

Buninyong Botanic Gardens Landscape Masterplan

14 December 2021



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Urban Initiatives acknowledges the Wurundjeri People of the Kulin Nation as custodians of the land upon which we work. We acknowledge also the Wadawurrung People as the Traditonal Owners of the lands on which the Buninyong Botanic Gardens sits and their unique perspective and contributions to this project.

We pay our respects to their respective Elders past, present and emerging.



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Executive Summary

In 2019, the Gong reservoir wall within the Buninyong Botanical Gardens was identified as a public safety risk due to its gradual deterioration over time. An engineering solution has been proposed to stabilise the dam wall. This will require the vegetation on both sides of the dam wall to be removed.

In May 2020, following extensive community consultation to discuss the Gong Wall project, Council endorsed a process to undertake further community engagement to prepare a landscape masterplan for the entire Gardens and to defer works on the dam wall until the completion of that process.

Further community engagement commenced in July 2021 to understand how the community uses the Gardens and Gong, what they valued and their vision for the future of the spaces. Overwhelmingly, the community clearly expressed their high regard for the Buninyong Botanic Gardens and Gong as a beautiful, natural space. A strong preference was for improvements to the existing character and infrastructure over large scale change. This sentiment has been used to steer this Masterplan.

The overarching objectives of this project are to:

- use the impending Gong wall works as an opportunity to achieve a more coherent, integrated upper and lower Gardens;
- build on the existing strengths of the Buninyong Botanic Gardens Conservation Study and Masterplan (2004) updating it to reflect new thematic areas of planting, education and the Traditional Owner's connection to country;
- evolve the Gardens to suit the diverse needs of the community, within the context of heritage significance and the availability of council resources;

- improve accessibility, circulation and connections;
- consider the future of the Gardens in the context of Climate Change and establish principles to guide inevitable change in the Gardens while retaining character and integrity;
- celebrate the landscape and heritage setting of the Gardens, including the cultural heritage of the location; and
- implement the City of Ballarat's Living Collections Strategy for the Gardens: that it be viewed as part of a broader suite of horticultural offerings of the City with, given its proximity to the Buninyong Primary School, a particular focus on Education.

Further themes evolved during the community engagement period including: A Place for Connecting;

- A Place for Connecting;
- A Place for Learning;
- Acknowledging our Cultural Heritage;
- Caring for our Natural Systems;
- A Botanic Gardens for the Future.

These themes have been used to derive strategies and practical recommendations in the Draft Masterplan which is now presented to the community for feedback before developing an Implementation Plan.

The Draft Masterplan will be on display for the community to read, review and provide comment until January 28th 2022. Comments and Submissions can be sent to citydesign@ballarat.vic.gov.au.

Following consultation on the Draft Masterplan, it will be reviewed ahead of presentation to Council for adoption.



1 INTRODUCTION

1.1 Context

In 1850 the Buninyong Botanic Gardens was identified as a Reserve for Botanic Gardens with 'springs and tea tree' and are one of the oldest botanic gardens in Victoria. They were established in the 1860s and designed by the first Director of the Royal Botanic Gardens Melbourne, Baron Ferdinand von Mueller. In 1999 the Gardens were added to the Victorian Heritage Register, formalising their Post-colonial historical, aesthetic, scientific and social significance to the State of Victoria. The 2014 Conservation and Landscape Masterplan details the importance of the Gardens from a post-Colonial perspective and remains an important reference document.



Fig. 1 Plan of the Township of Buninyong (1856) indicating 'springs and tea tree' on the Botanic Gardens site

For the Wadawurrung, the land on which the Gardens sit has been significant for millennia. It was the scene of a significant battle between the two fearsome volcano warriors Derrinalum and Bonan Youang. Below is Uncle Bryon's telling of their creation of Wadawurrung Country.

'We are here on Bongerimennin [Flagstaff Hill lookout in Linton], we have a view of Bonan Youang and Derrinalum. Bonan Youang is now at Mount Buninyong, which means a man lying on his back with his knees raised. Terrinalum is now called Mount Elephant. Terrinalum actually means place of the sea terns, which are like swallows. The story is told by the old people that Bonan Youang and Terrinalum argued and challenged each other to a fight and they came together to fight at a place called Pitfield. Terrinalum had a spear. Bonan Youang had an axe. And as they fought, Terrinalum pierced Bonan Youang's side with his spear. Buninyong hit Terrinalum on the head and split his head with his axe. They were so angry that they spat fire at each other, but they were also hurt so they retired back to their campsites to rest. They turned to stone. You can still see them today. If you look at Bonan Youang you can see where Terrinalum's spear pierced his side. If you look at Terrinalum you can see where Bonan Youang's axe split his head open.'

Wadawurrung ancestors witnessed this fight. Their Country, with its unique volcanic geology, flora and fauna now lies peaceful. The Gong is located directly in the line of fire between the remains of the two warriors and the remains of Derrinalum are visible from the highest point of the upper gardens.



Fig. 2 Wadawurrung Country and the Buninyong Botanic Gardens

1.2 Gong Reservoir Wall Stabilisation

The reconstruction of the Gong Wall will remediate the leaking dam wall and bring it into line with current standards to secure safety for the Buninyong Community. Works to the Gong Wall will retain the existing core and stabilising the structural integrity using a new drainage layer. The finish of the stabilised wall on the Gong side is proposed to be a rocky embankment planted with riverine plants while the Gardens side will be constrained to a soil to a depth of 300mm in order to ensure the wall structure remains intact. Solutions that may provide greater depth of planting medium for the inclusion of larger species, such as terracing, are being explored and are subject to engineering approval.

As part of the Wall repair, a Gong-side boardwalk may allow greater connection between park users and the aquatic environment and a new, safer pedestrian path can be established along Cornish Street. A new walking path is possible at the foot of the new Gong Wall to allow for appreciation of the new embankment collections and improved views into the Botanic Gardens

Opportunities that arise as a result of this project include:

- Exploring opportunities to better unite the two sides of the Gardens through paths, signage and improved line of sight;
- Seeing the revegetation of the new embankment wall as an opportunity to extend the collections of the Buninyong Botanic Gardens (and City of Ballarat), as well as providing a considered and heritage-sensitive backdrop for the Sequoia and ponds;
- Redesigning and integrating the Cornish Street edge and crossings to improve pedestrian access, safety and experience;



Fig. 4 Existing and Proposed Conditions post the Gong Embankment works

- Using the new interface of the embankment wall to create a thriving, indigenous, aquatic landscape for habitat, amenity and cultural importance and to improve its access;
- Using the embankment wall works to enable a staged vegetation replacement strategy which will progressively reduce weed species and replant with indigenous, water's edge species.

Currently, the Gardens and Gong are used as, and appear to be, two distinct spaces (Figure 4a). Under this Masterplan, the aspirations for the site are to enhance the Botanic Gardens as a place for exotic collections and the Gong side to be developed as a naturalised indigenous and native garden showcasing riverine and Australian plants (Figure 4b).

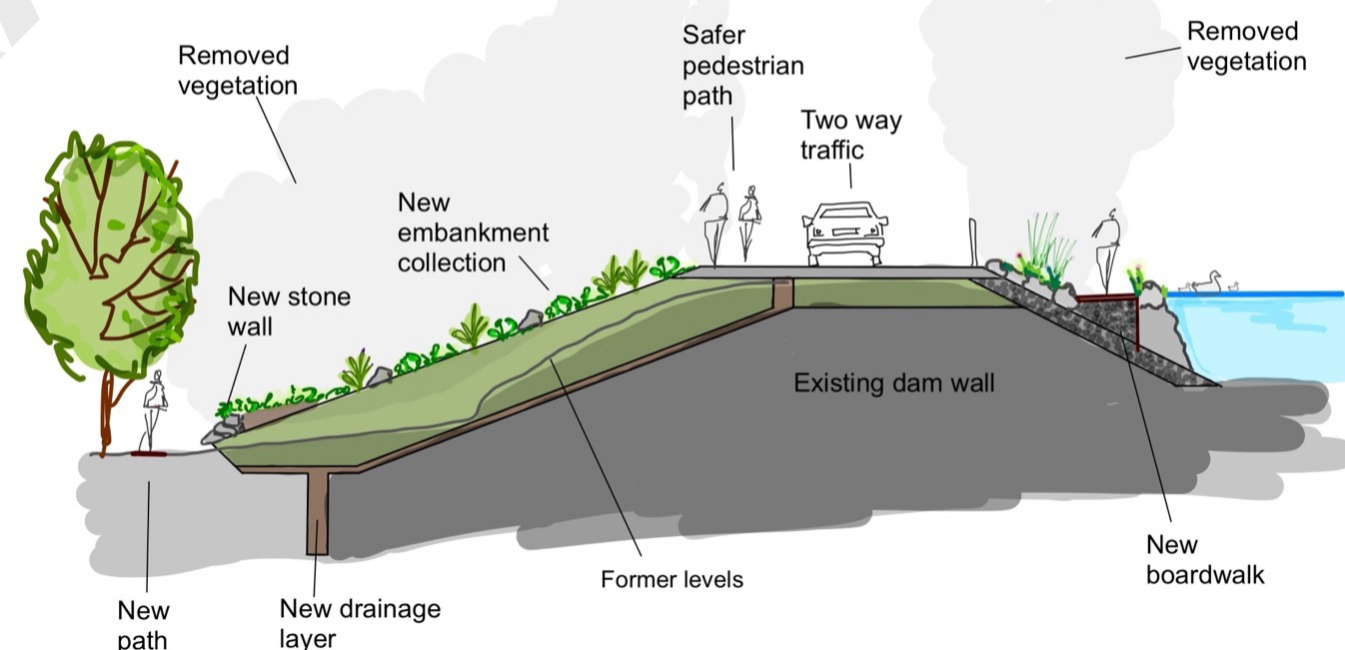


Fig. 3 Preliminary section for the new Gong embankment, Cornish Street and boardwalk. Concept subject to Engineering approval.

1.3 Guiding Documents

The following key documents were considered in the preparation of this revised Masterplan.

- *Buninyong Botanic Gardens Conservation Study and Masterplan*, Dr. David Jones 2014



- *Paleert Tjaara Dja Let's make Country Good Together 2020-2030*, Wadawurrung Country Plan 2020, WTOAC



- *The Gong Reservoir Dam Wall, Buninyong Botanic Gardens Reserve Heritage Impact Statement*, Context-GML Heritage Victoria August 2020

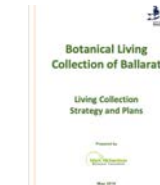


- *Community Engagement Report, Buninyong Botanic Gardens Master Plan*, City of Ballarat, September 2021



- 'The Gong Dam Detailed Design Upgrade Risk Assessment Summary', GHD, 2019

- *Botanical Living Collection of Ballarat - Living Collection Strategy and Plans*, Mark Richardson, May 2018



- *Buninyong Township Plan Tract with Biosis*, Max Hardy and Essential Economics 2019



- *Structural Inspection + Report on Buninyong Gardens Former Pool Perimeter Walls*, Consult Australia and Quatrefoil Consulting, June 2020



- Unpublished RMIT student work 'Project Botanica' was also considered as part of contextual research to prepare this Masterplan document.



2 STAKEHOLDER ENGAGEMENT PROCESS

This Masterplan project has come about as a direct response to an identified community need arising out of the 2019 community engagement and MySay survey focused on the Gong Wall stabilisation works undertaken by Council. The community requested that the Gong works be considered in the context of a revisited Masterplan for the Gardens and Gong precinct holistically.

Engagement to create the Draft Masterplan took place over 10 weeks in early to mid 2021. Consultation was initiated via a Stakeholder Advisory Group (SAG) facilitated by Council and continued with a broader community engagement process. Responses from this engagement series were used to create the Draft Masterplan.

Engagement methods included:

- Survey online and in hard copy
- Community Open House in July 2021
- Engagement with year five students at Buninyong Primary School
- Buninyong Community News – 2 Articles
- e-Newsletter to individuals or groups known to have a connection to the Gardens
- Letter to physical addresses immediately adjacent to the Gardens and Gong
- My Say Ballarat page and Social Media Campaign.

Response rates to the engagement process were lower than expected with many engaging with the project to obtain information about the stage of the project and curiosity about what was being proposed. The largest group providing feedback were children from the Buninyong Primary School

with individuals aged 45-64 completing a majority of the online surveys (45%). The majority of the respondents were locals who used the gardens as their local park for socialisation, exercise, respite and to feel connected to the natural beauty and aquatic environment.

Response rates for the key engagement events were:

- Visits to MySay Ballarat– 149 total visits across the 10 weeks of open engagement
- Attendees to Community Open House – 25 individuals
- Surveys Complete – 55
- Buninyong Primary Year 5 Students – 200 students and 4 teachers
- Email Contributions – 15 emails from 7 individuals.

The strongest theme emerging from the engagement was the community's high regard for the Buninyong Botanic Gardens and the Gong as a beautiful, natural space and their desire for the changes to the gardens to be done with a light touch without deeply changing much or adding too much to the site.

Identified areas for improvement included a connected path network spanning Cornish Street, increased tree planting, increase in interpretation of the Traditional Owner's connection to the space, increased variety of seating, an upgraded play space and greater access to the Gong through a path or boardwalk. There was also a preference for the Botanic Gardens to be enhanced to highlight European heritage and exotic plant

collections with the Gong being improved as a naturalised, riverine and aquatic space with collections of indigenous and native plants and a telling the story of the Wadawurung's connection to country through the story of the battle of Derrinalum.

Throughout all the engagement methods, a low level of concern about reconstructing the Gong wall was expressed provided that the repaired wall included improvements to pedestrian safety, increased amenity through a boardwalk, habitat creation, increased planting on the slope and a green look and feel.

Major stakeholder groups including Wadawurrung Traditional Owners Aboriginal Corporation (WTOAC), Friends of Buninyong Botanic Gardens and a variety of local community groups were approached directly for their feedback. Their views along with those of the broad community have been used to drive the recommendations of this Masterplan document.



The Open House consultation, July 2021.



The consultative site walk through the Gardens with representatives of the WTOAC revealed the Gardens' most significant view for the Wadawurrung.

3 EXISTING CONDITIONS

3.1 Access and Circulation

Existing Conditions Summary

There is an unsurprising contrast between the formality of the paths in the Lower Gardens and the more organic experience of the Upper Gardens paths around the Gong. This is consistent with the historical development of the Gardens and the difference is something to be celebrated as the Upper Gardens evolve into a contrasting zone of the Botanic Gardens in their own right.

Easy circulation is at times compromised by missing links in pathways, grades, inconsistent surface materials and poor drainage.

In considering improvements to the path network, travel to destinations beyond the Gardens, such as Buninyong Primary School and the south-west car park, which has contributed to the formation of desire lines, is worthwhile.

The establishment of a path hierarchy that responds to the various uses of the Gardens would also be beneficial. Whereas currently collections are not clearly defined, the opportunity to explore and experience collections of differing scales on a circuit of secondary or tertiary paths would provide the gardens and visitors with more varied options for enjoying their time there.

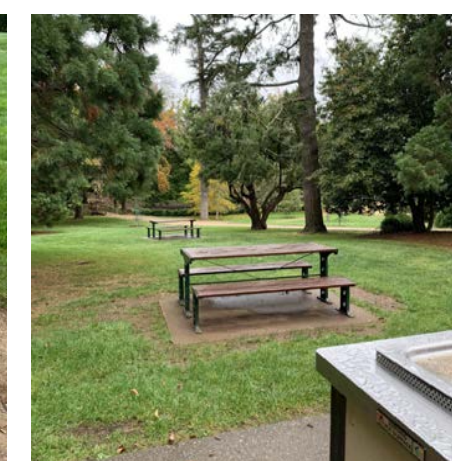
Key Issues

- Safe and accessible crossing between the two halves of the Gardens;
- Filling in missing links, in particular to destination/connections beyond or adjacent to the Gardens;
- Formalising frequented pathways to avoid soil compaction beneath/within tree root zones;



Fig. 5 Existing Physical Connection

- Considering universal access, path grades, drainage and surface finishes ;
- Providing circuitous paths for active and more leisurely exercise;
- Providing secondary and tertiary path connecting loops for exploring garden collections;
- Providing North-South pedestrian only access parallel to Cornish Street, which works like most of Buninyong's roads, as a shared zone.



Photos from above left: Crossing Cornish Street; Drainage issues affecting existing gravel pathways; Opportunity to better integrate furniture with BBQ facilities for easier access.

3.2 Interpretation

Existing Conditions Summary

The City of Ballarat's *Living Collections Strategy* has determined a purpose for the BBG which is complementary to that of the City's existing collections, on a theme of 'Education'. The Gardens are strongly positioned to deliver upon this theme owing to:

- their proximity to the Buninyong Primary School;
- the interest of the Wadawurrung Traditional Owners Aboriginal Corporation in this site and project;
- the variety of vegetation collections including the Gardens' aquatic setting;
- the traditional and colonial heritage significance of the Gardens.

The Buninyong Primary School currently uses the Gardens for exercise and as a recreation space, but have expressed an interest in using it as an educational resource and as an alternate space for teaching. They are particularly keen to learn about Wadawurrung culture, as is the Buninyong community keen to see it appropriately represented.

Existing interpretation takes the form of plaques and information boards only.

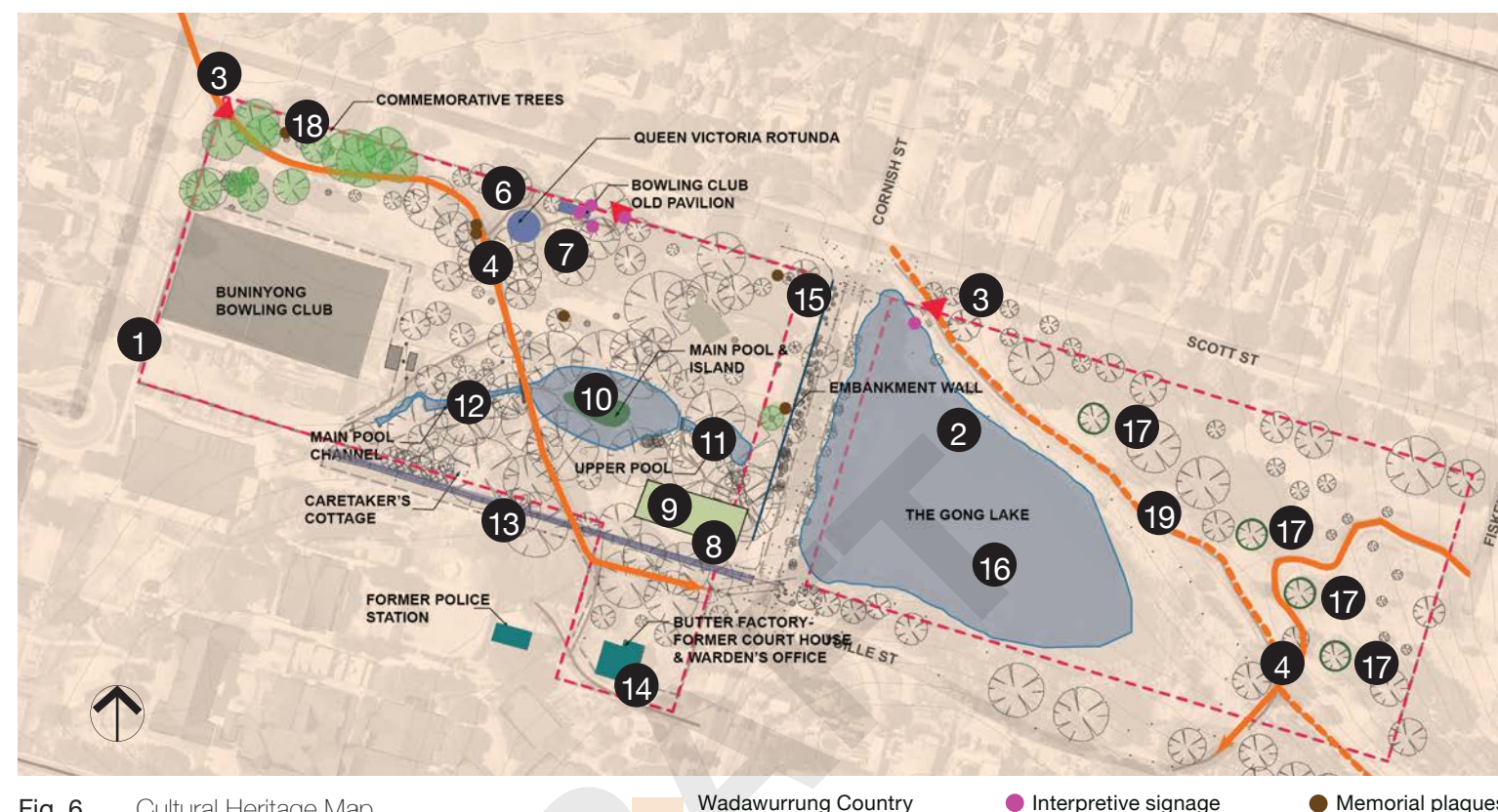
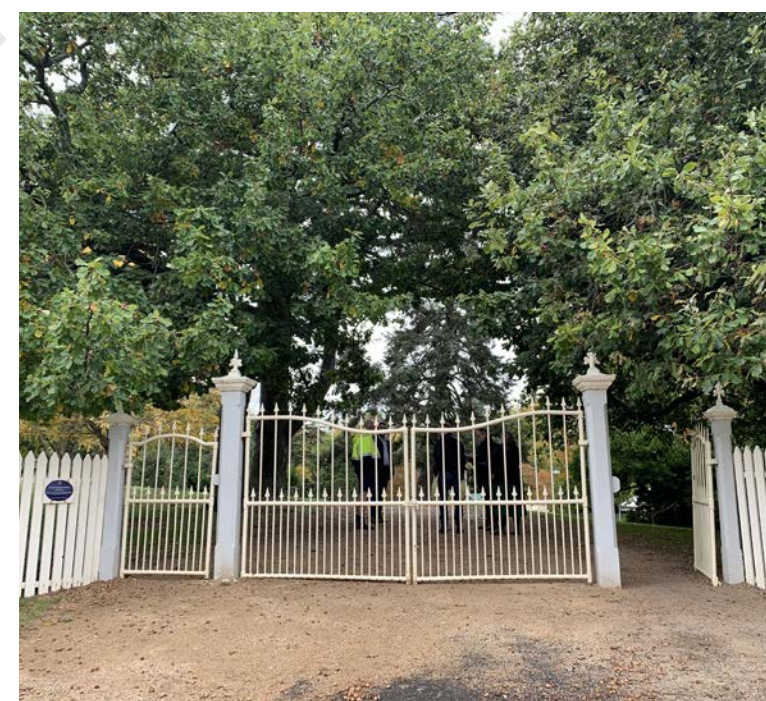


Fig. 6 Cultural Heritage Map

1. Buninyong Botanic Gardens HV (#1826)
2. The Gong Reservoir HV (#1826)
3. Entry / Main Gates HV (B1)
4. Main path HV (S1)
5. Concrete posts and wire on Scott Street edge (Significant)
6. Queen Victoria Rotunda HV (B2)
7. Bowling Club old pavilion HV B4)
8. Baths walls HV (B6)
9. Baths pool (covered over) HV (B5)
10. Main Pool and Island HV (S2)
11. Upper Pool HV (S3)
12. Main Pool channel HV (S2)
13. Stone flume HV (S4)
14. Former Court House (Significant)
15. Cornish Street Reservoir and embankment (Significant)
16. Gong Lake HV (S6)
17. Acer species (registered trees under the heritage act 1995)
18. Commemorative trees
19. Gong path HV (S5)

This map shows those features listed as significant. For a complete list of heritage-listed features see 'Historic Artefacts in the Buninyong Botanic Gardens'.

For a full list of heritage and significant trees please refer to the 'Vegetation and Inventory of the Buninyong Botanic Gardens and the Gong Reservoir' David Jones, Buninyong Botanic Gardens Conservation Study and Masterplan' 2014 [Appendix A](#).



Photos, left to right: Memorial tree plaque; Interpretive signage denoting the history of the Pavilion; Heritage plaque at the Gardens' main gate.

Key Issues

- Opportunity exists for the acknowledgement of Wadawurrung Country and the integration of interpretation about the pre-colonial history of the site (in consultation with the WTOAC);
- The quality and definition of existing plant collections are varying, plant labelling is also inconsistent;
- Existing interpretation and labelling is traditional and subject to exposure and deterioration. The Wadawurrung have expressed a preference for integrated, non-static interpretation and digital media, rather than visual clutter.

3.3 Waterways and Aquatic Health

Existing Conditions Summary

For what was previously an area of Springs and Tea Tree, water quality in the Gardens has been compromised by poor flow, residential development and agricultural activities in the catchment. Weed species proliferate and the heritage-listed overflow channel 'The Flume' does not function correctly, nor is maintained to do so. Constant seepage through the compromised wall means that overflow waters rather than reach 'The Flume', leak through to the base of the wall embankment causing a permanently soggy area.

Lack of circulation in the pond system renders the water stagnant. The waters of the ponds and the Gong, if properly maintained, offer greatly improved and contrasting opportunities for amenity, for areas of indigenous, wetland habitat and so for attracting wildlife.

Key Issues

- Stagnating waters in both the Gong and pond systems;
- Inappropriate species for filtering of wetland waters;
- Disconnection of Flume;
- Lower ponds end abruptly in a drain;
- Weed and exotic species along the waters edge and in the Gardens, including Willows and Poplars.

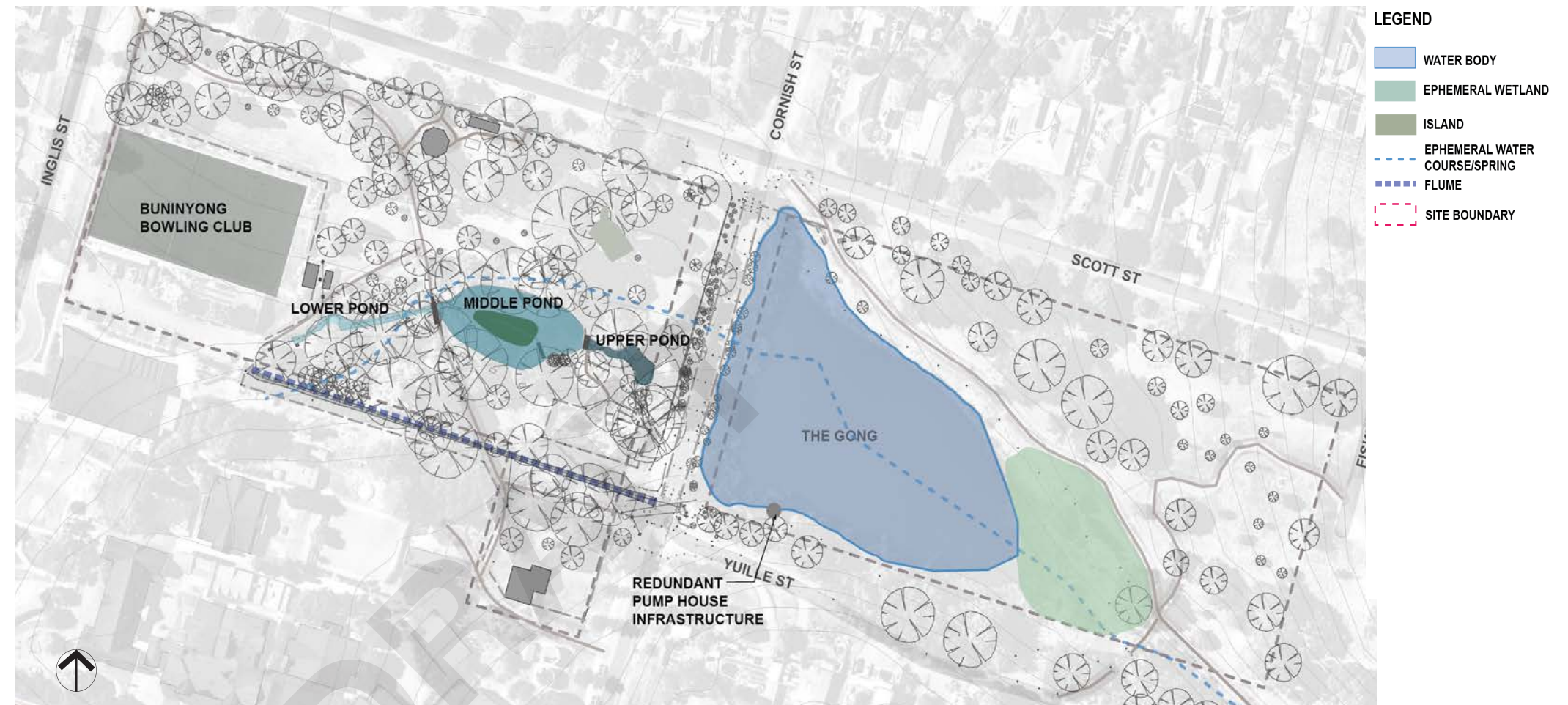


Fig. 7 Existing Water Conditions



Photos above from left: Ponds terminus; the heritage-listed Flume; Waters of the gardens ponds; The Gong Reservoir.

3.4 Trees, Vegetation and Collections

Existing Conditions Summary

The absence of a Collections Strategy for the Gardens means that decisions over time have been reactive rather than responding to and consistent with a coherent vision. Although the collections may have previously presented as intact, today the Gardens are comprised of a disparate grouping of specimens, largely conifers (*Pinus*, *Abies*, *Sequoiadendron* and *Cupressus* sp.), fairly commonplace exotic deciduous species (*Populus*, *Ulmus*, *Betula*) and dense, shaded areas of *Quercus canariensis*. The large, original coniferous and evergreen species plantings, as they have grown and resources for maintenance to the Gardens have lessened, have shaded out understory beds and diminished the colour offered by the display beds of the original Gardens. Still, the community describe Autumn colour in the Garden's trees as one of the highlights of the year.

The impending loss of the *Arbutus* (Strawberry Tree) on the lower Gong wall embankment and *Salix* (Willow) on the upper embankment, in addition to the eventual removal of weeds, senescent or unsafe trees, offers the opportunity to rethink plantings to bolster garden-wide strategies: providing spaces for the evolving uses of the Buninyong Community, future-proofing the Gardens collections against Climate Change, the removal of weed species which are responsible for long-term harm to the environment and strengthening collections and educative opportunities.

Key Issues

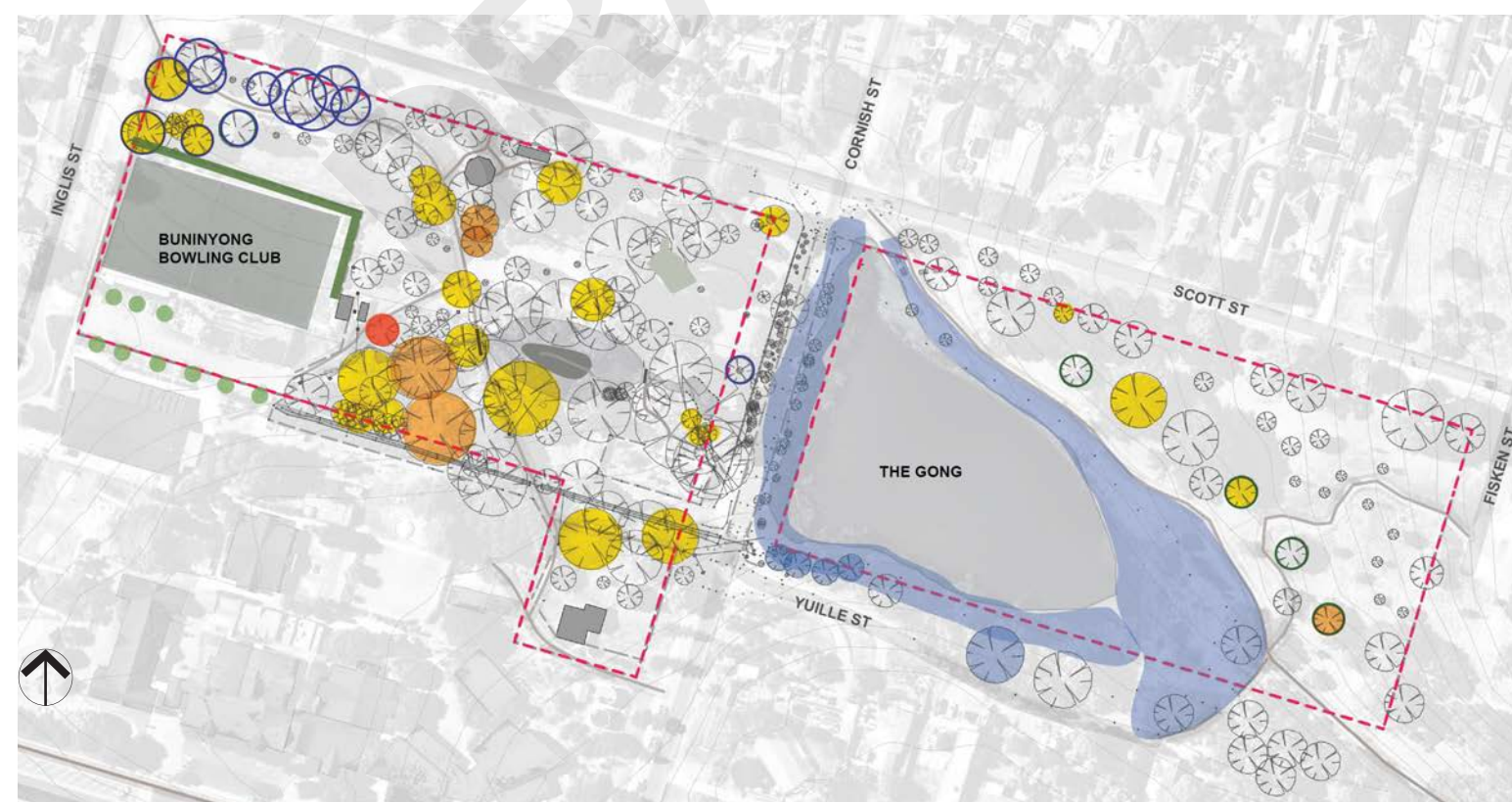
- Garden size is restrictive which limits capacity for large plant collections, species and the open spaces which are important to this community for amenity;
- Dominance by large, evergreen species and conifers which have shaded out

extensive areas of understory, limiting opportunities for garden beds and shrub/perennial collections;

- Areas of environmental weed plantings or suckers;
- History of ad hoc plantings of commonplace species and/or cultivars, lessening somewhat the significance of the place for its collections;
- Poor definition of collections particularly in the upper gardens;
- The original planting of the *Acer* collection in a location poorly-suited to the genus and subsequent addition of commonplace cultivars to augment the collection;
- Loss of understory 'colour' described in early accounts of the Gardens in their heyday;
- Danger of losing open space and key views to garden features eg pond, embankment;
- Opportunities for tree planting to surrounds of Gardens including to screen car-parks, street tree planting;
- Future planning for a tree management plan to guide the staged removal, replacement and renewal of trees throughout the gardens.



Clockwise from top: The *Acer* Collection; The Gardens/Bowling Club car park, bereft of trees and shade; self-sown Willows on the Gong bank, underplanted with indigenous grasses.



LEGEND

USEFUL LIFE EXPECTANCY (ULE) RATING

- LIFE EXPECTANCY 0-5Y
- LIFE EXPECTANCY 5-15Y
- LIFE EXPECTANCY 15-40Y

WEED INFESTATION / SPECIES

- WEEDS
- ACER SPECIES (REGISTERED TREES UNDER THE HERITAGE ACT 1995)
- COMMEMORATIVE TREES

SCREEN PLANTING

- OPPORTUNITY FOR HEDGE
- OPPORTUNITY FOR TREE PLANTING TO SCREEN CAR PARKS

SITE BOUNDARY

For a full list of heritage and significant trees please refer to the 'Vegetation and Inventory of the Buninyong Botanic Gardens and the Gong Reservoir' David Jones, Buninyong Botanic Gardens Conservation Study and Masterplan' 2014 [Appendix A](#).

Fig. 8 Existing Vegetation Conditions

3.5 Amenity

Existing Conditions Summary

Existing furniture and facilities in the Gardens would benefit from upgrades to ensure universal accessibility and alongside upgrades to pathways, an increase in stopping points along circuits would be worthwhile. A variety of seat groupings has been requested to increase gathering options and use by various community groups and the school.

Access to both shade and more open areas exists, but more comfortable, lighter canopied areas would make a significant contribution to areas of comfort which are cross-seasonal.

Requests have been received from the community for drinking fountains, to improve water quality and direct access to the waterside areas, as have specific requests for improvements to heritage structures for community use.

Key Issues

- Poor accessibility of some facilities eg. picnic tables;
- Furniture suite is inconsistent in type, age and condition;
- Unclear or inconsistent wayfinding signage;
- Lack of access and condition/safety of the Old Pool
- Outdated and/or inappropriate play equipment;
- Poor quality of water in pond systems and Gong;
- Opportunity to increase seating throughout as well as options for seating eg individual, group, formal, informal;
- Incomplete paths limit garden use for exercise;
- Lack of shelter over BBQ;

- Missing areas of shade/shelter in upper gardens, particularly at the high point where views can be enjoyed;
- Opportunity in heritage buildings - Police Station and Buttery, remain mostly unused;
- Evolving use of the Gardens and planning to accommodate future use.

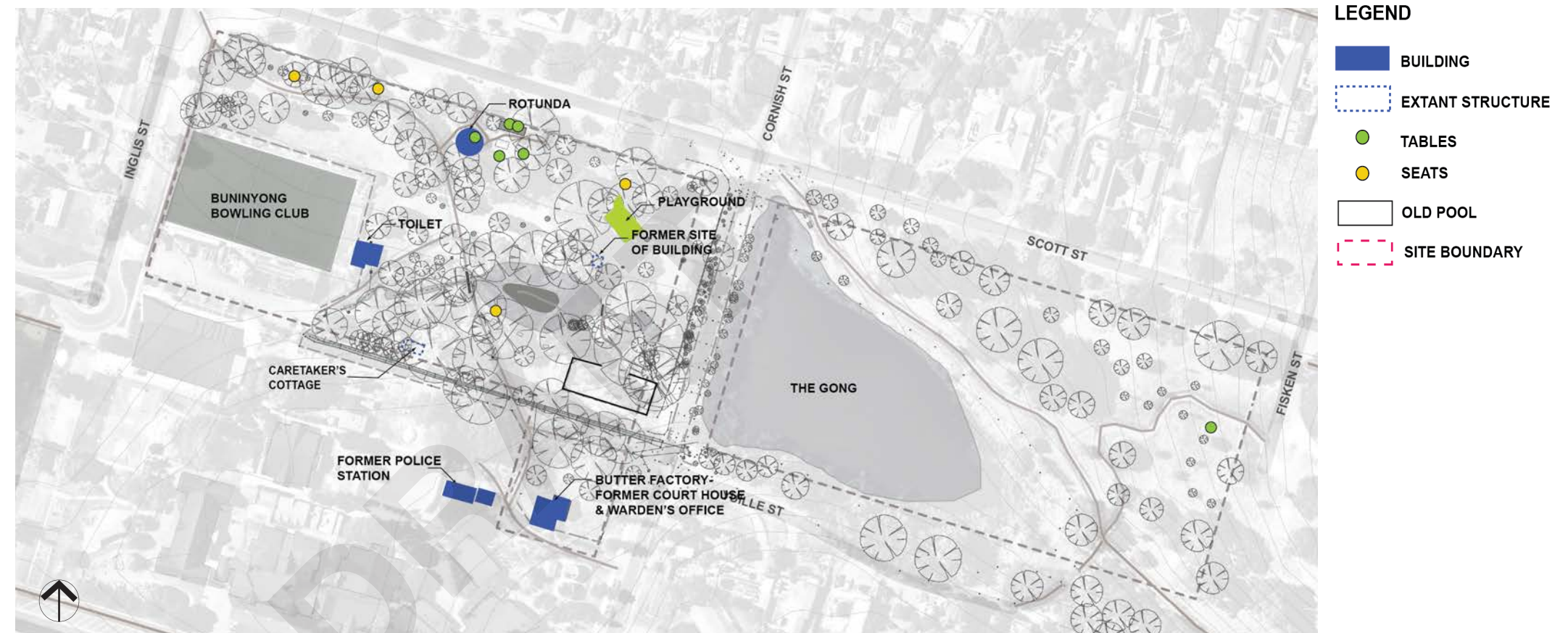


Fig. 9 Existing Buildings & Amenities



Photos above from left: Opportunity of the Heritage Precinct; BBQ facilities adjacent to the heritage-listed Pavilion; Outdated picnic tables, inaccessible for those with mobility issues; Traditional garden seating.

4 MASTERPLAN

4.1 Themes

The work included in this revised Masterplan report reflects the desires of the community and key stakeholders. Stakeholder engagement has revealed that all in all, wholesale changes to the Gardens are not desired but rather, that improvements to or the fine-tuning of what they already provide, is preferred. Themes from the consultation have therefore evolved as follows:

A Place for Connecting

First and foremost the Buninyong Botanic Gardens are a place for connecting. The important place held by the Gardens in the community's hearts is evident. Visitors retreat to the Gardens to connect to nature, to the seasons, to the past, to family and friends, for community events, for fun, learning, exercise and for respite. Looking forward, the Gardens will continue to provide for these pastimes as well as developing other opportunities to connect, particularly for the Buninyong Primary School, local residents and to the Wadawurrung community and their living cultural heritage.

A Place for Learning

The Living Collections Strategy recommends that a particular focus on education, ecology and biodiversity would make these gardens a unique complement to the City of Ballarat's

suite of gardens. The community are keen to learn more about their Gardens, the site and its heritage. Reframing the existing assets of the gardens from this perspective would render them an invaluable resource for the Primary School, the community and visitors alike.

Acknowledging our Cultural Heritage

The Gardens site is heritage-rich. Recommended future works will acknowledge this heritage through various interventions including consideration of key views, planting selection, signage, story-telling and interpretive trails, digital media, integrated nature play and land management techniques. Changes will be made in consultation with Heritage Victoria and the Wadawurrung Traditional Owners Aboriginal Corporation as appropriate, and will reference the recommendations of the 2014 Conservation Study and Masterplan.

Caring for our Natural Systems

Future plans and maintenance of the Gardens will be undertaken in a way that prioritises the health of natural systems on-site, particularly in consideration of rapidly changing climatic conditions. This includes improvements to aquatic, ephemeral and terrestrial areas, ensuring biodiversity, the selection of enduring botanical species and ethical maintenance techniques.

A Botanic Gardens for the Future

The Gardens are a precious combination of all of the above. Future-proofing the Gardens does not come at the cost of its heritage value. The essence of what makes the Gardens special is at the centre of all decision-making and innovative design allows us to conserve and nurture without compromise, while evolving where necessary.



4.2 Strategies

A series of strategies offering specific directions for the future development of the Gardens in keeping with the aforementioned overarching themes.

4.2.1 Community, Programming + Amenity

The Gardens continue to fill several roles in community life which have remained the same since their inception: those of access to nature, of providing a place for individual respite, exercise and for social gathering/ community events.

Under the umbrella of this strategy, facilitating these requirements from the Gardens has been achieved by:

- Paying heed to the natural topography of the Gardens and clearing views/sightlines to the base of natural amphitheatres/focal points, as these spaces can be used for performance and as outdoor teaching spaces;
- Augmenting the existing garden layout to provide a variety of contrasting spatial and natural experiences at different scales. This is achieved through the installation of secondary and tertiary paths and ornamental garden beds which provide the colour and scent in descriptions of the original gardens as well as breaking up of some of the larger expanses of lawn to create more intimate spaces (Refer Fig. 11). Upgrades to the Gong/upper gardens and the addition of wetland boardwalks will also add to the experiences on offer; Ensuring that a central band of open lawn with deciduous plantings and/ or ornamental gardens beds provides ample space for relaxing and picnicking in the gardens. This is as distinct from the Southern section of the Gardens which is dominated by large, evergreen canopies;

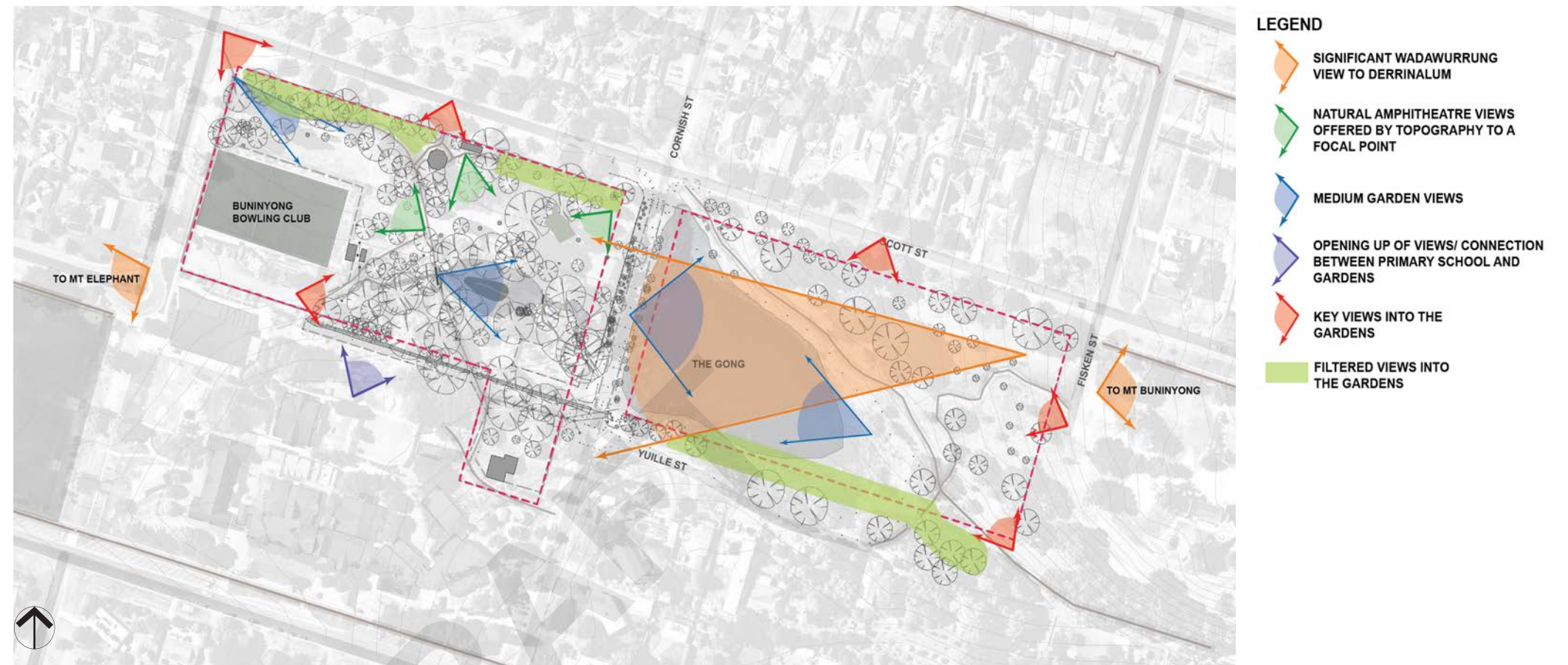


Fig. 10 Key Views and Focal Points

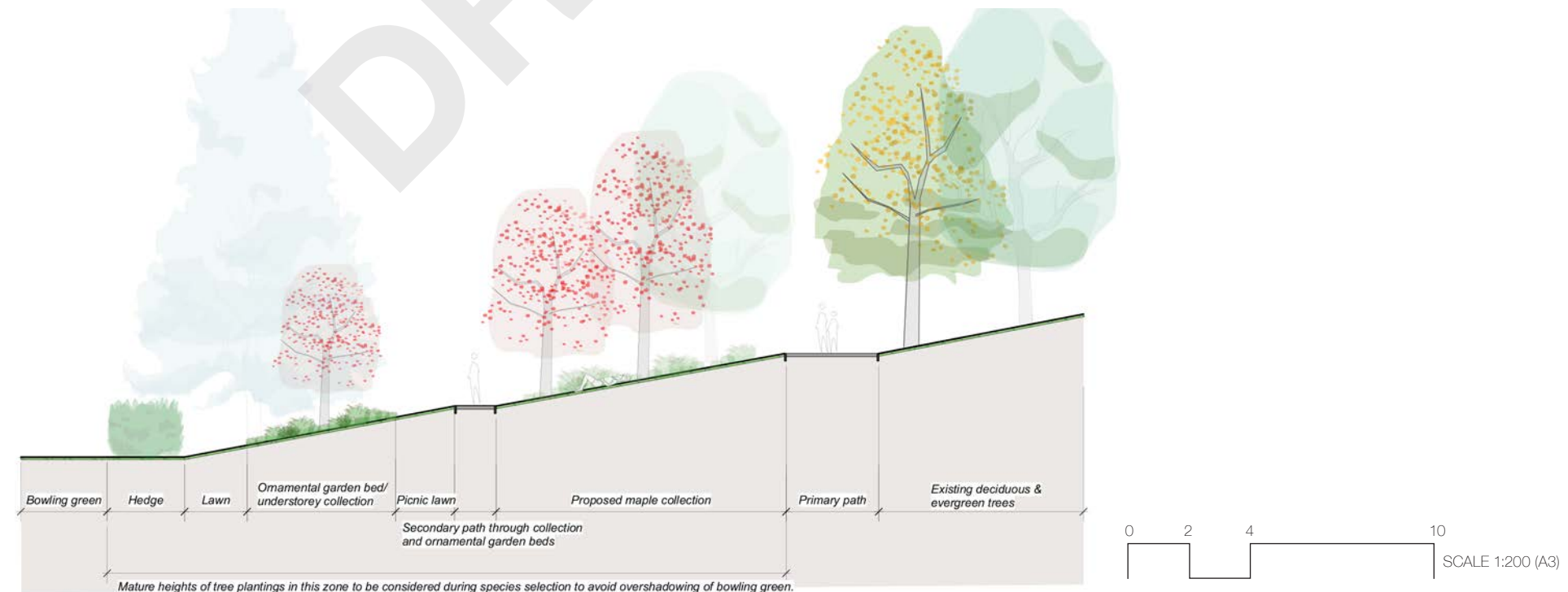


Fig. 11 Indicative Section showing the contrasting experiences offered along primary and secondary or tertiary pathways and the opportunity for new collections and understorey plantings offered by the zone between the Bowling Club and the main entrance.

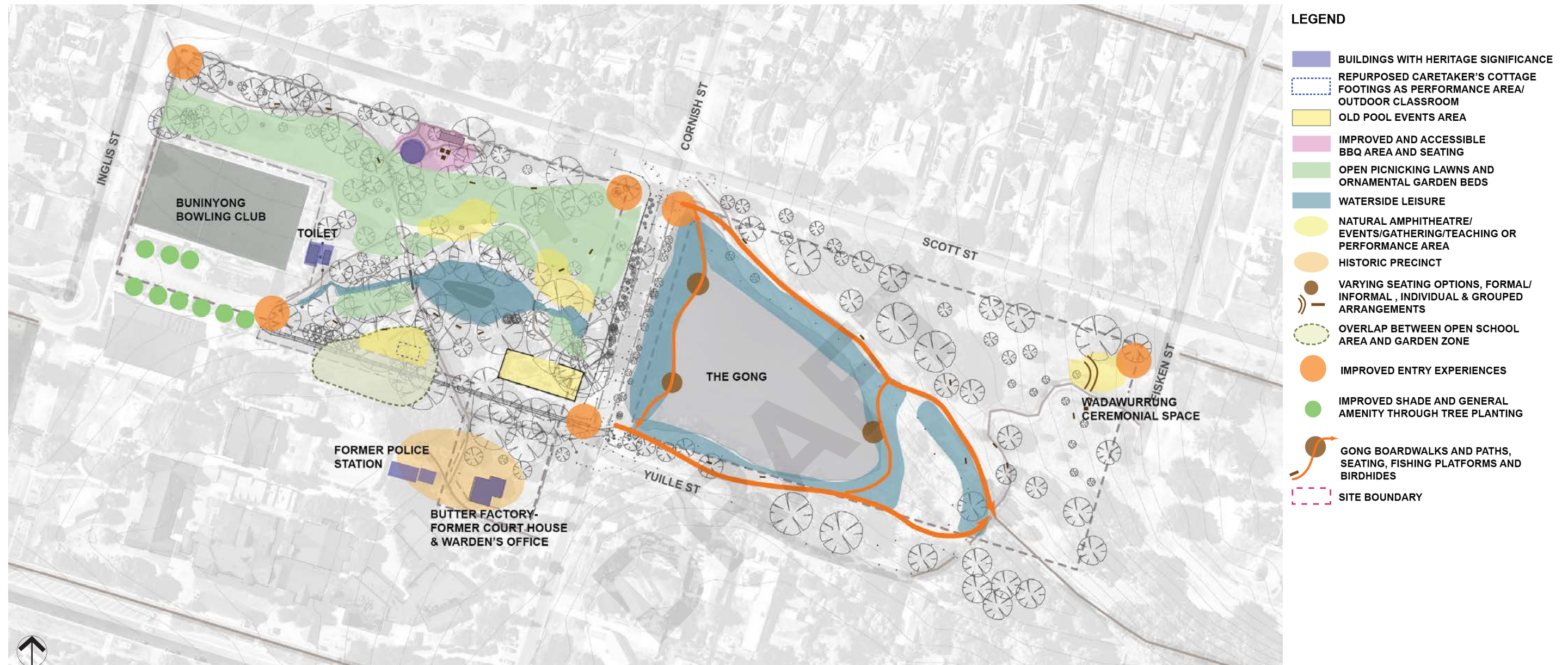


Fig. 12 Programming and Amenity

- Earmarking spaces for performance, teaching and ceremonial gathering (seating up to 25), for future development in conjunction with relevant stakeholders;
- Providing continuous and accessible pathways as well as circuit paths for walking (See Access, Circulation and Connections);
- Providing consistent and quality suite of seating, tables, water fountains etc. Water fountains to include dog bowls;

- Providing clear, informative and integrated signage for interpretation, wayfinding and connection;
- Considering consistent and continuous surfaces to ensure accessibility to furniture and other amenities in the Gardens;
- Recommending upgrades to heritage structures: the Flume, Old Pool, the interface between the Rotunda and the BBQ area, the Buttery and the

remains of the Caretaker's Cottage to extend programming possibilities for the Community and stakeholders.

4.2.2 Cultural Heritage

Stakeholder interest in the Gardens acknowledging cultural heritage and **continuing Wadawurrung culture** is high. The following recommendations have come out of consultation with the Wadawurrung:

- Consider the installation of a ceremonial/gathering space in the location as shown to remind visitors of the significance of the axis between Bonan Young (Buninyong) and Derrinalum (Mt Elephant). This gathering space, although designed to meet Wadawurrung cultural requirements could double as an events space and outdoor classroom;
- Engage with the Wadawurrung to develop plant lists for the indigenous collection which include recommendations for species for crafting and Bush Tucker;
- Design/develop materials palette/integrated interpretation and/or nature play elements for an interpretive trail within the Upper Gardens which includes the Bonan Youang/Derrinalum story;
- Develop signage to acknowledge Country to be located as indicated at the entrance/within the Gardens;
- Design dual-language English/Wadawurrung plant tags for the Upper Gardens;
- Consider future collaboration with Council for traditional lands and waterway management in the Gardens.

The **post-Colonial heritage character** of the Lower Gardens is to be maintained and enhanced by:

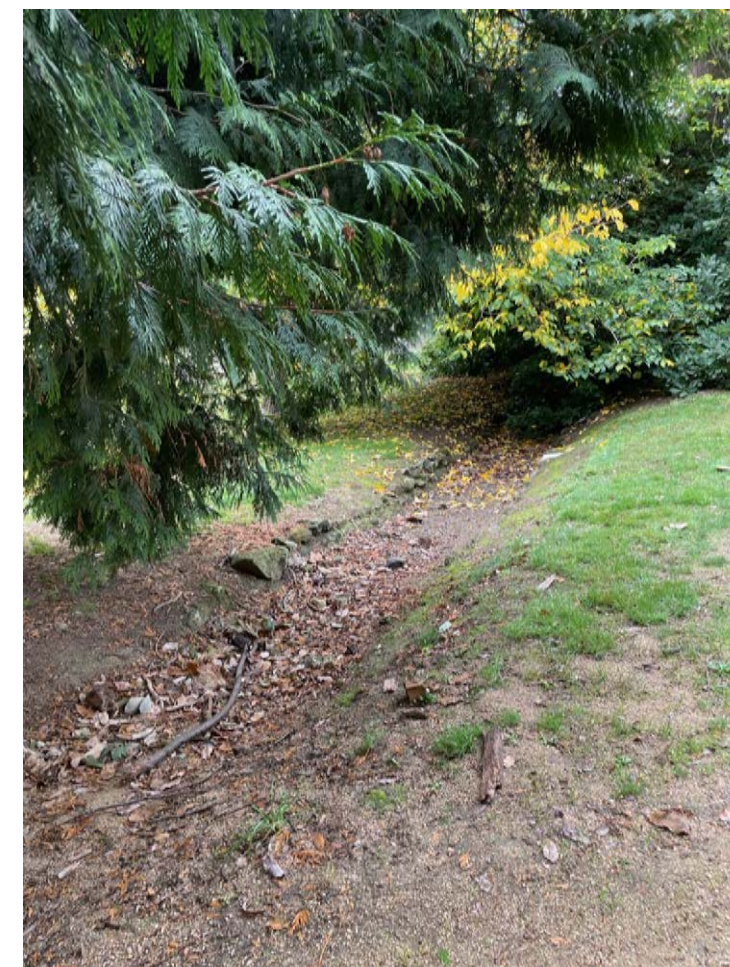
- Developing an integrated and consistent (Garden-wide) Interpretation Strategy;
- Reinstating the Flume as a high-flow space as part of the Gong wall works, so that it functions when necessary during large rain events, to avoid overflow;
- Retaining/opening up key views as indicated in Figure 11;

- Retaining and enhancing elements of the Gardens which reinforce their importance in community life as a place of leisure, education and gathering;
- Replacing like for like, as original tree plantings reach senescence while ensuring key views remain clear weed and non-drought-tolerant species are replaced with similar but sustainable specimens;
- Retaining memorial and heritage/significant plantings or consulting to relocate/substitute as appropriate;

- Installing a number of garden beds (as shown) to reinstate floriferous and ornamental understorey/shrub/perennial plantings continuing to draw visitors to the Gardens for seasonal change, as was tradition.
- Repairing the old swimming pool walls and structure and reinterpreting it as usable space, especially for events;
- Ensuring materials and construction techniques for new structures/infrastructure are complementary to the existing character of the place.



Fig. 13 Wadawurrung ceremony in Wurdi Youang (You Yangs) (Image: ABC)



4.2.3 Education and Interpretation

The City of Ballarat's Living Collections Strategy has determined that the Gardens are strongly positioned to deliver upon a theme of 'Education' owing to the layering of their history, their collections and their proximity to the Buninyong Primary School.

The traditional ownership of the Wadawurrung and their interest in this site and project, the heritage significance of the Gardens and the huge value of curated natural settings as 'live' teaching spaces, renders the Gardens an important educative resource.

This approach has been endorsed by the community, stakeholders, in particular the WTOAC and representatives of the Buninyong Primary School and Council. As a result, opportunities have been sought to use existing and proposed planting collections, specimens and other aspects of the Gardens as active and passive teaching/learning tools with a particular focus on the following themes:

- Indigenous plantings of cultural significance;
- Natural systems, biodiversity, wildlife and habitat;
- Memorialisation through plantings;
- Colonial history;
- Science and evolution; and
- Climate Change.

Going forward, interpretation relating to traditional stories and culture, in particular the story of Bonang Youang and/or other associated Language projects will be developed in partnership with Wadawurrung Traditional Owners as a living process.

The WTOAC has indicated a preference that cultural interpretation express one, robust design narrative, in this case, the site-specific story of Bonan Youang (Buninyong),

the warrior volcano, who over the course of his battle with Derrinalum formed the unique Wadawurrung Country. The story 'flows throughout the site, Gardens and beyond' thus ways of articulating the story and acknowledging ownership which are

integrated and/or living, are preferred to static interventions.

The WTOAC is a fledgling corporation at the time of writing, however keen to be involved in future projects on-site as they evolve as an

organisation and resources increase.

Post European settlement history and heritage values will also be acknowledged appropriately and in consultation with heritage Victoria.



Fig. 14 Proposed Education and Interpretive Opportunities Map

1. Consistent approach to interpretation and signage (where necessary) throughout the Gardens begins here. It is appropriate to denote heritage significance and cultural significance at the main gate;
2. Memorial Trail: Existing memorial avenue could be augmented by further information eg. veteran details/stories, historical information about the impacts of significant world events on the locality;
3. Opportunity to bring together information about the heritage structures in this area.
4. Interpretive/Educative opportunities around the natural and constructed water systems in the Gardens ie. Gong Reservoir, springs, Flume and ponds;
5. Consider opportunities to 'reverse integrate' the Buninyong Primary School with the Gardens, with particular focus on the interface between the two and the educative resources requested of the school;
6. The Historic/Legal precinct is a rich source of post colonisation educative information for sharing as well as information about architecture, design and plantings design should the grounds of this precinct be formalised through plantings of the era;
7. The upper gardens present an opportunity to sensitively acknowledge Country. Interpretive elements, patterns, stories and other references can be embedded into built form. The boardwalk and areas of rich habitat offer the opportunity to install nesting boxes and bird hides to nurture and observe wetland environments and their fauna;
8. The WTOAC has offered to provide Wadawurrung names for the labelling of the upper gardens vegetation. Using this endangered language embodies the opportunity to educate about many things as well as to acknowledge Country;
9. Indigenous gardens beds and a new Wadawurrung ceremonial space provide an area for teaching culture, and for teaching more generally.

4.2.4 Access, Circulation and Connections

The existing, historical layout of the pathways is improved by:

- Filling in missing connections on primary paths;
- Ensuring connections are made to destinations within and beyond the Gardens on continuous, safe and accessible pathways (Ref: Fig 15);
- Installing secondary and tertiary paths for more detailed exploration of the Gardens and their collections. These also provide a broader offering of spatial experiences (Ref: P19 Fig. 17 Indicative Section);
- Providing circuit paths for walking and addressing grades and access particularly along the eastern slope of the Gardens (Ref: Fig 16);

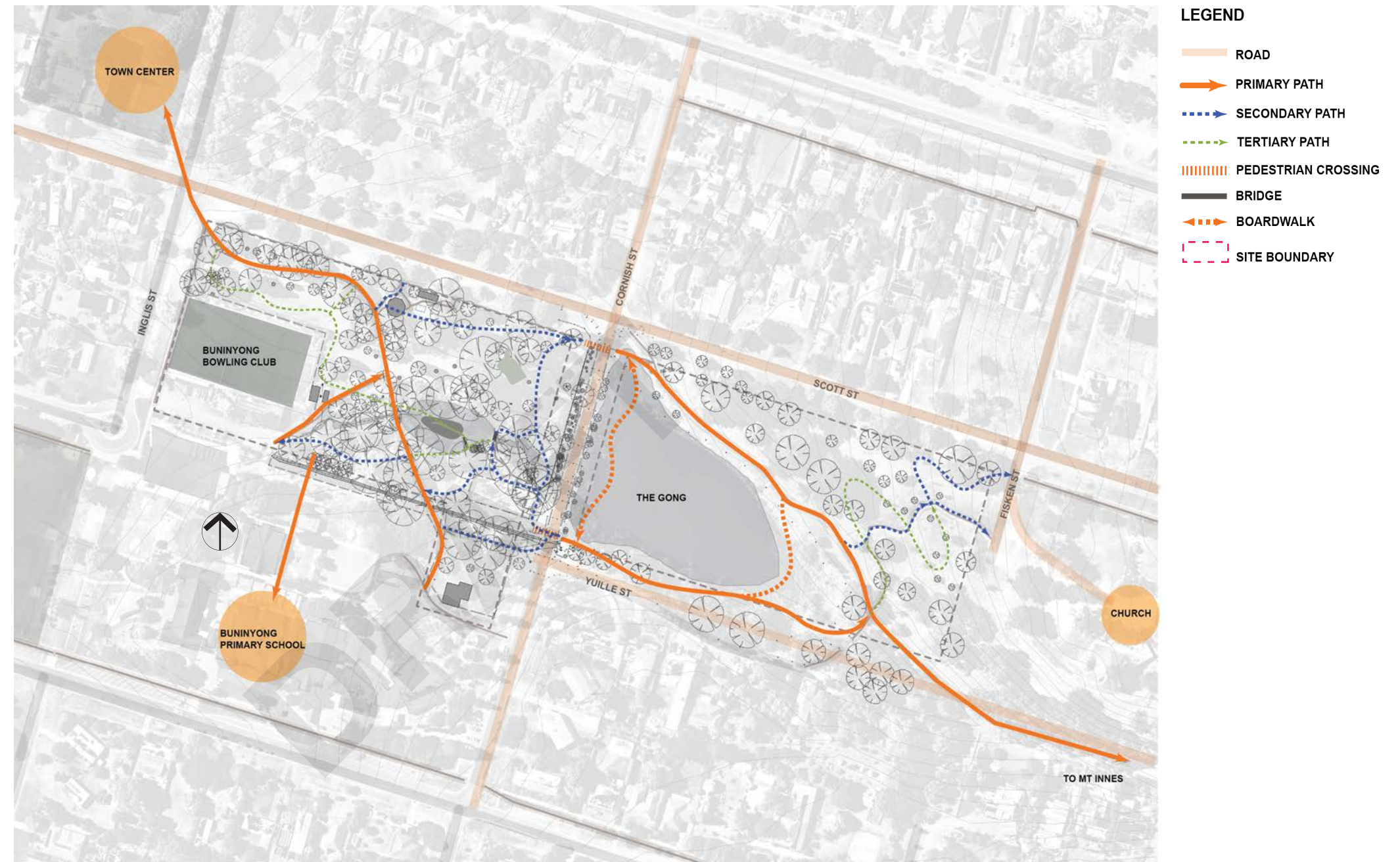


Fig. 15 Improved Paths and Connections

- Providing an improved natural experience and closer access to the Gong waters through the installation of boardwalks. Curvilinear form is preferred by the Wadawurrung (Ref: P15 Fig.11);
- Enhancing entry experiences from the main, secondary and car park entrances (Ref: P15 Fig.11);
- Addressing access, grading and visibility issues across Cornish Street. Consider changes in the road surface to prioritise pedestrian crossing;
- Improving access to island and connection beyond.

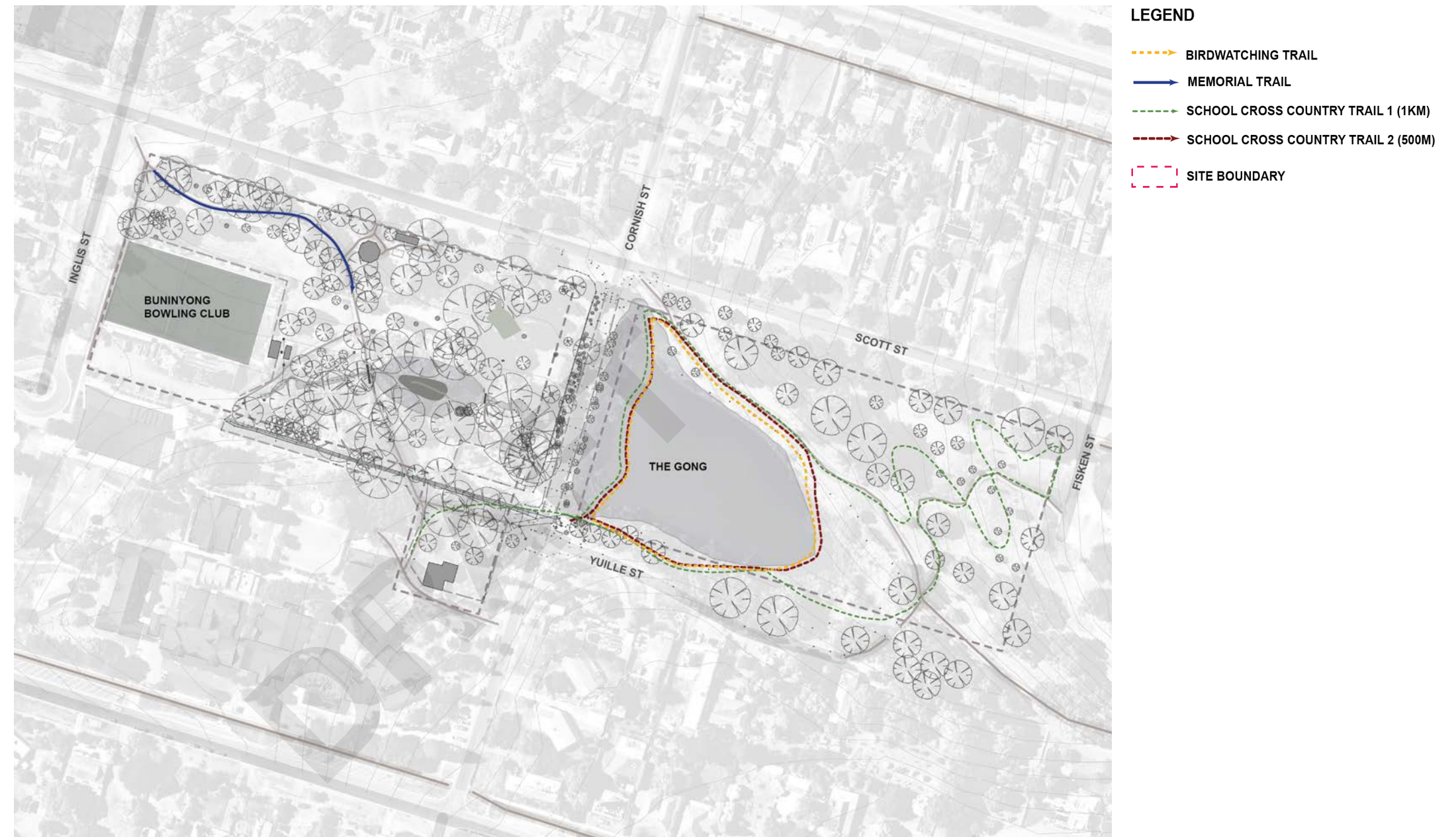


Fig. 16 Visitor Experience Circuits and Exercise Trails

4.2.5 Healthy Ecosystems, Habitat and Water

Flourishing habitat and biodiversity provide benefits for fauna and humans alike and embodies the ancient wisdom of the Wadawurrung.

Achieving biodiversity in the Gardens is key to their longevity and preserving their integrity. The Gong works will, by default, precipitate the removal of weed species (largely Willow /*Salix* sp.) which have proliferated on the upper embankment and at the water's edge, particularly on the southern bank of the Gong. These works present an opportunity to then regenerate the area with indigenous species that provide the ideal habitat for native birds and other animal species which would benefit from this environment. Conserving, improving and protecting habitat and plantings for aquatic life around the Gong has been prioritised highly by the community, including the Wadawurrung.

- It is recommended that a Tree Replacement Strategy for the Gardens is produced to ensure the conservation of the heritage character of the Gardens as well as to support the stakeholder vision for the Gardens into the future.
- Staged removal of weed species is necessary to secure improved water quality and a healthy wetland environment;
- Revegetation of this area will require aquatic, ephemeral and terrestrial plantings which filter the water improving its quality. Improvements to water quality has knock-on benefits for adjacent water bodies and natural systems. Considered design of this area will be beneficial;
- Indigenous wetland species are quick to establish and noticeable improvements to habitat and the waterside environs will be evident within five years of planting.

- Undertaking revegetation works in consultation with the Wadawurrung.
- Reengineering of the Gong Wall offers the opportunity to also address and improve the issues around
- Poor drainage at the base of the embankment wall in the Lower Gardens;
 - Poor flow through the Ponds system; and
 - The functioning of the heritage Flume.

The Flume is a high-flow bypass that will function at times during large rain events to avoid overflow. The designed seepage from the Gong wall is normal as it is an earthen wall. The new sub-surface drainage system will be designed and integrated with the wall construction and excess water will be discharged to the ponds, improving circulation and water quality. The ponds will by virtue of the new sub-surface drainage system, benefit from the water filtration, additional supply and increased flow.

The Lower Ponds would benefit greatly from some attention at the pond terminus, particularly as this is also the entrance to the Gardens from the car park. Enlarging and better integration of the drain would greatly improve its appearance.

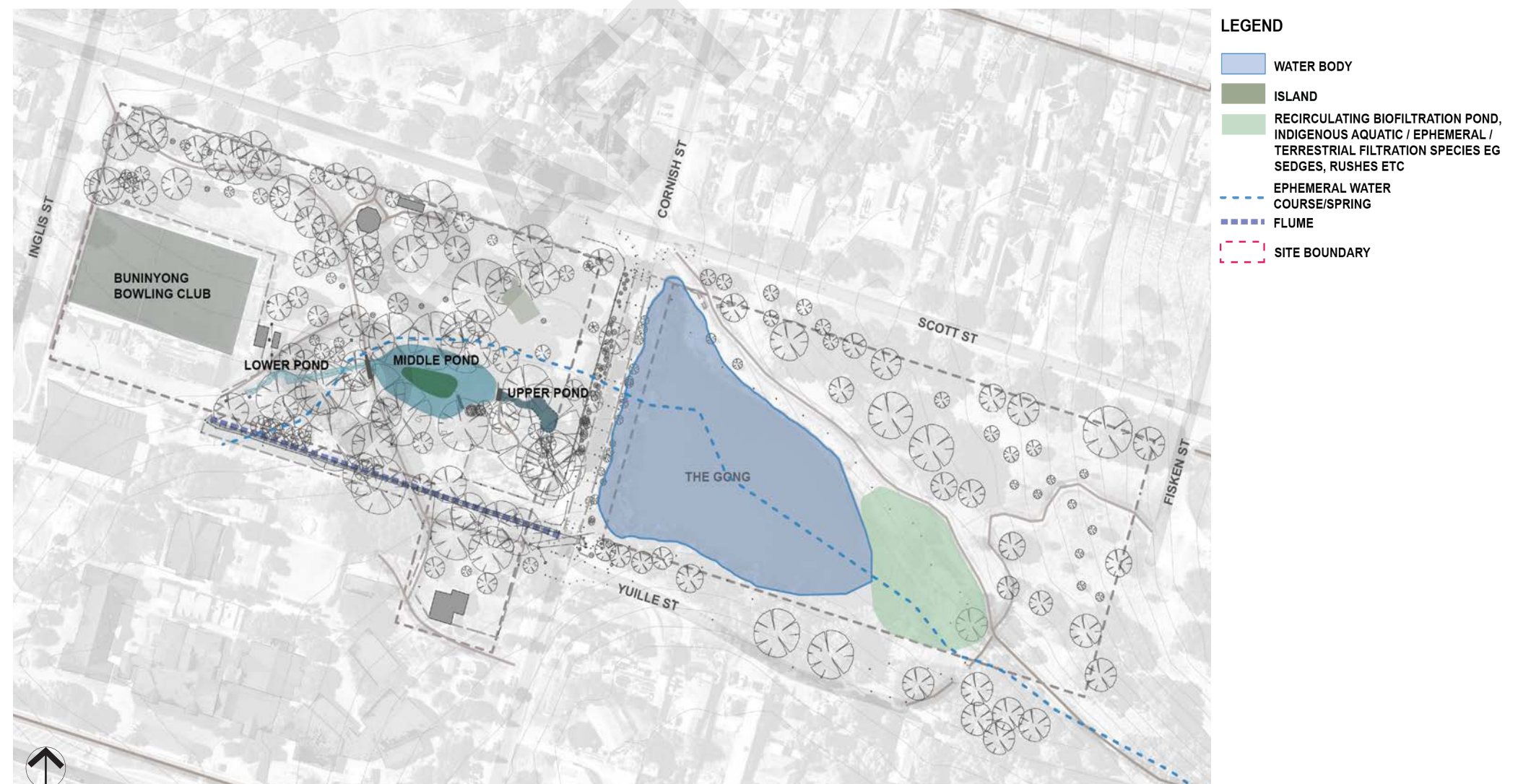


Fig. 17 Proposed Water Bodies Map

4.2.6 Trees, Vegetation and Collections

As mentioned previously, the City of Ballarat's Living Collections Strategy has determined a planting strategy for the BBG which is complementary to that of the City's existing collections, on a theme of 'Education'.

Opportunities to implement this planting strategy have been outlined in the 'Education and Interpretation Strategy'.

New plantings on the Gong Embankment will be used to strengthen the overall planting strategy and design intent.

In addition, this Masterplan strategy recommends:

- The Upper Gardens be developed to contain an indigenous planting collection. This collection will focus particularly on species appropriate to the site conditions and for caring for Country: wetland species for rehabilitation of aquatic systems and for cultural use, Bush Tucker plants of the Wadawurrung and other plants relevant to sharing of knowledge and storytelling;
- Plantings that are enduring and non-threatening to natural systems within or beyond the Gardens;
- Plantings are suited to and conducive to the programming requirements of the Gardens;
- Plantings are compatible with the conditions of the location and appropriate in the context of changing climatic conditions to ensure the character of the Gardens remains intact;
- New and replacement plantings whose characteristics (scale, form, habit, evergreen/deciduous, flowering etc) must be considered alongside the

other strategies within this document for achieving the long-term vision for the place eg. retention of open views, screening, provision of native habitat etc. as well as retaining heritage character;

- The commissioning of a Tree Replacement Strategy for the Gardens that aligns with the above recommendations and takes into account the Useful Life Expectancy of existing specimens, securing the future of the Gardens' trees.



LEGEND

- ORNAMENTAL PERENNIAL/SHRUB COLLECTIONS
- SEASONAL BULB ENTRY DISPLAY
- VIBURNUM COLLECTION
- CONIFER/SUCCULENT COLLECTION
- INDIGENOUS SHRUB/PERENNIAL DISPLAY BEDS
- DECIDUOUS & FLOWERING TREE COLLECTION
- EPHEMERAL-AQUATIC-WETLAND SPECIES COLLECTION
- CONIFEROUS/DECIDUOUS TREE BOUNDARY PLANTINGS
- WET EXOTIC UNDERSTOREY SPECIES/EVOLUTION COLLECTION
- DECIDUOUS AND EVERGREEN TREE SPECIMENS
- HISTORIC PRECINCT
- INDIGENOUS COLLECTION
- RELOCATED/AUGMENTED ACER COLLECTION

- 1 Consider blending vegetation across the Buninyong Botanic Gardens and Primary School Boundary to create better integration;
- 2 Consider implementing a planting style and species typical of this type of precinct. Carrying these across the boundary will go some way to assisting with reading of the precinct as a whole;
- 3 Existing Gong-side plantings already extend beyond the Gardens' boundary into this area. Plans for the foreseeable future are to continue to manage this road reserve as part of the Gardens.

Fig. 18 Proposed Vegetation/Collection Map

4.3 Masterplan



Fig. 19 Buninyong Botanic Gardens Masterplan 2021

Legend

	Native Trees		Conifer		Bridge		Open lawn		Ceremonial Gathering Space
	Deciduous Trees		Ornamental garden bed		Path		Water		Existing buildings
	Evergreen Trees		Indigenous garden bed		Boardwalk		Wetland		Seat
	Maple		Conifer collection						

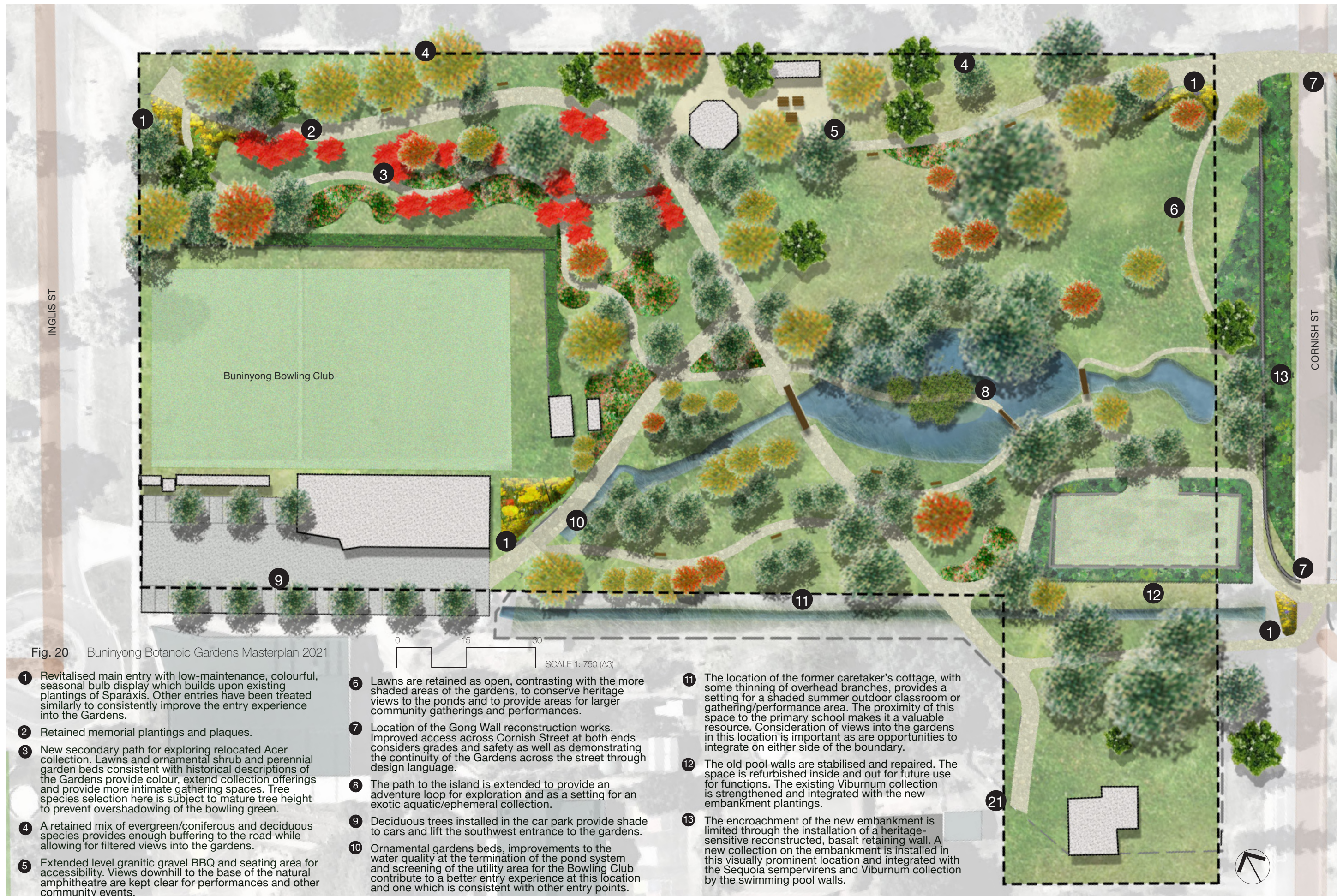


Fig. 20 Buninyong Botanic Gardens Masterplan 2021

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- 1 Revitalised main entry with low-maintenance, colourful, seasonal bulb display which builds upon existing plantings of Sparaxis. Other entries have been treated similarly to consistently improve the entry experience into the Gardens.
- 2 Retained memorial plantings and plaques.
- 3 New secondary path for exploring relocated Acer collection. Lawns and ornamental shrub and perennial garden beds consistent with historical descriptions of the Gardens provide colour, extend collection offerings and provide more intimate gathering spaces. Tree species selection here is subject to mature tree height to prevent overshadowing of the bowling green.
- 4 A retained mix of evergreen/coniferous and deciduous species provides enough buffering to the road while allowing for filtered views into the gardens.
- 5 Extended level granitic gravel BBQ and seating area for accessibility. Views downhill to the base of the natural amphitheatre are kept clear for performances and other community events.

- 6 Lawns are retained as open, contrasting with the more shaded areas of the gardens, to conserve heritage views to the ponds and to provide areas for larger community gatherings and performances.
- 7 Location of the Gong Wall reconstruction works. Improved access across Cornish Street at both ends considers grades and safety as well as demonstrating the continuity of the Gardens across the street through design language.
- 8 The path to the island is extended to provide an adventure loop for exploration and as a setting for an exotic aquatic/ephemeral collection.
- 9 Deciduous trees installed in the car park provide shade to cars and lift the southwest entrance to the gardens.
- 10 Ornamental garden beds, improvements to the water quality at the termination of the pond system and screening of the utility area for the Bowling Club contribute to a better entry experience at this location and one which is consistent with other entry points.

- 11 The location of the former caretaker's cottage, with some thinning of overhead branches, provides a setting for a shaded summer outdoor classroom or gathering/performance area. The proximity of this space to the primary school makes it a valuable resource. Consideration of views into the gardens in this location is important as are opportunities to integrate on either side of the boundary.
- 12 The old pool walls are stabilised and repaired. The space is refurbished inside and out for future use for functions. The existing Viburnum collection is strengthened and integrated with the new embankment plantings.
- 13 The encroachment of the new embankment is limited through the installation of a heritage-sensitive reconstructed, basalt retaining wall. A new collection on the embankment is installed in this visually prominent location and integrated with the Sequoia sempervirens and Viburnum collection by the swimming pool walls.



Fig. 21 Buninyong Botanic Gardens Masterplan 2021

- 14 The new Gong embankment provides thriving indigenous habitat and filtration for improved water quality as well as contributing to buffering the natural experience of the new boardwalk from the road.
- 15 Integrated with the Gong embankment works, a new boardwalk provides a vehicle-free option to travel north-south along Cornish Street in proximity to the water. The boardwalk structure provides a vehicle for embedded cultural interpretation nesting boxes, bird hides and seating.
- 16 The hills of the upper gardens are a setting for indigenous tree plantings and provide vantage points for enjoying views of the water.

- 17 This location has been selected by the Wadawurrung as an appropriate setting for a Ceremonial Gathering Space. It provides views to Derrinalum and serves as a reminder of the story of the formation of Wadawurrung Country. The retention of this open view is integral to the importance of this space.
- 18 A universally accessible secondary path provides access to and from the Gathering Space via a series of indigenous shrub and perennial garden beds. These beds exhibit seasonal interest in this part of the gardens and are a focal point and identifiable wayfinding marker, visible from multiple locations in the upper gardens.
- 19 Location for a biofiltration pond for improved water quality throughout the Gong. A secondary boardwalk offers access across it.

- 20 Staged weed removal, including of teh Poplars and Willows, and replacement with indigenous species provide an attractive and informal buffer zone outside of the site boundary but between the Gardens and adjacent houses along Yuille Street.
- 21 Historic precinct would benefit from coordinated activation in consultation with interested community groups and other stakeholders.
- 22 Optional second boardwalk, subject to funding.



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