collections were reviewed in terms of the original thinking and staffing. Like the Palmetum and Queens Gardens, there is a real need to have a collection plan (including management) to avoid irrelevant collections being introduced and potentially under maintained in the future.

If treated as an arboretum the plantings for the 'family picnics' section of the garden could provide attractive shady conditions for the families to sit in. It is an area that must have only a limited number of hotspots positioned at potential, popular picnic locations.

There is a view that Anderson Gardens has potential to be the 'lead garden' in the Townsville Botanic Gardens; however, the Palmetum is currently better placed to gain Botanic Garden accreditation in the short term.

To enable the Anderson Gardens to achieve accreditation for such a position, a much better understanding of the collection itself (both in terms of what is already there and what themes will be prioritised in the future), updated collection records, labelling and interpretation and getting involved in education and/or conservation will be required. With regards to its possible use for education, the garden is well placed with close proximity to schools and the TAFE Queensland Pimlico Campus. If used for education purposes, it would also be necessary to develop an Interpretation Plan.

If a decision is made to use the Anderson Gardens as the lead accredited botanic garden, the development of an Operational Management Plan may also be required.

7.4.2 Suggested collections

Discussion identified Anderson Gardens as a plant collection that focuses on "regional flora and amenity horticulture". To begin developing a strong theme for the arboretum, it is suggested to initially use the trees of the Townsville region taken from reputable, regional species lists (for example, Queensland Government Wetlandinfo 'Plants of Townsville Local Government Area' species Lists).

In addition to being a major part of the arboretum's living collection, the planting of locally native trees could be seen as both a trial for the selection of local plants for the Townsville urban region (to be used by the Council) and as an example of plants to be grown by the residents of Townsville.

As a part of the advancement of the living collection, an emphasis could also be placed on developing an ex situ

conservation collection of the threatened plant species in the Townsville region (refer table below).

Two other tree collections that the arboretum has already established and should further develop are 1) its collection of Australian trees from the dry tropics and, 2) its collection of tropical fruit trees. The latter already includes commonly grown species such as Lychee, Black Sapote, Papaw, Citrus and less common fruit such as Bread Fruit, Wampi, Miracle Fruit, Dates, Cashews, Jack Fruit, and Longan.

If the theme of 'Amenity Horticulture' progresses it could focus on a much broader range the flora of the local region and again demonstrate the use of local plants either in the local parks or home gardens.

7.4.3 Conservatory

The conservatory is currently only open by appointment. It houses a collection of tropical plants including bromeliads, gingers, aroids, nepenthes (Pitcher plants), palms and cycads. This seems to be a very loose collection and if the old conservatory is removed and replaced it is vital that a reason for its existence is understood.

One possible collection would be the under-tree flora of the native forests near to Townsville or from the dry tropics. "Walking under the forest" is a potential theme. The new facility should be open to the public and would require horticultural staff to manage the collection.

Family	Botanic Name	Common Name	Status
Acanthaceae	Graptophyllum excelsum	Scarlet Fuchsia	NT
Apocynaceae	Marsdenia brevifolia	A type of Bush Banana	V
Arecaceae	Livistona drudei	Haliflax Fan Palm	V
Burseraceae	Canarium acutifolium	A type of Canarium Nut	V
Byttneriaceae	Commersonia reticulata		V
Cyatheaceae	Cyathea celebica	A type of Tree Fern	NT
Elaeocarpaceae	Dubouzetia saxatilis		V
Elaeocarpaceae	Elaeocarpus coorangooloo	Brown Quandong	NT
Euphorbiaceae	Croton magneticus	Croton	V
Hymenophyllaceae	Crepidomanes majoriae	A type of Fern	V
Lycopodiaceae	Huperizia phelgmarioides	A type of Tassel Fern	V
Mimosaceae	Senegalia albizioides	Climbing Wattle	NT
Myrtaceae	Eucalyptus paedoglauca	Mt Stuart Ironbark	V
Myrtaceae	Sannantha papillosa		E
Orchidaceae	Gastrodia urceolata	White Potato Orchid	V

Family	Botanic Name	Common Name	Status
Orchidaceae	Goodvera viridiflora	Heart-Shaped Goodyera	NT
Orchidaceae	Habenaria rumphii	Stiff Rein Orchid	NT
Orchidaceae	Habenaria xanthantha	Freak Rein Orchid	NT
Poaceae	Paspalidium udum	A type of Watercrown Grass	V
Rubiaceae	Myrmecodia beccarii	Ant Plant	V
Rubiaceae	Oldenlandia polyclada		NT
Sapindaceae	Arytera dictyoneura	Veined Coogera	NT
Sapindaceae	Dodonaea uncinata	A type of Hopbush	NT
Solanaceae	Solanum sporadotrichum	A type of Nightshade	NT
Sparrmanniaceae	Corchorus hygrophilus	Native Jute	V

Conservation Status of Above Species:

V: Vulnerable (the nationally vulnerable species are bolded)

NT: Near Threatened

E: Endangered



Strategies

The Anderson Gardens' Vision and Objectives have been translated into several actions, categorised into seven strategies. These are:

Upgrade Infrastructure Services

Conservatory, Nursery and Garden Shop/Kiosk

Circulation and Layout

Play Spaces, Shade Structures and Furniture

Living Plant Collections

Management and Operations



Upgrade Infrastructure Services



7.5.1 Action – Infrastructure Services

Renewing and upgrading the infrastructure services to provide a reliable and fit for purpose system capable of supporting a Botanic Garden and multi functional space, including:

1. Renewing the electrical reticulation including installing 3 phase power to the circular lawn.
2. Installing potable water points including drinking fountains.
3. Lighting the Gulliver St entry and circular lawn space.
4. Installing lighting in the car park at the front of the conservatory and in the public realm area.
5. Constructing two new amenities toilet blocks (4 female, 4 male cubicles, 2 accessible toilet with parent change tables). Both amenities blocks are to be accessible to play spaces and consider Crime Through Environmental Design (CPTED) principles.
6. Installing CCTV.
7. Extending irrigation to additional collections.



5 Constructing two new amenities blocks
Source (L-R): Sam Crawford Architects, Rozana Montiel
NOTE: These exemplar images are indicative only



Conservatory, Education Garden and Kiosk/ Garden Shop



7.5.2 Action – Conservatory, Nursery and Garden Shop/Kiosk

Improving and developing the built environment to enhance the services and experiences the gardens are able to provide, including:

1. Demolishing the existing conservatory building and replacing with an architectural building that connects to the existing office spaces. The conservatory will be redeveloped in accordance with its current use and extended uses (subject to final detail design). Investigate other research complementary uses such as a butterfly sanctum. Consideration is to be given to the public realm at the front of the building and access to car parking.
2. Creating a gathering space co-located between the conservatory and garden shop.
3. Enhancing and upgrading the nursery (currently not in use) with a new garden shop, including provisions for a small kiosk, for the local community to buy plants, accessories and coffee.
4. Upgrading the Education Garden to include a small information centre for the local community.
5. Following the accreditation of the Anderson Gardens, developing the Townsville Botanic Gardens' records and library and making it accessible to the community.
6. Installing Public Art pieces throughout the pathway network from the carpark to the conservatory and within in the conservatory building. These art pieces are to become apart of the gathering space and provide an interactive welcoming. The public art placed throughout the gardens can be either indigenous or nature-inspired. The public art should reflect the botanic gardens nature, form and meaning.

Conservatory, Education Garden and Kiosk/ Garden Shop (cont.)



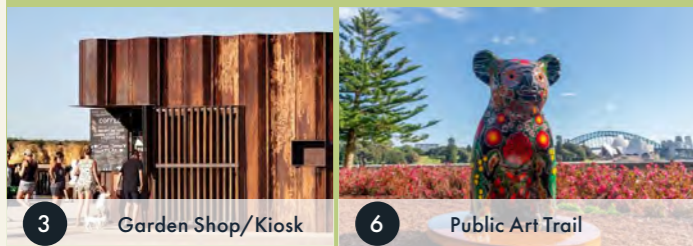
1 Demolishing and replacing the existing conservatory

Source (L-R): Jeff Eden, City of Greater Geelong
NOTE: These exemplar images are indicative only



2 Gathering Space

Source (L-R): Tract, Royal Botanic Gardens Sydney
NOTE: These exemplar images are indicative only



3 Garden Shop/Kiosk

6 Public Art Trail

Source (L-R): ArchDaily, Freedays
NOTE: These exemplar images are indicative only



6 Public art pieces

Source (L-R): Venetta Menzies, John Faier
NOTE: These exemplar images are indicative only

Circulation and Layout



7.5.3 Action – Circulation and Layout

Improving and developing connections throughout the gardens and access to surrounding streets and locations, including:

1. Create and recognise the circular lawn as a multi functional space.
2. Ensuring all hard-finished pathways are DDA compliant.
3. Creating a 2.0m tree-lined pathway connection from Fullham Road to the circular lawn pace and collections inclusive of a bridge over the drainage corridor. The bridge design should acknowledge and be designed for inundation of water (subject to future detailed design).
4. Creating a 2.0m tree-lined pathway connection from Thomas Road and Turner street to the family space inclusive of a bridge over the drainage corridor. The bridge design should acknowledge and be designed for inundation of water (subject to future detailed design).
5. Placing a new hard-finished, tree-lined pathway from the main circuit to the schools.
6. Providing a new 2.0m pathway connecting the proposed Northern collections, all abilities playground/nature play and Public Art trail inclusive of a bridge where the pathway intersects with the lake. The bridge design should acknowledge and be designed for inundation of water (subject to future detailed design).
7. Regrading and reconfiguring collection pathways to intertwine with plants and seating nodes. The collection pathway's natural material finish (gravel) will remain whilst washouts and erosion will be minimised.



3 4 Tree-lined pathway connecting to neighbouring streets

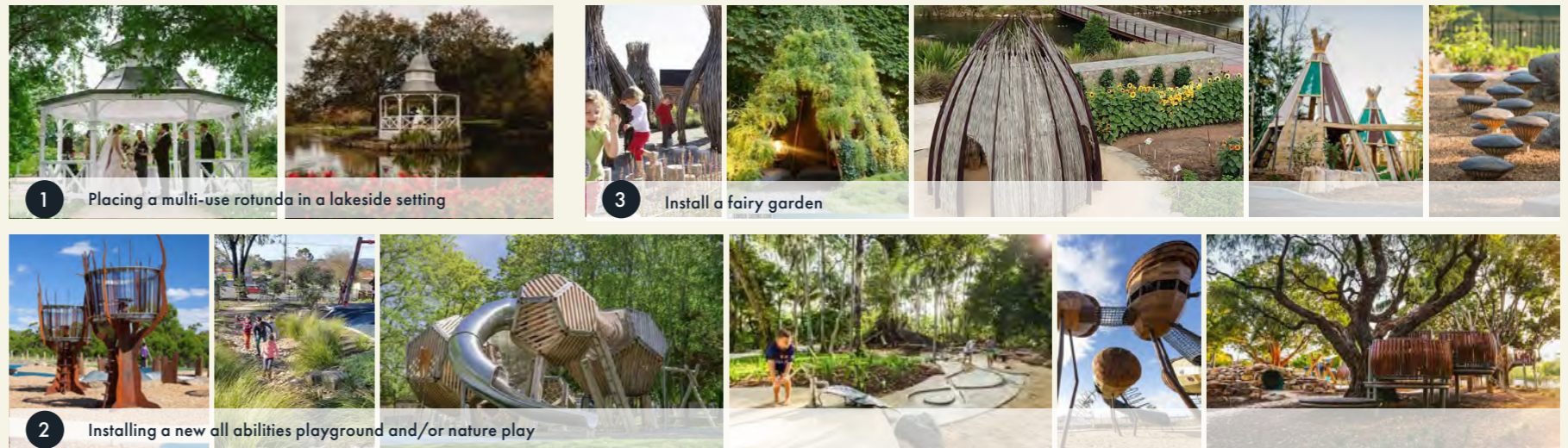


11 Constructing new car parks with WSUD principles

Source (L-R): iZone Imaging, John Gollings, Caltrans, Pashek+MTR

8. Removing the gravel car park to the North of the main car park. This area will be replaced with turf and an extension of the current collection inclusive of a gravel pathway and seating.
9. Repairing the existing main road and car parks where necessary.
10. Creating a pedestrianised entrance off Balls Lane that is also accessible to maintenance and service vehicles.
11. Constructing a new car park from the Wellington Street entrance to service the garden shop, conservatory and gardens. This car park will include bus bays, Water Sensitive Urban Design (WSUD) principles and tree plantings.
12. Constructing a new car park off Gulliver Street to access the new collections.
13. Beyond 10 years, the focus will be on enhancing the Northern section of Anderson Gardens and its interface with the residential area to create an edge for the Botanic Gardens. Another focus will be to design a wetland corridor with ponds and enhance water habitat. However, this is not a priority within the next 10 years.
14. Installing a customised designed major wayfinding sign at the corner of Fullham Road and Gulliver Street. This is to promote the location and provide legibility to the Anderson Gardens.
15. Expanding existing collections.
16. Install raised speed bumps along the road pavement. They are to be placed where the pathway network intersects with the road.

Play Spaces, Shade Structures and Furniture



Source (L-R): Cavanagh Photography, Cavanagh Photography, Matrin Tessler, Homesthetics, Adelaide Botanic Garden, Earthscape, Landscape Structures, Government of South Australia, Aspect Studios, Duncan and Grove, Landplan Landscape Architecture, Brett Boardman, Ross Wallace Photography and Emerge Associates

NOTE: These exemplar images are indicative only

7.5.4 Action – Play Spaces, Shade Structures and Furniture

Providing opportunities for all age groups to enjoy the gardens, including:

1. Placing a multi-use rotunda to allow for wedding ceremonies and various events to be undertaken in a lakeside setting.
2. Constructing a new play space being either an all abilities playground and/or nature play with pathways to the perimeter and a shade structure. This play space should include seating, picnic facilities, drinking fountains and shelters. The design will incorporate existing significant vegetation and trees. In this area, there is to be play elements for all ages, a flying fox and small water play elements. This is all subject to detailed design and the playground area will be designed in detail to accommodate flooding.
3. Installing a fairy garden for the younger ages to the East of the play space. This is to be a well surveillance garden with low shrubs, seating and fairy structures.
4. Placing in additional shelters with picnic settings around the playground area. This should be in line with a consistent furniture style.
5. Installing an interactive play space near the conservatory and amenities block. This play space is to include interactive Art pieces designed in collaboration with an artist. Inspiration is the National Arboretum play space.
6. Installing drinking fountains with dog bowls. These should be co-located with the installation of bike hoops/racks for visitors using the gardens. This should be in accordance with the furniture style suite and placed accordingly throughout the gardens.

7. Furnishing the gardens, collections and family areas with seating. This should be in accordance with the furniture style suite.
8. Installing bins. This should be in accordance with the furniture style suite.
9. Placing signage at the garden's entrances. This should be in accordance with a unified style guide used throughout the three Botanic Gardens.
10. Installing interactive art pieces to the new public art trail. The public art placed throughout the gardens can be either indigenous or nature-inspired. The public art should reflect the botanic gardens nature, form and meaning.
11. Tying in the Giant Children's /Water Sensitive Demonstration Collection redevelopment.
12. Installing art sculptures as focal points in the lakes. The sculptures are to incorporate a fountain jet to help provide aeration to the lakes. The public art placed throughout the gardens can be either indigenous or colonial. The public art should reflect the botanic gardens nature, form and meaning.
13. Placing an information shelter that incorporates a brochure stand and digital interpretive sign (garden and heritage information) at the primary entrance to the gardens. There is opportunities to also develop a mobile app and/or a QR code that can be placed at the shelter to inform users about the Botanic Garden.
14. Installing seating around the perimeter of the circular lawn. This should be in accordance with a unified style guide used throughout the three Botanic Gardens.



Source (L-R): Alex Pentek, Rose of Sharon, Venetia Menzies



Source (L-R): Trover, Saving our Trees
NOTE: These exemplar images are indicative only

Living Plant Collections



Management and Operations



7.5.5 Action – Living Plant Collections

Developing the gardens as an arboretum to better establish its identity as Townsville's core botanic gardens, including:

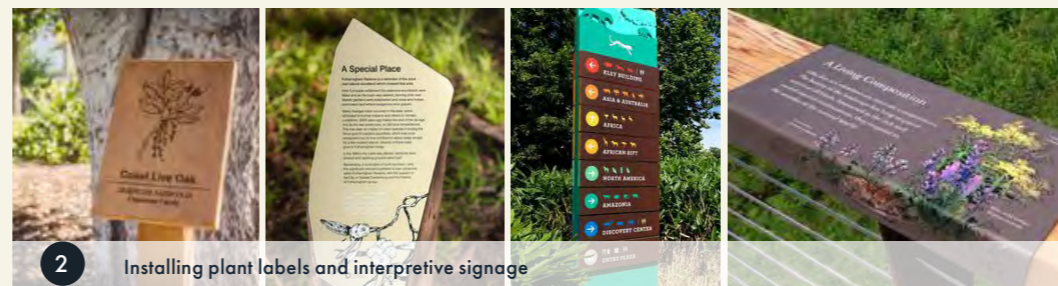
1. Preparing a Living Plant Collection plan.
2. Further development of the north-east Queensland tree and Pandanus collections.
3. Establishment of a collection of plants important to the region's indigenous people.
4. Review of any additional palm plantings.
5. Review and rationalisation of the existing cycad collection.
6. Review and expansion of the existing orchard collection.
7. Development of two new collections to the North of the gardens that interface with the drainage corridor.
8. Expansion of the Eucalypt Collection.

Reference the Living Collections (7.4) section for more detail.

7.5.6 Action – Management and Operations

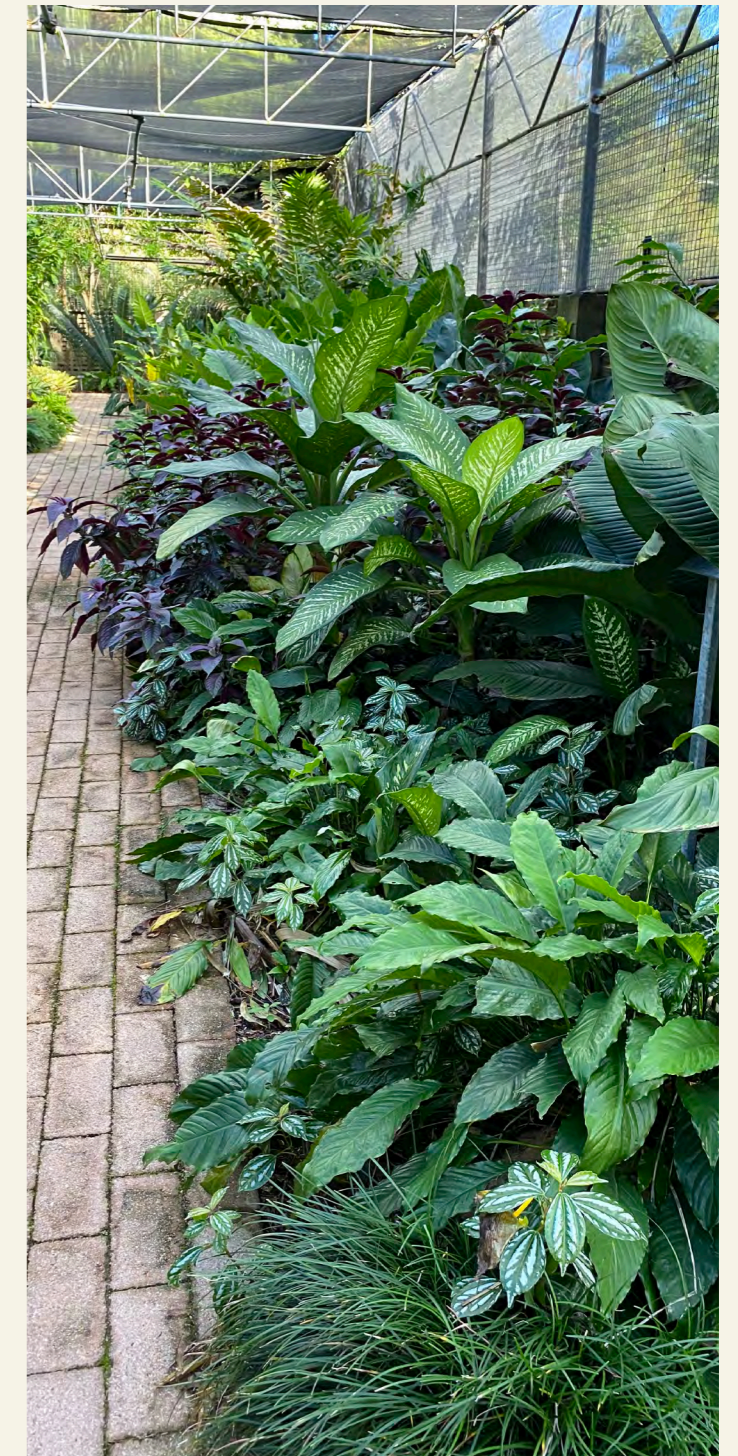
Establishing essential procedures to maintain and enhance the botanic gardens, including:

1. Stocktaking and recording of living collections.
2. Installing plant labels and interpretive signage detailing all significant plants and themes in the living collections as well as heritage listed items.
3. Developing a garden tour which can be accessed by the public and education facilities for guided or self-guided interpretation of the collection.
4. Considering the development of a plan to involve the garden in plant conservation.
5. Enhancing the lakes through increased maintenance and the removal of water lilies as necessary.
6. Developing event management plans.
7. Developing an education plan.



2 Installing plant labels and interpretive signage

Source (L-R): Scott Boms, Heine Jones, Sprout Design, Gecko Group
NOTE: These exemplar images are indicative only



7.6 Masterplan Layout

Please note, this illustrative masterplan is indicative only and does not represent a concept plan or any level of detail design.

Lighting to Gulliver St Entry and Circular Lawn



Power lighting and 3 phase water for flexible activities to occur

Play Space: Nature Play and/ or All Abilities Playground

Kokoda Pool

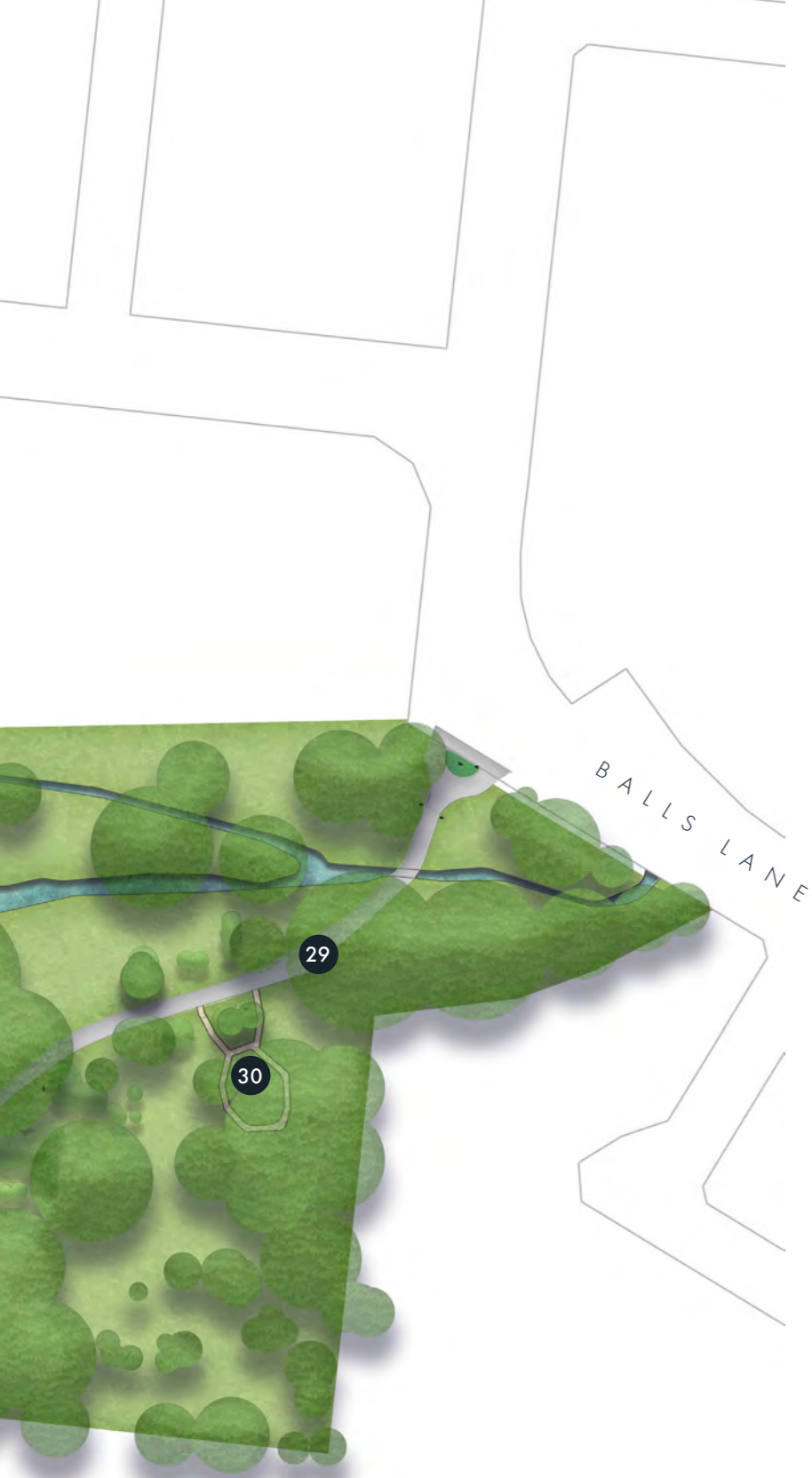
Small Interactive Playspace

Remove gravel car park

Increased furniture (Tables, seats, bins, drinking fountains)

FOCUS FOR THE 10 YEAR MASTERPLAN AND FLEXIBLE ACTIVITY SPACE

FAMILY PICNICS & SMALL GROUP ACTIVITIES



Legend

- | | | | |
|---|--|---|---|
|  | Multi-functional Space |  | Circular Lawn |
|  | Picnic Tables |  | Public Art Trail |
|  | Seats |  | Education Nursery |
|  | Lighting |  | New Collection |
|  | Shelter |  | Existing Indented Parking |
|  | Lake Sculpture |  | Small Information Centre/ Kiosk/ Garden Centre |
|  | Wayfinding Sign |  | Date Palm Grove |
|  | New Car Park |  | Rotunda |
|  | Entry Lighting |  | Lakes |
|  | Australian Rainforest/Native |  | Fairy Garden |
|  | Demonstration Garden WSUD |  | Pandanus Collection |
|  | Eucalypt Collection |  | All Abilities Playground |
|  | Interactive Play Space |  | Bamboo Collection |
|  | Drainage Corridor |  | Pedestrianised Maintenance and Event Access Way |
|  | New Pathways |  | Cape York Peninsula Collection |
|  | Bridges |  | Legume Tree Collection |
|  | Amenities Block |  | Tropical Fruit Orchard |
|  | New Conservatory and Information Shelter |  | World Cycad Collection |
|  | Staff Office |  | Palm Collection |
|  | Existing Staff Car Park |  | Bus Parking Area |
|  | Maintenance Shed | | |

7.7 Priority Action and Indicative Staging Plan

High Priority (Focus on infrastructure services, circulation and layout, interactive space and tidying up plant collections)

Medium Priority (Focus on the creation of the new conservatory, nursery, garden shop, pathways, quality of finishes to core inner garden, play spaces and developing new living collections)

Low Priority (Starting to focus on beyond of 10 years within the Anderson Gardens.)

Action	Strategy	Action
High Priority (2020-2023)		
Upgrade Infrastructure Services		
A1	1	Renew the electrical reticulation including installing 3 phase power to the circular lawn
A2	2	Install potable water points including drinking fountains
A3	3	Lighting is to be placed to the Gulliver St entry and circular event lawn space.
A4	5	Install two new amenities block
Circulation and Layout		
A5	1	Create and recognise the circular lawn as a multi functional space
A6	2	All the hard finished pathways to be DDA compliant
A7	7	Retain collection pathways as gravel or a natural material. The new collection pathways should intertwine with the plants and place in seating
A8	8	Remove the gravel car park to the North of the main car park. Place with grass and extend the current collection with a gravel pathway and seating.
A9	9	Repair existing main road way and existing car parks where necessary.
A10	16	Install raised speed bumps along the road pavement
Play Spaces, Shade Structures and Furniture		
A11	1	Place in a multi use rotunda
A12	5	Place in an interactive play space near the conservatory and amenities block
A13	7	Place in seating throughout the gardens
A14	8	Place in bins
A15	9	Place signage at the entrances
A16	11	The Giant Children's Collection is being redeveloped
A17	14	Install seating around the perimeter of the circular lawn

Action	Strategy	Action
High Priority (2020-2023)		
Living Plant Collections		
A18	1	Prepare a Living Plant Collection Plan including:
A19	2	Developing North-east Queensland and Pandanus collection
A20	3	Establishing a collection important to the region's indigenous people
A21	4	Review any additional palm planting
A22	5	Review and rationalisation of existing cycad collection
A23	6	Review and expansion of existing orchard collection
A24	8	Expansion of the Eucalypt Collection

Action	Strategy	Action
Medium Priority (2023-2026)		
Upgrade Infrastructure Services		
A25	4	Lighting to be installed in the car park at the front of the conservatory and in the public realm area.
A26	6	Install CCTV
A27	7	Extend Irrigation for additional collections
Conservatory, Nursery and Garden Shop/Kiosk		
A28	1	Demolish the existing conservatory building, determine its purpose and collection theme and replace with an architectural building/ conservatory
A29	2	Create a gathering space between the conservatory and garden shop
A30	3	Enhance and upgrade the nursery with a garden shop
A31	4	Upgrading the Education Garden to include a small information centre for the local community
A32	6	Public Art pieces are to be installed in the conservatory throughout the pathway network and/ or on the ceiling of the conservatory.

Action	Strategy	Action
Medium Priority (2023-2026)		
Circulation and Layout		
A33	3	Create a 2.0m tree lined pathway connection from the Fullham Road including a bridge
A34	4	Create a 2.0m pathway connection from the Thomas Road and Turner street including a bridge
A35	5	Place a new hard finished tree lined pathway from the main circuit to the schools
A36	6	Create 2.0m pathway connecting proposed Northern collections, play space and public art trail including a bridge
A37	10	Create a pedestrianised entrance off Balls Lane whereby it can also be used for maintenance and event vehicles
A38	11	Place a new car park entering off Wellington Street
A39	12	A new car park off Gulliver Street to access the new collection
A40	14	Install a wayfinding sign at the corner of Fullham Road and Gulliver Street
A41	15	Expand Collections
Play Spaces, Shade Structures and Furniture		
A42	2	Place in a new space being either all abilities playground and/or nature play
A43	3	A fairy garden for the younger ages can be installed to the East of the All-abilities playground
A44	4	Place in more shelter areas with tables around the playground area
A45	6	Place in drinking fountains with dog bowls and bike rack/ hoops
A46	10	Interactive Art pieces are to be installed to the new public art trail
A47	12	Place art sculpture focal points into the lakes
A48	13	Place an information shelter that incorporates brochure stand and digital interpretive sign at primary entrance to the gardens
Living Plant Collections		
A49	7	Development of two new collections of the North of the gardens

Action	Strategy	Action
Low Priority (2026-2030)		
Conservatory, Nursery and Garden Shop/Kiosk		
A50	5	When Anderson Gardens is accredited the records and library will be stored and will be accessible for the community to explore.
Circulation and Layout		
A51	13	Beyond 10 years, the focus will be on enhancing the Northern section of Anderson Gardens and the drainage corridor



Legend

-  High Priority Actions
-  Medium Priority Actions
-  Low Priority Actions

7.8 Cost Planning

The schedule provided is to assist Townsville City Council in formulating the feasibility assessment of works proposed as part of Townsville Botanic Gardens Masterplan 2020-2030. Rates and figures provided are based on industry and best practice standards and does not necessarily reflect a comprehensive cost plan, description of the works or designs to be produced as part of detailed design. Furthermore, all rates shall be deemed to allow for supply and installation unless noted otherwise. The exclusions include; Cost Escalation, Margins and Adjustments, Authority Fees and Charges, Goods and Services Tax, Unforeseen Conditions (eg. Acid Sulfate Soil, Flooding, Asbestos), Topsoil Testing, Maintenance and Consultant Fees.

Action	Strategy	Unit	Quantity	Rate	Amount	
High Priority (2020-2023)						
Upgrade Infrastructure Services						
A1	1	Renew the electrical reticulation including installing 3 phase power to the event space	item	1	\$150,000	\$150,000
A2	2	Install potable water points including drinking fountains	Item	5	\$10,000	\$50,000
A3	3	Light the Gulliver St entry and circular lawn space.	Item	61	\$5,000	\$305,000
A4	5	Construct two new amenities toilet blocks (4 female, 4 male cubicles, 2 accessible toilet with parent change tables). Both amenities blocks are to be accessible to play spaces and consider Crime Through Environmental Design (CPTED) principles.	Item	2	\$300,000	\$600,000
					Total	\$1,105,000
Circulation & Layout						
A7	7	Regrade and reconfigure collection pathways to intertwine with plants and seating nodes. The collection pathway's natural material finish (gravel) will remain whilst washouts and erosion will be minimised.	m ²	4,450	\$35	\$155,750
A8	8	Remove the gravel carpark to the North of the main carpark	m ²	1,000	\$10	\$10,000
		Replace with grass and extend the current collection with a gravel pathway and seating.	m ²	1,000	\$60	\$60,000
A9	9	Repair existing main road way and existing carparks where necessary.	m ²	500	\$150	\$75,000
A10	16	Install raised speed bumps along the road pavement.	Item	7	\$46,900	\$328,300
					Total	\$629,050
Play Spaces, Shade Structures and Furniture						
A11	1	Place a multi-use rotunda	m ²	430	\$650	\$279,500
A12	5	Install an interactive play space near the conservatory and amenities block. This play space is to include interactive Art pieces. This is to be designed in collaboration with an artist. Inspiration is the National Arboretum.	Item	1	\$750,000	\$750,000
A13	7	Furnish the gardens, collections and family areas with seating in accordance with the furniture style suite.	Item	27	\$3,000	\$81,000
A14	8	Install bins.	Item	20	\$3,000	\$60,000

Action	Strategy	Unit	Quantity	Rate	Amount	
High Priority (2020-2023)						
A15	9	Place signage at the garden's entrances.	Item	10	\$10,000	\$100,000
A16	11	The Giant Children's Collection is being redeveloped. Tie it into the masterplan.	n/a	-	-	\$-
A17	14	Install seating around the perimeter of the circular lawn for spectators.	Item	8	\$3,000	\$24,000
					Total	\$1,294,500
Living Plant Collections						
A19	2	Further develop the North-East Queensland Tree and Pandanus collections.	m ²	850	\$130	\$110,500
A20	3	Establish collection of plants important to the region's indigenous people.	m ²	5,000	\$130	\$650,000
A22	5	Review and rationalise the existing cycad collection.	m ²	2,000	\$60	\$120,000
A23	6	Review and expand the existing orchard collection.	m ²	5,000	\$130	\$650,000
A24	8	Expand the Eucalypt Collection.	m ²	1,400	\$130	\$182,000
					Total	\$1,712,500
					Total Cost High Priority Actions (2020-2023)	\$4,741,050

Action	Strategy	Unit	Quantity	Rate	Amount	
Medium Priority (2023-2026)						
Upgrade Infrastructure Services						
A25	4	Install lighting in the car park at the front of the conservatory and in the public realm area.	Item	10	\$5,000	\$50,000
A26	6	Install CCTV (covering 500sqm per pedestrian and vehicular entry).	m ²	5,000	\$5	\$25,000
A27	7	Extend Irrigation for additional collections	Item	1	\$75,000	\$75,000
					Total	\$150,000
Conservatory, Nursery and Garden Shop/Kiosk						
A28	1	Demolish the existing conservatory building.	m ²	1,000	\$100	\$100,000
		Replace with an architectural building that connects to the existing office spaces and accommodates both existing uses and extended, complementary uses (e.g. butterfly sanctuary). Consider the public realm at the front of the building and be well accessible to carparking	PS	1	\$1,000,000	\$1,000,000

The schedule provided is to assist Townsville City Council in formulating the feasibility assessment of works proposed as part of Townsville Botanic Gardens Masterplan 2020-2030. Rates and figures provided are based on industry and best practice standards and does not necessarily reflect a comprehensive cost plan, description of the works or designs to be produced as part of detailed design. Furthermore, all rates shall be deemed to allow for supply and installation unless noted otherwise. The exclusions include; Cost Escalation, Margins and Adjustments, Authority Fees and Charges, Goods and Services Tax, Unforeseen Conditions (eg. Acid Sulfate Soil, Flooding, Asbestos), Topsoil Testing, Maintenance and Consultant Fees.

Action	Strategy	Unit	Quantity	Rate	Amount
Medium Priority (2023-2026)					
A29	2 Create a gathering space co-located between the conservatory and garden shop.	PS	1	\$500,000	\$500,000
A30	3 Enhance and upgrade the nursery with a new garden shop including provisions for a small kiosk for the local community to buy plants, accessories and coffee.	PS	1	\$500,000	\$500,000
A31	4 Upgrade the Education Garden to include a small information centre for the local community.	PS	1	\$100,000	\$100,000
A32	6 Install Public Art pieces throughout the pathway network from the carpark to the conservatory and within the conservatory.	Item	4	\$25,000	\$100,000
Total					\$2,300,000
Circulation and Layout					
A33	3 Create a 2.0m tree-lined pathway connection from the Fulham Road to the event space and collections	m ²	320	\$140	\$44,800
	Create a bridge over the drainage corridor.	Item	1	\$85,000	\$85,000
A34	4 Create a 2.0m tree-lined pathway connection from the Thomas Street and Turner Street to the family space.	m ²	375	\$140	\$52,500
	Create a bridge over the drainage corridor.	Item	1	\$65,000	\$65,000
A35	5 Place a new hard finish tree-lined pathway from the main circuit to the schools.	m ²	35	\$140	\$4,900
A36	6 Provide a new 2.0m pathway connecting the proposed Northern collections, all abilities playground and Public Art trail.	m ²	4,800	\$140	\$672,000
	Create a bridge over the drainage corridor.	Item	1	\$45,000	\$45,000
A37	10 Create a pedestrianised entrance off Balls Lane whereby it can also be used for maintenance and event vehicles.	m ²	100	\$450	\$45,000
A38	11 Construct a new car park from the Wellington Street entrance to service the garden shop, conservatory and kiosk. This car park will include bus bays, Water Sensitive Urban Design (WSUD) principles and tree plantings.	m ²	4,820	\$160	\$771,200
	WSUD	PS	1	\$50,000	\$50,000
A39	12 Construct a new carpark off Gulliver Street to access the new collections.	m ²	150	\$125	\$18,750
A40	14 Install a custom designed major wayfinding sign at the corner of Fulham Road and Gulliver Street. This is to promote the location and provide legibility of Anderson Gardens	Item	1	\$15,000	\$15,000
A41	15 Expand Collections	PS	1	\$400,000	\$400,000
Total					\$2,269,150

Action	Strategy	Unit	Quantity	Rate	Amount
Medium Priority (2023-2026)					
Play Spaces, Shade Structures and Furniture					
A42	2 Construct a new all abilities and/or nature playground with pathways on the perimeter + shade structure. This play space should include seating, picnic facilities, drinking fountains and shelters. The design will incorporate existing significant vegetation and trees. In this area, there is to be play elements for all ages, a flying fox and small water play elements.	Item	1	\$2,000,000	\$2,000,000
A43	3 Install a fairy garden for the younger ages to the East of the All-abilities playground. This is to be a well surveillance garden with low shrubs, seating and fairy structures.	PS	1	\$250,000	\$250,000
A44	4 Place in additional shelter areas with tables around the playground area. This should be in line with a consistent furniture style.	Item	32	\$30,000	\$960,000
A45	6 Install drinking fountains with dog bowls.	Item	5	\$2,000	\$10,000
	Install bike hoops/racks.	Item	3	\$1,000	\$3,000
A46	10 Install interactive art pieces to the new public art trail.	PS	4	\$25,000	\$100,000
A47	12 Install art sculptures as focal points in the lakes that incorporate a fountain jet to help provide aeration to the lakes.	PS	2	\$50,000	\$100,000
A48	13 Place an information shelter that incorporates brochure stand and digital interpretive sign (garden and heritage information) at primary entrance to the gardens.	Item	1	\$20,000	\$20,000
	Develop a mobile app and/or QR code	Item	1	\$50,000	\$50,000
Total					\$3,493,000
Living Plant Collections					
A49	7 Develop two new collections to the North of the gardens that interface with the drainage corridor.	m ²	4,550	\$130	\$591,500
Total					\$591,500
Total Cost Medium Priority Actions (2023-2026)					\$8,803,650
TOTAL COST OVER 10 YEAR MASTERPLAN					\$13,544,700

8 Palmetum



8.1 Vision

Ensure the Palmetum capitalises on its significant reputation as one of the world's foremost collections of palms and improve accessibility for all

8.2 Objectives



8.3 Site Analysis

Summary

Palmetum is a very attractive destination centred on a collection of palms. Most of the existing collections and infrastructure has been in place since 1988. Of all the three parks which form the Townsville Botanic Garden, the Palmetum feels the closest to a truly recognisable Botanic Garden in itself.

The main botanical attribute is a very significant palm collection (in both national and international terms) which includes a large Australian collection and several rare and threatened species. Other collections include Pandanus and cacti and succulents. The future development of the collection could look at including plants that are related to palms and could provide, for example, attractive flowering. The Palmetum is well placed to be developed as a botanic garden given its very strong palm collection, the core of a functioning and credible botanic garden.

Evaluated against the Masterplan of 1998 and 2005, again not much of this plan has been instigated. Most of what exists pre-dates the 1998 Masterplan.

The focus is primarily tending to the gardens as they exist including maintaining pathways and a failing irrigation system.



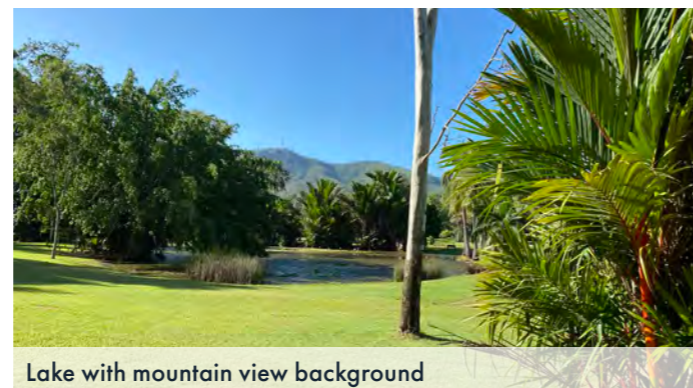
Entrance near the Tumbetin Lodge



View over to the lawn



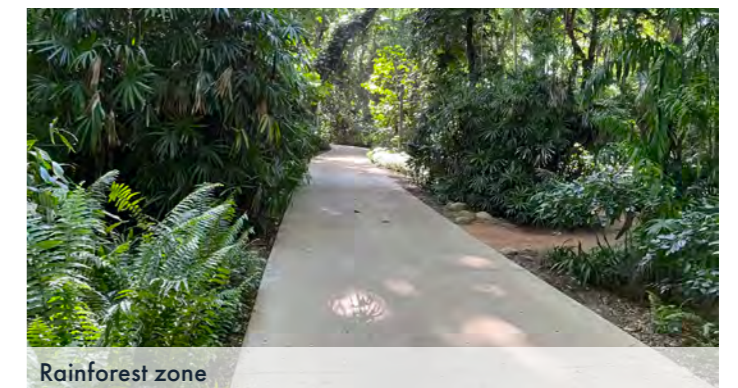
Main accessway around the gardens



Lake with mountain view background



High quality pavement



Rainforest zone



Zigzag bridge




















Sister City Garden - Tokuyama Garden & Summerhouse



Black Hawk Memorial

Existing Site Layout - Palmetum

Legend

-  Project Site Boundary
-  Major pathway Network
-  Pedestrian Trail
-  Waterway/Water body
-  Bike Path
-  Pedestrian Entry
-  Major Node
-  Parking
-  Chair
-  Table
-  Tokuyama Garden & Summerhouse
-  Black Hawk Memorial
-  Savannah Zone
-  Lagoon
-  Xerophytic Zone
-  Picnic Area
-  Undeveloped Land
-  Licuala Walk
-  The Island
-  Rainforest



8.4 Living Collections

8.4.1 Collections:

In terms of the living collection, the Palmetum is the most defined of the three gardens. It has been developed as a global collection focussing on palms with an informal arboretum-like layout within the three habitat areas of Rainforest, Savannah and Xerophytic zones.

The Palmetum grows about fifteen percent of the 2,800 palm species in the world and has been focusing on the rare and endangered species along with particularly attractive and difficult to obtain species. Botanic Gardens Conservation International notes that the Townsville collection is in the top ten public plantings of palms in the world. As a part of this, its conservation collection which includes the critically endangered palm *Carpoxydon macrospermum* should be further developed with an emphasis on any threatened palm species in Australia.

As a part of the Palmetum living collection in the xerophytic habitat, a cacti and succulent garden has also been established and features a display of arid land species planted in association with drought-tolerant palms. If this is retained, the plants selected for planting should have some relevance to the palms and the link between them needs to be interpreted. Also, a display of other plants relevant to the palms in the savannah and the rainforest should be developed and interpreted.

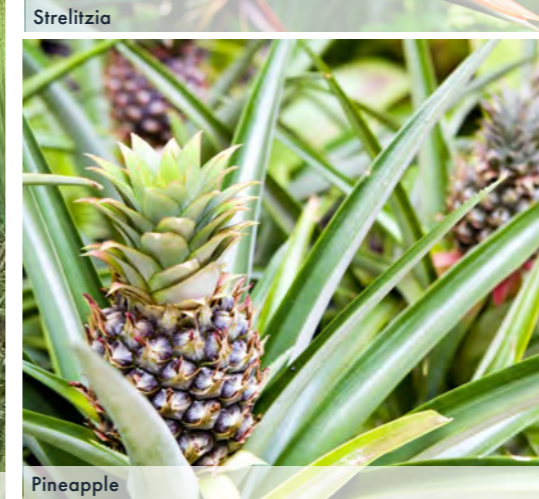
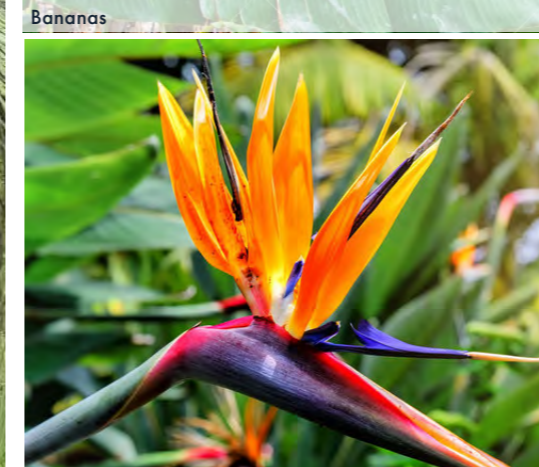
In addition to or instead of the use of habitat as the major theme in the collection, the palm collection could be expanded to include plant species that are related to palms.

To further consider whether the Palmetum is based on habitat and/or botanical classification and look at what other palm species are wanted, a collection plan is now needed.

Plants Related to Palms



Plants More Broadly Related to Palms



8.5 Masterplan Strategies

Strategies

The Palmetum's Vision and Objectives have been translated into several actions, categorised into six strategies. These are:

Upgrade Infrastructure Services

Create Multi-functional Space

Circulation and Layout

Play Spaces, Palm House, Shade Shelters and Furniture

Living Plant Collections

Management & Operations



Upgrade Infrastructure Services

8.5.1 Action – Infrastructure Services

Renewing and upgrading the infrastructure services to provide a reliable and fit for purpose system capable of supporting a Botanic Garden and multi functional space, including:

1. Renewing the electrical reticulation including installing 3 phase power to the multi functional space.
2. Installing potable water points including drinking fountains.
3. Expanding the existing staff maintenance building with offices, toilets and a kitchenette.
4. Installing lighting and CCTV along the Ross River Shared Pathway, existing car park, to the entries of the gardens and to the new car park.
5. Repairing timber board walks and bridges within the Rainforest area.
6. Removing the library and staff offices from the Tea Room. The library can be placed into the new staff facilities until time comes to transfer it over to Anderson Gardens.
7. Improving bank stabilisation to the east of the drainage corridor.
8. Installing a boardwalk and deck onto the Ross River at the Northern entry to the Botanic Gardens. This should be an area for users of the gardens and passerbys to stop and take in the views of the river. The placement of the deck should be an additional highlight to the entry to Palmetum. The deck should also incorporate seating for users to sit and relax.



Source (L-R): Simon Whitbread, Lara Swimmer, Eagle Lighting Australia, Bottega 7, Luce & Light

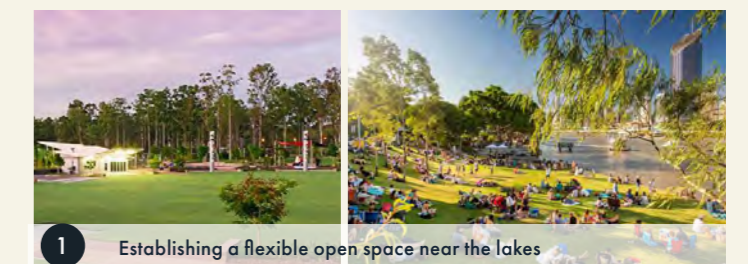
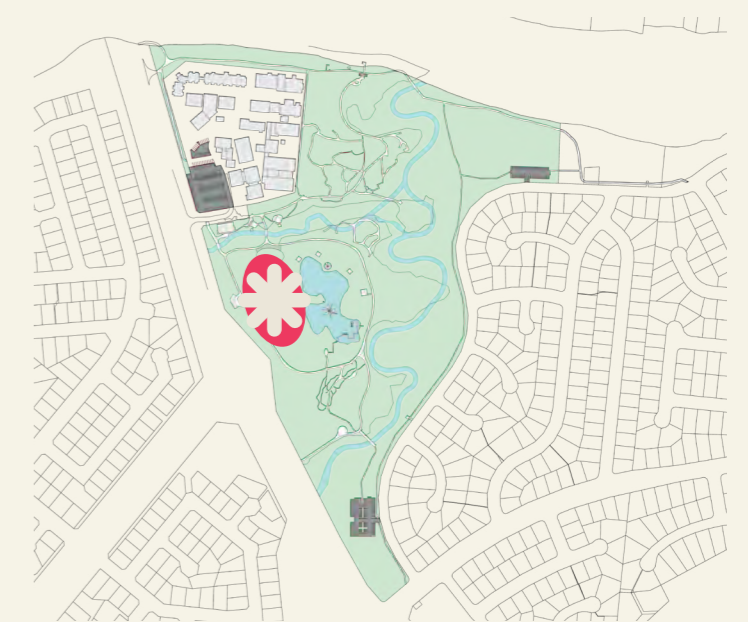
NOTE: These exemplar images are indicative only

Create Multi-functional Space

8.5.2 Action – Create Multi Functional Space

Enhancing the garden's capacity to host flexible communal activities through the creation of new facilities, including:

1. Establishing a flexible, open space near the lakes.
2. Installing seating around the perimeter of the open space.



Source (L-R): City of Ipswich, South Bank Parklands Coporation

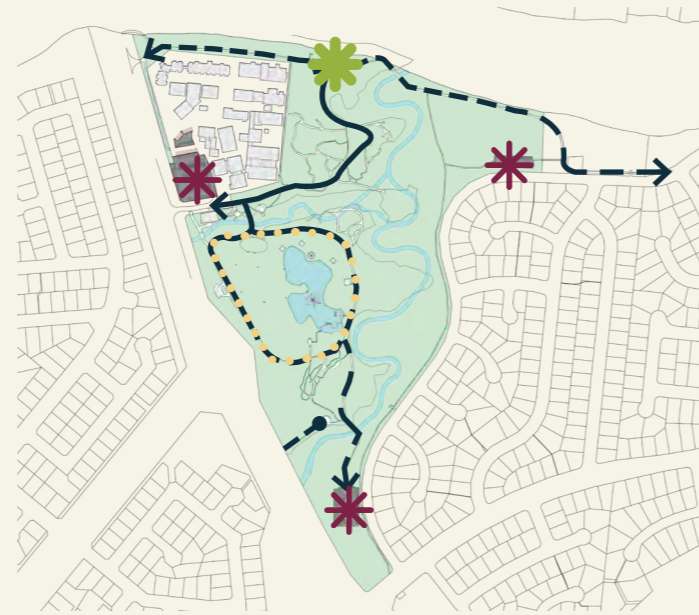
NOTE: These exemplar images are indicative only

Circulation and Layout

8.5.3 Action – Circulation and Layout

Improving and developing connections throughout the gardens and access to surrounding streets and locations, including:

1. Ensuring all hard-finished pathways are DDA compliant.
2. Improving access to the collections by regrading and upgrading natural pathways as required to improve accessibility.
3. Completing the main access pathway with a concrete finish.
4. Constructing a new car park to the south of the gardens.
5. Creating a pathway and pedestrian bridge connecting the new car park across the drainage corridor to the collections.
6. Planting trees along the Ross River shared path that provide shade but do not obstruct low views. Do not place low height trees, trees with low hanging branches or shrubs. This will ensure safety and surveillance along the river.
7. Constructing an entry statement shelter to the Palmetum entry off the Ross River Shared Pathway.
8. Creating a recreational bicycle use only friendly Botanic Gardens by removing prohibiting signage and installing bicycle racks/ loops near the tea room, play space and staff building.
Some restrictions should be in place of where bicycles are allowed to go. This includes restricted limitations within the Rainforest and decking area, but encouraged on the circuit pathway around the lake.
9. Creating a turn around point on the maintenance accessway and drop off entrance to the South of the Botanic Gardens.
10. Constructing an overflow car park to the North-East of the gardens. This car park will include Water Sensitive Urban Design (WSUD) principles and tree plantings.



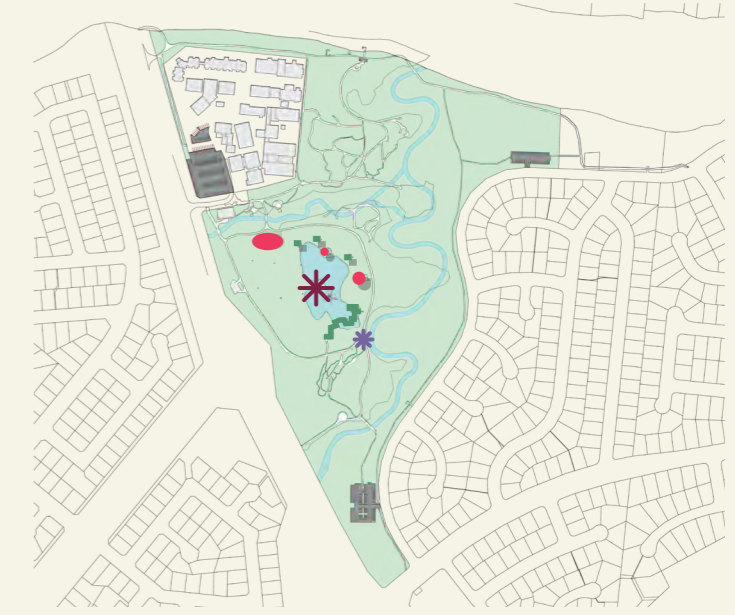
Source (L-R): Tract, Landscape Voice, Ramos Bassols, Cycling Brisbane
NOTE: These exemplar images are indicative only

Play Spaces, Palm House, Shade Shelters and Furniture

8.5.4 Action – Play Spaces, Palm House, Shade Shelters and Furniture

Providing opportunities for all age groups to enjoy the gardens, including:

1. Placing a multi-use rotunda to allow for wedding ceremonies and various events to be undertaken in a lakeside setting.
2. Providing a new interactive play space installation that combines the benefits of a traditional playground with advances in technology. It will provide an engaging experience designed for children to sense and learn. The theme of this play space is to be in line with the palm garden theme.
3. Constructing a new Palm House to store and display indoor Palms.
4. Furnishing the gardens around the lake with additional shelters and picnic settings in line with a consistent furniture style.
5. Installing an art sculpture in the lake for users to admire when relaxing by the water. The sculpture should incorporate a fountain jet to help aeration of the lake.
6. Installing a boardwalk at the south of the lake. This will connect from the existing shelter to a safe landing position to the east of the lake. Along the boardwalk there is to be areas for users to sit and take in the view.
7. Introducing additional seating nodes within the rainforest area.
8. Placing bins and drinking fountains throughout the gardens. This should be in accordance with the furniture style suite.
9. Installing seating along the main accessway.
10. Placing an information shelter that incorporates a brochure stand and digital interpretive sign (garden and heritage information) at the primary entrance to the gardens.
11. Including an entry wayfinding sign at the new car parks to display a map and information on the Botanic Gardens.



Source (L-R): Photobrook Photography, Jaye Rockett, Royal Botanic Gardens Victoria, Kauri Park, Royal Botanic Gardens Victoria
NOTE: These exemplar images are indicative only

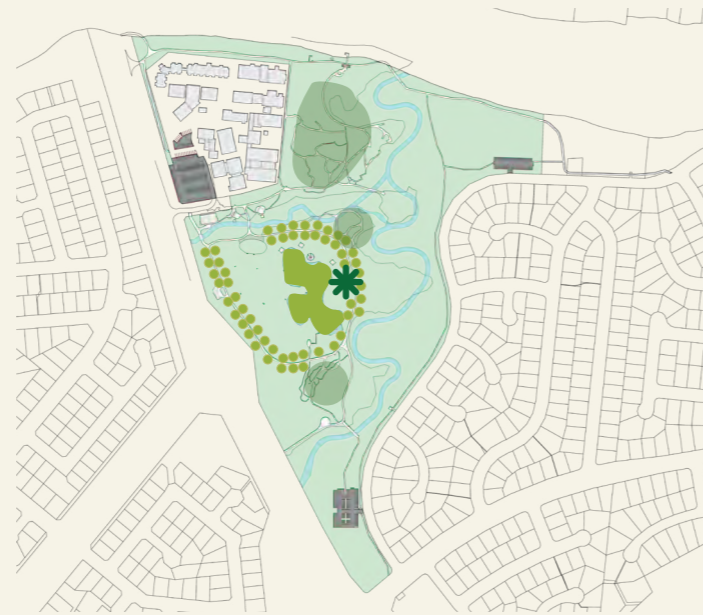
Living Plant Communities

8.5.5 Action – Living Plant Collections

Capitalising on the Palmetum’s global reputation to provide a premier botanical experience, including:

1. Preparing a Living Plant Collection Plan.
2. Planting additional palm trees along the access way boulevard.
3. Developing new collections for the Palm House.
4. Installing interpretive signage for all significant living collections and throughout historically significant areas of the garden. This is a significant element of the guided tours and will be used for educational purposes.
5. Improving the lake weed maintenance through investigative solutions such as pumps and fountains for water circulation.

Reference the Living Collections (8.4) section for more detail.

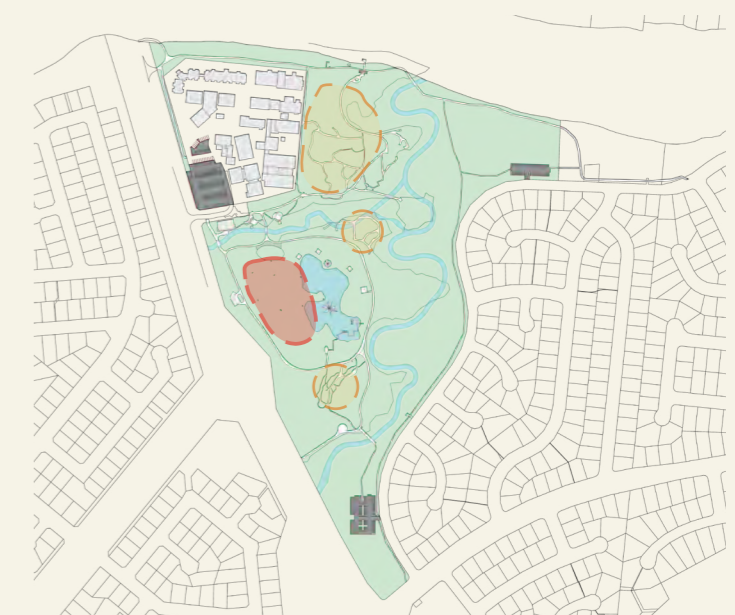


Management and Operations

8.5.6 Action – Management & Operations

Establishing essential procedures to maintain and enhance the botanic gardens, including:



1. Labelling and interpretation of plant collections.
2. Recording collections.
3. Providing a garden tour which can be accessed by the public and education facilities for guided or self-guided interpretation of the collection. Additionally, developing a booking system for guided group tours with council staff or garden volunteers.
4. Developing event management plans.
5. Creating a plan for accreditation.
6. Considering undertaking a Heritage Conservation Management Plan.
7. Developing an education plan.



8.6 Masterplan Layout

Please note, this illustrative masterplan is indicative only and does not represent a concept plan or any level of detail design.

Legend

-  Picnic Shelter
-  Multi-functional Space
- 1** Extension of Staff Maintenance Building
- 2** Ross River Shared Pathway
- 3** Improved Bank Stabilisation
- 4** Designated Event Space
- 5** Interactive Play Space
- 6** New Car Park
- 7** Pathway to Connect New Car Park
- 8** Pedestrian Bridge
- 9** Entry Shelter
- 10** Tea Room
- 11** Wedding Rotunda
- 12** Palm House
- 13** Lake Sculpture
- 14** Boardwalk
- 15** Rainforest Area
- 16** Information Kiosk Stand
- 17** Lake
- 18** Savannah Collection
- 19** Xerophytic Collection
- 20** Black Hawk Memorial
- 21** Tokuyama Garden & Summerhouse
- 22** Maintenance Access Way
- 23** Overflow Car Park





8.7 Priority Action and Indicative Staging Plan

High Priority (Focus will be on staff facilities, pathways and furniture.)

Medium Priority (Focus will be on the creation of new interactive play space, art sculpture, new parking and infrastructure to support these works.)

Low Priority (Focus will be on additional boardwalks, overflow car park and palm house.)

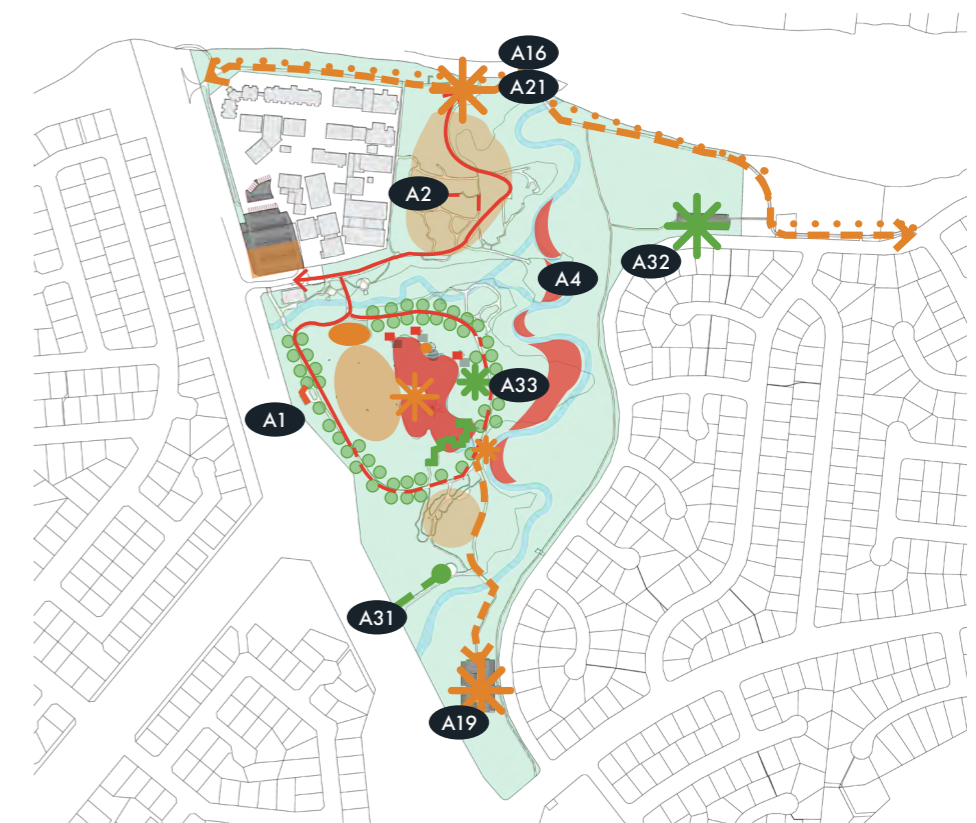
Action	Strategy	Action
High Priority (2020-2023)		
Upgrade Infrastructure Services		
A1	3	Build a new staff maintenance building with offices, toilets and a kitchenette.
A2	5	Repair timber board walks and bridges
A3	6	Remove the library and staff offices from the Tea Room
A4	7	Improve bank stabilisation to the east of the drainage corridor.
Circulation and Layout		
A5	1	All the hard finished pathways to be DDA compliant.
A6	3	Reconfigure and install a hard finish to the remaining of the main access pathway
A7	8	Create a recreational bicycle friendly Botanic Gardens
Play Spaces, Palm House, Shade Shelters and Furniture		
A8	4	Place in shelters with tables around the lake area
A9	7	Place in other seating areas in the rainforest area
A10	8	Place in bins and drinking fountains in the gardens
Living Plant Collections		
A11	1	Prepare a Living Plant Collection Plan
A12	5	Improve the lake weed maintenance

Action	Strategy	Action
Medium Priority (2023-2026)		
Upgrade Infrastructure Services		
A13	1	Renew the electrical reticulation including installing 3 phase power to the multi functional space
A14	2	Install potable water points including drinking fountains
A15	4	Install lighting and CCTV along the Ross River Shared Pathway
A16	8	New Boardwalk and Deck on Northern entry
Create Multi-functional Space		
A17	1	Establishing flexible, open space near the lakes

Action	Strategy	Action
Medium Priority (2023-2026)		
Circulation and Layout		
A18	2	Improve access to the collections by regrading and upgrading as required
A19	4	Create a new car park potentially at Southern end of the gardens
A20	5	Create a pathway and pedestrian bridge connecting the new car park across the drainage corridor to the collections.
A21	7	Create an entry shelter along the Ross River Shared pathway to enter the Palmetum Gardens
Play Spaces, Palm House, Shade Shelters and Furniture		
A22	1	Place in a multi use rotunda
A23	2	Provide a new interactive play space
A24	5	Install an art sculpture in the lake
A25	9	Install seating along the main accessway
A26	10	Place an information shelter that incorporates brochure stand and digital interpretive sign at primary entrance to the gardens
A27	11	Include an entry wayfinding sign at the new car park to display a map and information on the Botanic Gardens
Living Plant Collections		
A28	4	Interpretive signage is to be placed on all significant trees and in the living collections and inform users on the heritage of the garden.

Action	Strategy	Action
Low Priority (2026-2030)		
Create Multi-functional Space		
A29	2	Install seating around the perimeter of the designated lawn
Circulation and Layout		
A30	6	Plant trees along the Ross River Shared Pathway
A31	9	Turn around point on the maintenance accessway and drop off entrance
A32	10	Create an overflow carpark to the North-east of the gardens.

Action	Strategy	Action
Low Priority (2026-2030)		
Play Spaces, Palm House, Shade Shelters and Furniture		
A33	3	Install a Palm House
A34	6	Install a boardwalk at the south of the lake
Living Plant Collections		
A35	2	Continue palm trees along the main accessway
A36	3	Plant new collections in the Palm House



Legend

- ↔ High Priority Actions
- ★ Medium Priority Actions
- ★ Low Priority Actions

8.8 Cost Planning

The schedule provided is to assist Townsville City Council in formulating the feasibility assessment of works proposed as part of Townsville Botanic Gardens Masterplan 2020-2030. Rates and figures provided are based on industry and best practice standards and does not necessarily reflect a comprehensive cost plan, description of the works or designs to be produced as part of detailed design. Furthermore, all rates shall be deemed to allow for supply and installation unless noted otherwise. The exclusions include; Cost Escalation, Margins and Adjustments, Authority Fees and Charges, Goods and Services Tax, Unforeseen Conditions (eg. Acid Sulfate Soil, Flooding, Asbestos), Topsoil Testing, Maintenance and Consultant Fees.

Action	Strategy	Unit	Quantity	Rate	Amount	
High Priority (2020-2023)						
Upgrade Infrastructure Services						
A1	3	Expand the existing staff maintenance building with offices, toilets and a kitchenette.	PS	1	\$500,000	\$500,000
A2	5	Repair timber board walks and bridges within the rainforest area.	Item	3	\$30,000	\$90,000
A4	7	Improve bank stabilisation to the east of the drainage corridor.	m ²	11,000	\$10	\$110,000
					Total	\$700,000
Circulation & Layout						
A6	3	Complete the main access pathway with a concrete finish.	m ²	1,650	\$140	\$231,000
A7	8	Create a recreational bicycle friendly Botanic Gardens by removing prohibiting signage and installing bicycle rack/loops near the tea room, play space and staff building	Item	2	\$1,000	\$2,000
					Total	\$233,000
Play Spaces, Palm House, Shade Shelters and Furniture						
A8	4	Furnish the gardens around the lake with additional shelters and picnic settings in line with a consistent furniture style.	Item	3	\$30,000	\$90,000
A9	7	Introduce additional seating nodes within the rainforest area.	Item	5	\$3,000	\$15,000
A10	8	Place in bins and drinking fountains throughout the gardens.	Item	10	\$8,000	\$80,000
					Total	\$185,000
Living Plant Collections						
A12	5	Improve the lake weed maintenance through the investigative solutions such as pumps and fountains for water circulation.	m ²	7,000	\$20	\$140,000
					Total	\$140,000
					Total Cost High Priority Actions (2020-2023)	\$1,258,000

Action	Strategy	Unit	Quantity	Rate	Amount	
Medium Priority (2023-2026)						
Upgrade Infrastructure Services						
A13	1	Renew the electrical reticulation including installing 3 phase power to the event space	item	1	\$100,000	\$100,000
A14	2	Install portable water points including drinking fountains	m ²	5	\$10,000	\$50,000
A15	4	Install lighting and CCTV along the Ross River Shared Pathway, existing carpark to the entries of the gardens and to the new carpark	m ²	4,500	\$250	\$1,125,000
A16	8	Install a boardwalk and deck onto the Ross River at the Northern entry to the Botanic Gardens.	m ²	50	\$1,000	\$50,000
		Incorporate seating.	Item	2	\$3,000	\$6,000
					Total	\$1,331,000
Circulation and Layout						
A18	2	Improve access to the collections by regrading and upgrading natural pathways as required to improve accessibility	m ²	1,500	\$35	\$52,500
A19	4	Construct a new car park to the south of the gardens	m ²	2,200	\$180	\$396,000
		Hard surface pathway from the car park to the main access way	m ²	480	\$140	\$67,200
A20	5	Create a pathway (and pedestrian bridge) connecting the new carpark across the drainage corridor to the collections.	m ²	190	\$140	\$26,600
		Pedestrian Bridge	Item	1	\$80,000	\$80,000
A21	7	Construct a statement shelter to the Palmetum entry off the Ross River Shared Pathway.	PS	1	\$45,000	\$45,000
					Total	\$667,300
Play Spaces, Palm House, Shade Shelters and Furniture						
A22	1	Place a multi-use rotunda to allow for wedding ceremonies and various events to be undertaken in a lakeside setting.	m ²	100	\$650	\$65,000
A23	2	Provide a new interactive play space installation that combines the benefits of a traditional playground with advances in technology. It will provide an engaging experience designed for children to sense and learn. The theme of this play space is to be in line with the palm garden theme.	PS	1	\$1,000,000	\$1,000,000

The schedule provided is to assist Townsville City Council in formulating the feasibility assessment of works proposed as part of Townsville Botanic Gardens Masterplan 2020-2030. Rates and figures provided are based on industry and best practice standards and does not necessarily reflect a comprehensive cost plan, description of the works or designs to be produced as part of detailed design. Furthermore, all rates shall be deemed to allow for supply and installation unless noted otherwise. The exclusions include; Cost Escalation, Margins and Adjustments, Authority Fees and Charges, Goods and Services Tax, Unforeseen Conditions (eg. Acid Sulfate Soil, Flooding, Asbestos), Topsoil Testing, Maintenance and Consultant Fees.

Action	Strategy	Unit	Quantity	Rate	Amount	
Medium Priority (2023-2026)						
A24	5	Install an art sculpture in the lake for users to admire when relaxing by the water. The sculpture should incorporate a fountain jet to help assist aeration of the lake	Item	1	\$50,000	\$50,000
A25	9	Install seating along the main accessway	Item	5	\$3,000	\$15,000
A26	10	Place an information shelter that incorporates brochure stand and digital interpretive sign (garden and heritage information) at primary entrance to the gardens.	Item	1	\$20,000	\$20,000
A27	11	Include entry wayfinding signage at the new carparks to display a map and information on the Botanic Gardens	Item	2	\$10,000	\$20,000
					Total	\$1,170,000
Living Plant Collections						
A28	4	Install interpretive signage on all significant trees, in the living collections and throughout historically significant areas of the garden. This is a significant element of the guided tours and will be used for educational purposes.	PS	1	\$80,000	\$80,000
					Total	\$80,000
Total Cost Medium Priority Actions (2023-2026)						\$3,248,300

Action	Strategy	Unit	Quantity	Rate	Amount	
Low Priority (2026-2030)						
Create Multi-functional Space						
A29	2	Install seating around the perimeter of the designated lawn	Item	10	\$4,500	\$45,000
					Total	\$45,000
Circulation and Layout						
A30	6	Plant trees along the Ross River shared path that provide shade but do not obstruct low views. Do not place low height trees, trees with low hanging branches or shrubs. This will ensure safety and surveillance along the river (100L)	Item	20	\$300	\$6,000
A31	9	Create a turn around point on the maintenance accessway and drop off entrance to the South of the Botanic Gardens.	m ^l	400	\$180	\$72,000
A32	10	Construct an overflow car park to the North-East of the gardens	m ²	1100	\$180	\$198,000
		WSUD	PS	1	\$50,000	\$50,000
					Total	\$326,000
Play Spaces, Palm House, Shade Shelters and Furniture						
A33	3	Construct a new Palm House to store and display indoor Palms.	m ²	100	\$3,000	\$300,000
A34	6	Install a boardwalk at the south of the lake. This will connect from the existing shelter to a safe landing position to the east of the lake. Along the boardwalk there is to be areas for users to sit and take in the view.	m ²	240	\$1,500	\$360,000
					Total	\$660,000
Living Plant Collections						
A35	2	Continue palm trees along the main accessway (100L).	Item	60	\$300	\$18,000
A36	3	Develop new collections for the Palm House	m ²	100	\$300	\$30,000
					Total	\$48,000
Total Cost Low Priority Actions (2026-2030)						\$1,079,000
TOTAL COST OVER 10 YEAR MASTERPLAN						\$5,585,300

9 Unified Palettes

In order to respect the specific and defined characteristics of the three Botanic Gardens, we suggest a unified furniture and embellishments palette that is consistent with current Townsville City Council standards.

If deemed appropriate, a design/style guideline specific to the Botanic Gardens should be developed to create a modern palette of furniture that will create a point of difference to other parks and open space reserves within Townsville. Anderson Gardens and Palmetum would require a similar furniture style, while Queens Gardens will require bespoke elements to reflect the heritage themes of the Gardens, and complement the Conservation Management Plans.

While Botanic Gardens focus of living collections, education and conservation, there is some elements of the masterplan which offer both active and passive spaces. These spaces are commonly associated with play, leisure, picnicking and public realm. These are the amenity blocks, gathering space, conservatory, interactive play spaces, all abilities playground and nature play, garden shop/ kiosk, palm house and shelters. To support this and extend the visitor experience, it is appropriate to provide a suite of furniture elements which is complementary and embraces the distinct and recognised sense of place. Furniture suites will aim to provide a variety of uses and functions while facilitating for individual and group social activities. It will also aid in the overall experience value in respect to location and context.

The furniture suites elements typically include structures, shelters, picnic settings, seating, bins, bollards and lighting.

To further enhance the overall experience of each of the Botanic Gardens it is recommended a range of premium furniture types are used. Premium furniture ranges should only be applied to areas which provide a higher level of experience, engagement, service, facilities and will accommodate for a larger magnitude of traffic. These areas include the public realm outside of the Conservatory, the gathering space and all multi-functional spaces. The Premium furniture ranges will reflect a modern, enduring and contemporary urban suite which supports these spaces' use as a public realm and viewing area. Material selection will be in a range of pre-cast and insitu concrete, hardwood timbers, local stone and powdercoat treated elements to assist in establishing brand, locality and wayfinding.

The standard furniture suite will reflect modern and contemporary opportunities to present enduring design qualities and outcomes for all. Furniture design will respond to the context, character and function of adjacent spaces, including the aesthetic qualities of play, natural environment and refuge.



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