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FINAL MASTERPLAN & ACTIVATION STRATEGY

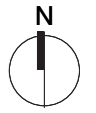
FINAL MASTER PLAN

The Final Master Plan represents the outcomes of the original desires and ambitions of the Lake Caroline precinct, and reflects updates and feedback that were received on the plan during consultation. The master plan was widely accepted, with 95% of the community supporting the proposal.

The key elements of the Draft Master Plan have remained the same as the project has now progressed to the Final Master Plan status.



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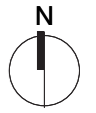
FINAL ACTIVATION STRATEGY

This Activation Strategy provides a well-rounded approach to activation around the Lake Caroline precinct, by recommending activation opportunities under the following pillars:

- Creation of public amenities to facilitate activation (i.e. picnic areas, playgrounds, lawn, promenades etc)
- Council facilitated programming and events (festivals, markets, concerts)
- Private operator activation through retail offerings (cafes, boat hire etc)



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8.1 OVERALL STRATEGY



ECOLOGY

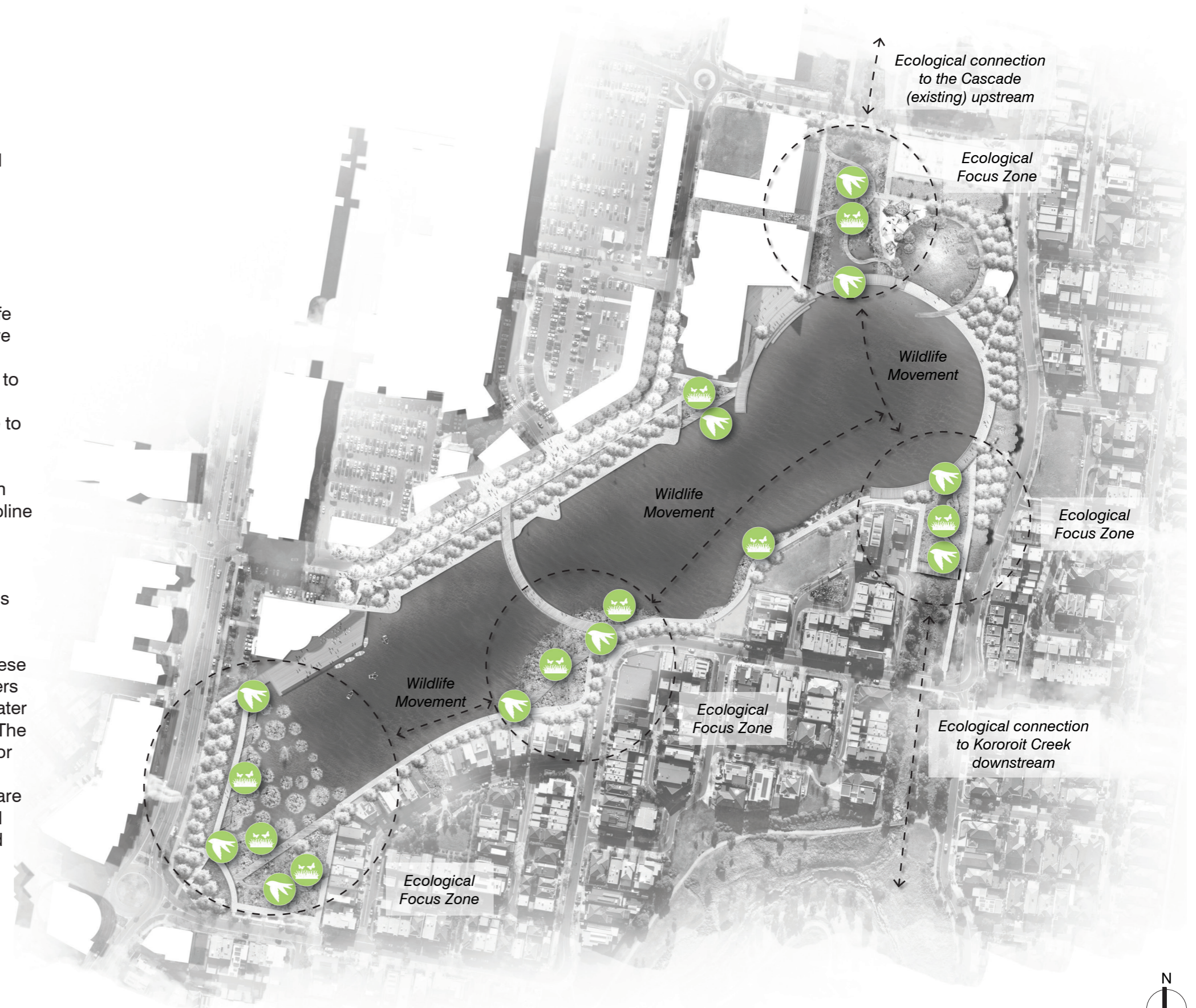
The ecology theme aims to preserve and promote the health of existing wildlife, and to provide a better environment for establishment of additional ecological communities.

During consultation, the community expressed their love to the existing wildlife which currently inhabits the lake and have emphasised the need for wildlife to be protected. The community are also keen to see the lake be transformed into an ecological haven, attracting more wildlife to the lake. The lake is also identified as a hotspot of Growling Grass Frog in the analysis, in which the frog has been often sighted near the gabion walls along Caroline Springs Boulevard and existing wetland planting.

The Master Plan has provided a generous wetland area for the existing and future wildlife in the form of floating wetlands, wetland plants and lakeside planting. These will be the key habitat areas where shelters are provided by wetland planting, and water quality is improved by wetland filtration. The lake would also serve as a wildlife corridor between upstream and Kororoit Creek downstream. Lookouts and boardwalks are included for recreational and educational purpose, allowing visitors to observe and appreciate the thriving ecosystem.

LEGEND

-  Wildlife Habitat Zone
-  Lookout



AMENITIES & FACILITIES

There are several existing amenities and facilities around the lake, such as seating, BBQs, gym equipment and exercise stations, with their location identified in the analysis. These amenities are frequently used by visitors and have proven popular among the community. In the consultation, the community have expressed that the existing amenities need to be upgraded as they have degraded over the years. The community have also expressed a desire for additional equipment and facilities to be installed along the lake to improve their experience of the Lake Caroline.

The Master Plan has identified suitable locations for additional amenities and facilities, including major areas and key path junctions. Additional locations for shaded areas are also identified, which could be provided in the form of shelter, shadesails and trees. Existing amenities, facilities and installation (as shown in light blue in the adjacent plan) will be reviewed by Council to determine their retention or upgrade.

LEGEND

-   BBQ (Proposed & Existing)
-   Rubbish / Recycling Bins (Proposed & Existing)
-   Seating / Picnic Table (Proposed & Existing)
-   Exercise Station (Proposed & Existing)
-   Bicycle Hoop (Proposed & Existing)
-   Drinking Fountain (Proposed & Existing)
-   Toilet / Baby Change









ACTIVITY, PLAY & INTERPRETATION

Currently there is one main playground, Boathouse Reserve Playground, and two existing event spaces, boardwalk near Lake Street and lawn near Boathouse Play. They have been used extensively and deteriorated after years of use. The community has reflected that more event spaces and playspaces are needed. A need to improve wayfinding is also identified in the consultation. This could be combined with the interpretation element, which would be installed for educational purpose and wildlife watching.

The Master Plan has identified suitable location for the aforementioned elements.



LEGEND

-  Main Event Space
-  Food & Beverages
-  Playspace
-  Exercise Station
-  Boat Rental
-  Interpretation / Wayfinding



CIRCULATION & ACCESSIBILITY

The overall circulation and accessibility around the lake would be improved by the inclusion of additional path connections and vehicular zones, making it more accessible and connected.

The analysis and community consultation, identified multiple doglegged paths, leading to confusion in wayfinding and an arduous walking experience. A strong desire to have a north-south connection across the lake was also reflected in the community consultation, in which many contributors reminiscing the old lake crossing and citing a need of having a direct path between CS Square and southern lake bank.

In response, a number of new pathways, boardwalks and the lake crossing bridge are included to provide a direct connection. They serve as shortcuts for commuters who seek a more direct route, or alternative walkways with different scenic experience for people who enjoy strolling along the lake. To improve external access, Lake Street is transformed into a slow zone with lowered speed limit and priority parking, making it a more pedestrian-friendly space to improve access to the lake for the elderly, families with kids and people with disabilities.

LEGEND

- Entry Point
- ↔ Internal Connection
- ↔ External Connection



PROJECT PRECINCTS

The Lake Caroline Master Plan breaks the precinct down into project sites, to better describe the ambition of each zone, and allow for fundable stages of work to be allocated into Melton City Council's capital works program.

The precinct has been divided up into seven projects, to allow staged delivery of the master plan in clear separable portions.

The seven projects include:

- The Boathouse Lawn, Cafe and Playground
- Cascade & Weir Wetlands Upgrade
- Lake Crossing Bridge & Esplanade Ecology Hub
- Lake Street Transformation
- Promenade Parkland Refresh
- Southern Ecology Zone
- Esplanade Greening



8.2 BOATHOUSE EVENT LAWN, CAFE & PLAYGROUND

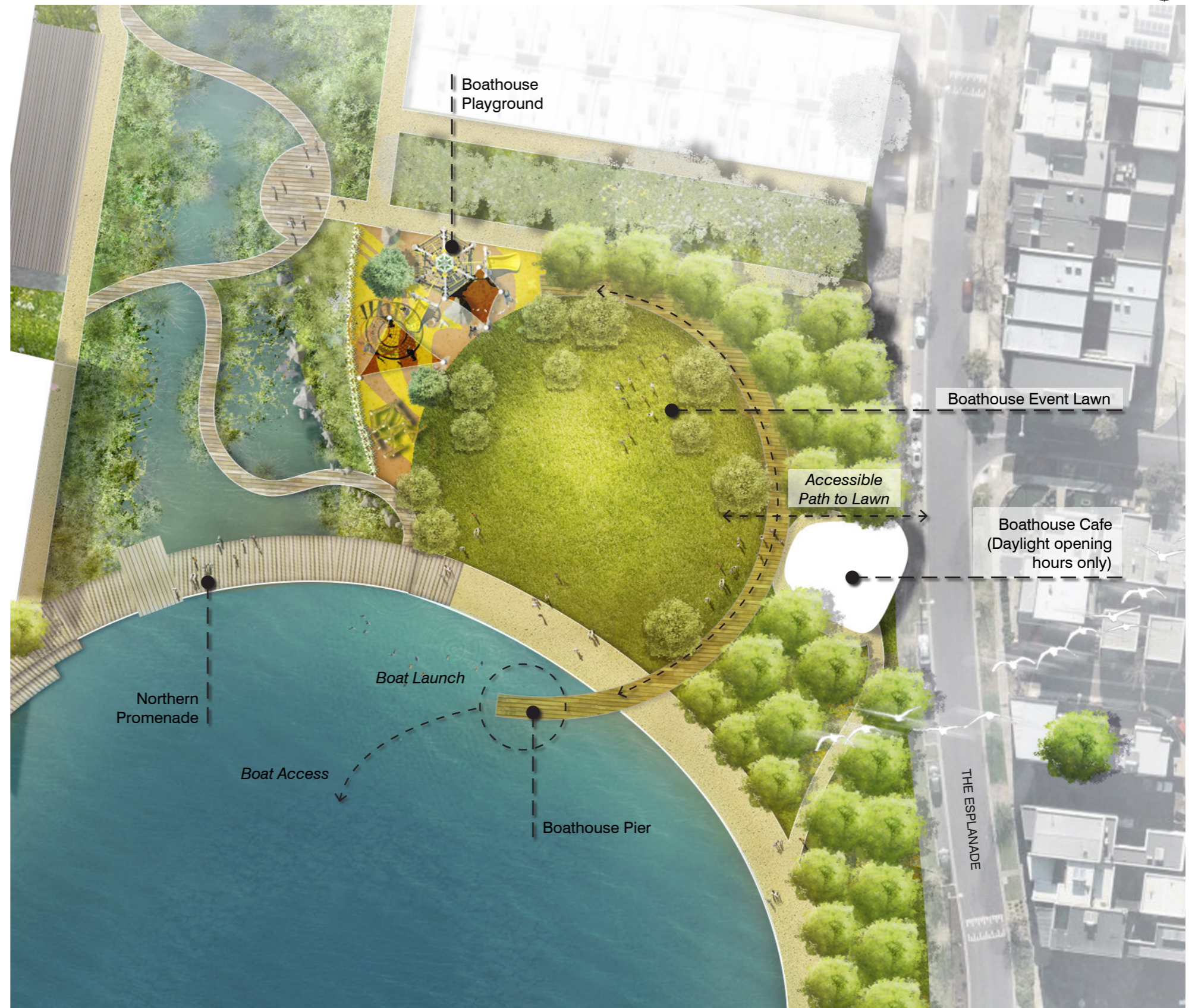
Boathouse Reserve will be reimagined, transforming the existing land use and playground into a versatile activity hub at the north end of the lake.

The project area will include the new Boathouse Playground, Cafe, Event Lawn and Pier, by redesigning the existing area and upgrading public spaces and infrastructure to accommodate daily activities and variety of scales of events.

The Boathouse Event Lawn

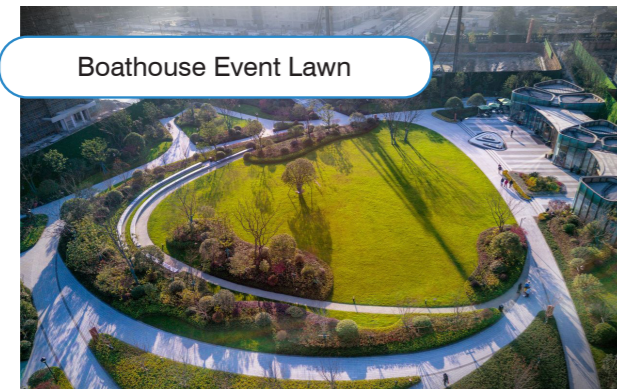
A generous Event Lawn will be situated facing south, it will slope towards the lake, at a grade of around 1:30, providing a natural amphitheatre. The Event Lawn will be framed by garden bed and canopy trees to the north, with small shelters and seating along the edge. Additional canopy trees will be dotted within the north-western areas of the lawn to provide shade, without obstructing views of major events. The Event Lawn will be activated on all edges by the connected pathways, the arcing Northern Promenade, the Boathouse Café and the Playground.

Significant tree plantings will create a buffer to the lawn from the existing townhouses on the north boundary. At around 1800m² the space will be able to cater for a range of events including concerts, markets and festivals. The location is intended to become a viewing area for fireworks or lake activation. The Boathouse Pier will be designed to



include services (power, lighting, AV etc) to allow for a 'plug-in' stage setup. In non-event mode, the large lawn will be the ideal place for picnics, or rolling a ball around the lawn, and yoga classes.

The Event Lawn is intended to cater for all existing events and festivals, as well as opening up new activation opportunities with local providers. As the design for this space progresses, existing event holders would be consulted to ensure that the appropriate services are installed to facilitate these events.



Boathouse Event Lawn

Pengbu Central Commons by PLAT Studio (Source: PLAT Studio)



Lakeside Alive on Lawn

(Source: Melton City Council)

The Boathouse Playground

The new accessible Boathouse Playground will be nestled between the Cascade Wetlands, Event Lawn and the Northern Promenade.

With an area of around 1000m2 allocated for the new playground, this creates an opportunity to incorporate a combination of bespoke play and significant nature play elements, connecting to the stories of the adjacent wetlands, and Lake Caroline.

The significant size of the playground will allow for a range of ages for play - from very junior nature exploration, to early physical play, to complex play. The playground should include inclusive play elements to cater for a wide range of physical aptitudes and neurodiversities.

Sited adjacent to the event lawn and cafe, the playground will be well serviced by the cafe facility, be shaded through canopy trees and key shade elements, and adequately contained from the nearby water elements.

More advanced play ie. gym equipment, senior play will be catered in other areas around the Lake Caroline precinct.



New Boathouse Playground

(Source: Glenthorne National Park Playspace by TCL)



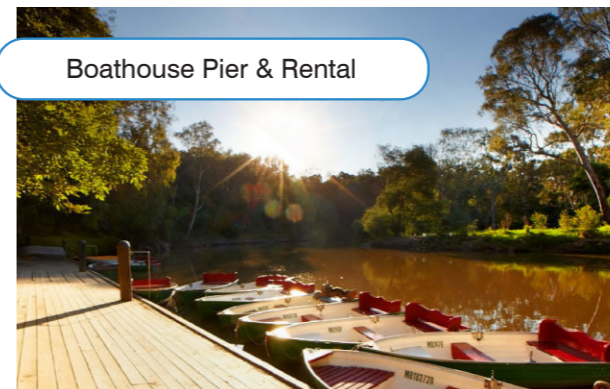
Water Play Elements

(Source: Richter Spielgerate)



Boathouse Cafe

(Source: Bethnal Green Gardens)



Boathouse Pier & Rental

Boat Hire (Source: Studley Park Boathouse)

The Boathouse Cafe

A small café pavilion will activate the north-east corner of the event lawn, providing food and beverage, toilet and change facilities. The pavilion will serve as a power and utilities connection for larger events and festivals.

The cafe will be designed as an outward facing building, allowing for spill-out seating under a canopy and into the surrounding parkland gardens. It is intended to be operational during daylight hours - further detail on the cafe would be developed through a separate feasibility and consultation process.

The proposed Master Plan location of the cafe allows activation of the adjacent event lawn, easy access for parents using the play ground, as well as facilitating back of house access from the Esplanade for service and deliveries.

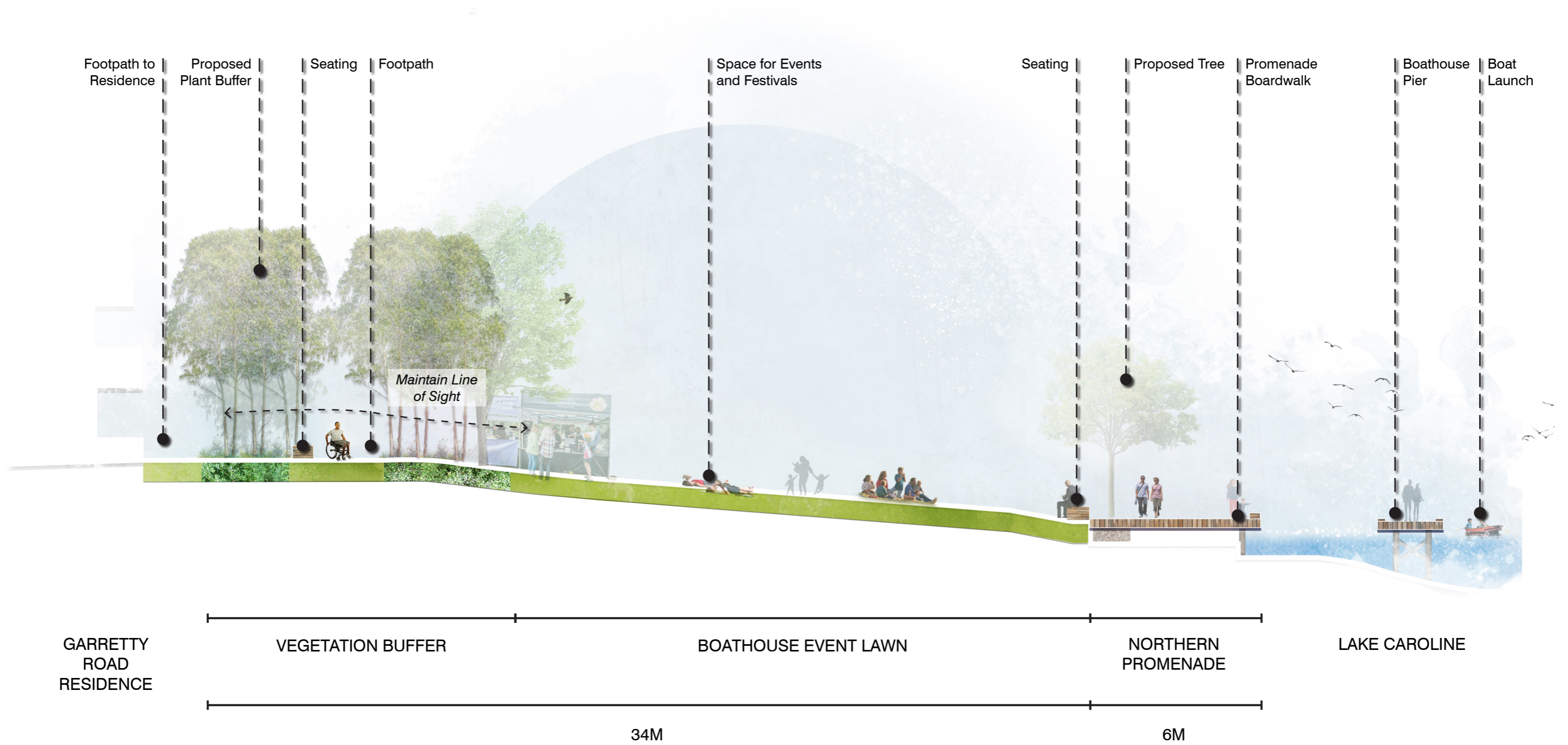
The Boathouse Pier

The Boathouse Pier is a small pier that arcs out beyond the Northern Promenade, into the lake. It will facilitate small paddle and/or row boat rentals. It will give visitors an opportunity to wander out over the water and interact with the local bird life.

In the instance of events, a floating stage could be connected to the pier, to maximise 'on-land' space for event capacity.

In times when weather is conducive, the café would set up tables and chairs along the pier.

BOATHOUSE EVENT LAWN INDICATIVE SECTION



Boathouse Event Lawn Activation

The Event Lawn is designed to cater large scale public events and community events. On normal days the Event Lawn is a spacious lawn for passive activities, including picnic and gatherings.

- Picnic
- Recreational activities
- Active recreation and fitness
- Ball games
- Farmers markets
- Festival & events
- Concerts
- Lake event seating
- Pop-up eatery and food events
- Stage and amphitheatre
- Night-time events, e.g. outdoor movie
- Temporary spatial transformation (subjected to further feasibility study)



Boathouse Event Lawn

Lakeside Alive 2024 (Source: Melton City Council)



Caroline Springs Annual Carols (Source: Star Weekly)



Farmers Market (Source: Rotary Caroline Springs)



Picnic on Lawn



Lakeside Alive 2024 (Source: Melton City Council)



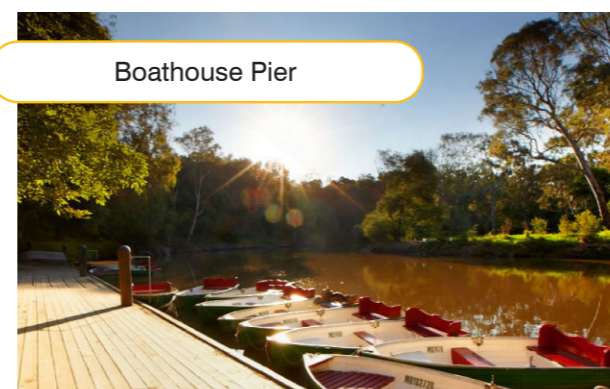
Outdoor Movie Night (Source: Westchester Magazine)

Boathouse Pier Activation

Boathouse Pier is one of the two boat launching points in the Lake. The Pier could also be used as a dining deck for people to enjoy food along lakeside. The operation of the Pier is supported by the Boathouse Cafe.

Watersports, such as rowing and dragonboat, could be launched by the community at the Pier.

- Paddle boat hire
- Watersports launching point, e.g. kayaking and canoeing
- Café & dining activation along the pier
- Lake event seating
- Floating picnic



Boathouse Pier

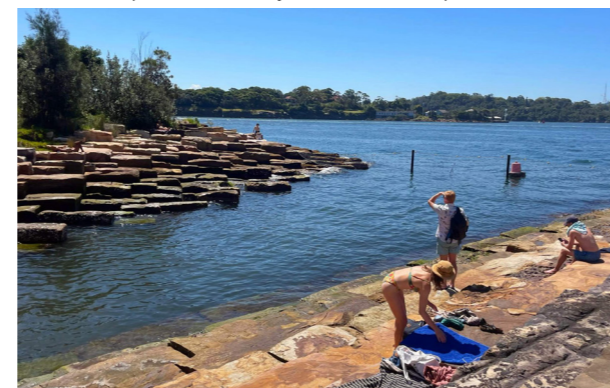
Boat Hire (Source: Studley Park Boathouse)



Dining along Pier (Source: BLU Crabhouse & Raw Bar)



Cafe Spillover (Source: The Boatbuilders Yard)



Barangaroo Reserve (Source: Bec Dreher)



Paddle Boat Hire and Kayaking (Source: Dockside Mildura Marina)



Floating Picnic (Source: Herald Sun)

8.3 CASCADE & WEIR WETLANDS UPDATE

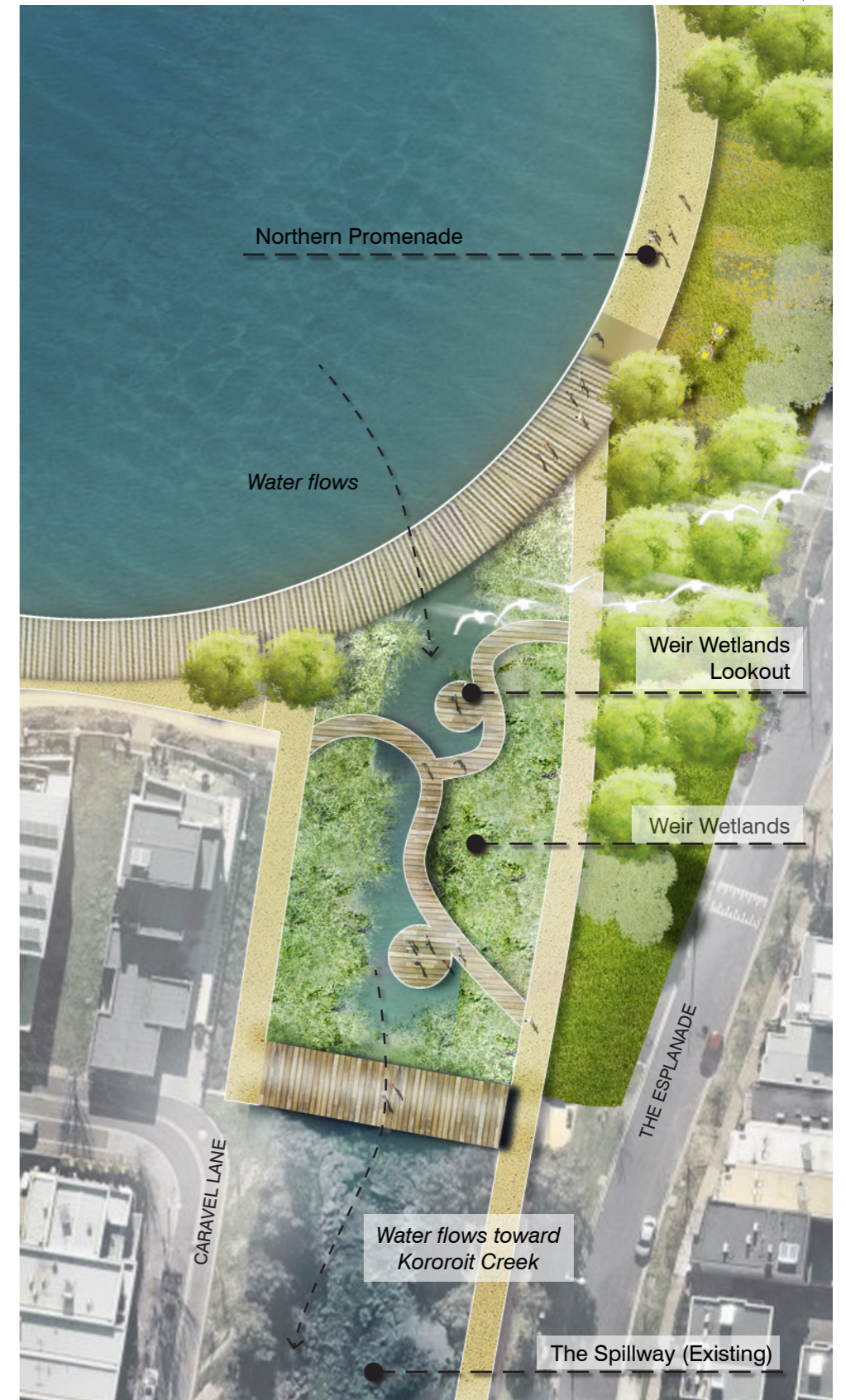
As the key inlet and outlet of Lake Caroline, the Cascade Weir and Wetland play a critical role in improving water quality in both the lake and the creek.

The Cascade Wetlands

The northern part of the Wetlands facilitate the intake of water from the existing Cascades north of Garretty Road. The inlet area of the Lake is currently open water with a reeded edge. It has the opportunity to provide high quality, continued wetland habitat connecting directly into Lake Caroline. Already home to turtles and fish, this secluded area of habitat will provide a safe-haven for wildlife.

The main Lake Caroline circuit path will provide a direct connection across the south of this wetland area, removing an unnecessary path dog-leg. The meandering boardwalks and lookouts provide an alternative, slower pace set of path connections. The area will enable discreet moments to engage with nature through lookouts, boardwalks and bird hides.

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This area is also a valuable education asset - with opportunities to provide interpretive signage on plant species and wildlife, water quality, and the function of the lake. Local preschools will be able to engage in Bush Kinder here, and primary and secondary schools would have the option to partake in monitoring the species and water quality within this location as part of their science programs.

For the existing residents transforming this space into a biodiversity hub, provides additional amenity, different from the rest of the Lake Caroline Precinct. Community groups could be encouraged to care for this area providing a sense of ownership and responsibility.

The Weir Wetlands

The outflow in high rainfall events is via the Weir - overflowing and discharging into Kororoit Creek.

The Master Plan proposal for Lake Caroline recognises the importance of the cleanliness of this water ahead of discharging into Kororoit Creek catchment. The water quality is currently controlled, however large pollutants are often seen in the vicinity of the weir, and additional algae bloom occurs intermittently, posing some challenges to the maintenance.

Providing a habitat buffer to Lake Caroline Weir, the Weir Wetlands enables extended habitat connection to the lake, as well as water cleansing ahead of overflow and discharge to Kororoit Creek.



Bird Hide

East Point Park Bird Sanctuary by PLANT Architect Inc (Source: Cameron Lintott)



Boardwalk in Wetlands

Oaklands Park and Wetland by TCL (Source: Sam Noonan)



Cascade Wetlands Lookout

South Parkland Wetlands by TCL (Source: Jackie Gu)



Boardwalk over Water

Water Crossing (Source: Melbourne Cairnlea Lake Boardwalk, Hassell)

Northern Promenade

The generous Northern Promenade creates a sweeping arc at the northern end of the Lake. This grand gesture connects the Weir Wetlands, open lawns of The Esplanade, Boathouse Event Lawn and Playground, and the Promenade Parkland on the western side of the Lake.

It is envisaged that the Promenade will be tree-lined, providing much needed amenity and shade.



Art Interpretation

Interpretation by TCL (Source: Ben Wrigley)



The Weir Wetland

Adelaide Botanic Gardens Wetlands by TCL (Source: John Gollings)



Floating Wetlands

Redcliffe Golf Course Floating Wetland (Source: Fytogreen)



Boardwalk

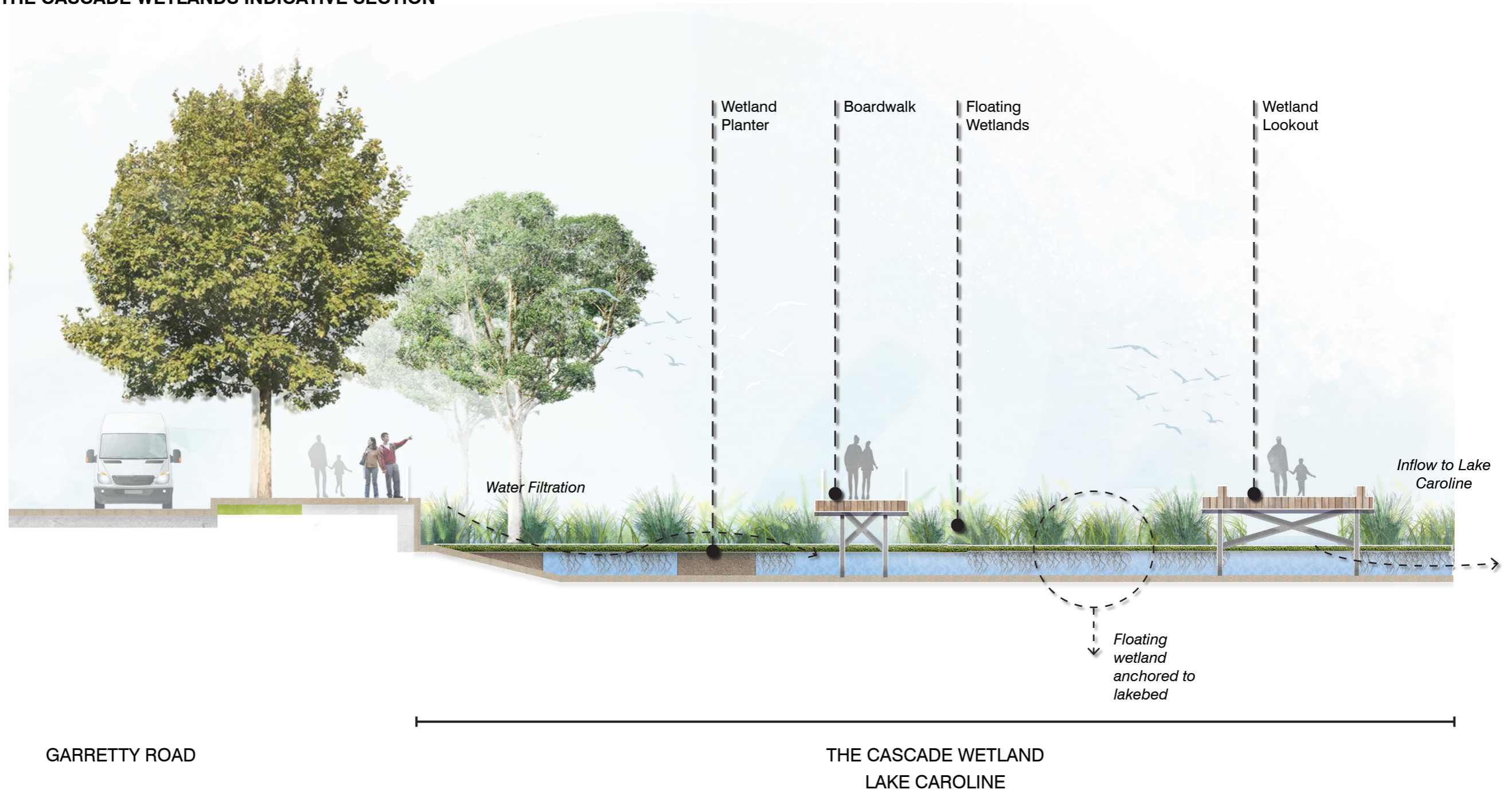
South Parkland Wetlands by TCL (Source: Jackie Gu)



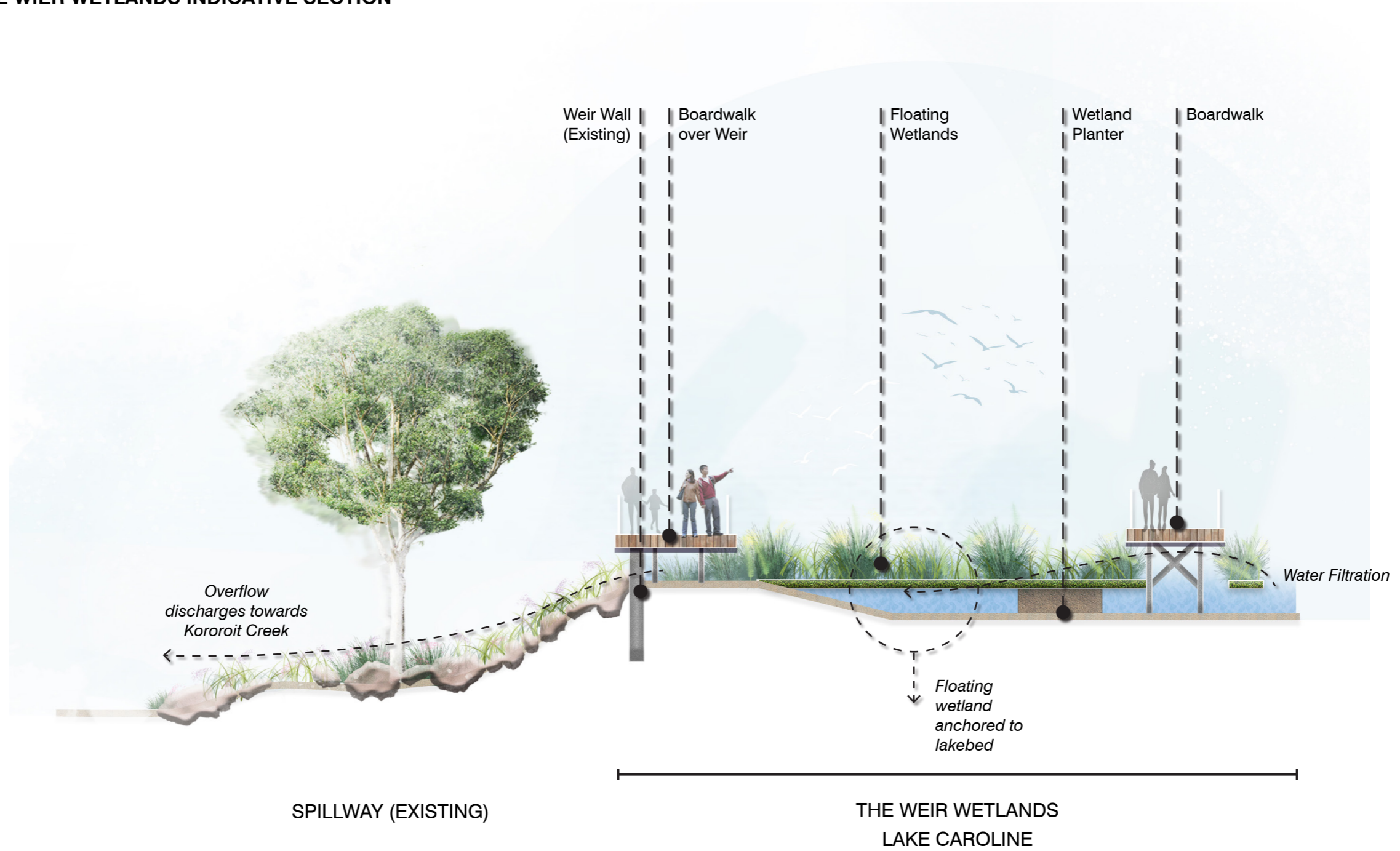
Northern Promenade

Anney's Lakefront Promenade (Source: KC to Anney)

THE CASCADE WETLANDS INDICATIVE SECTION



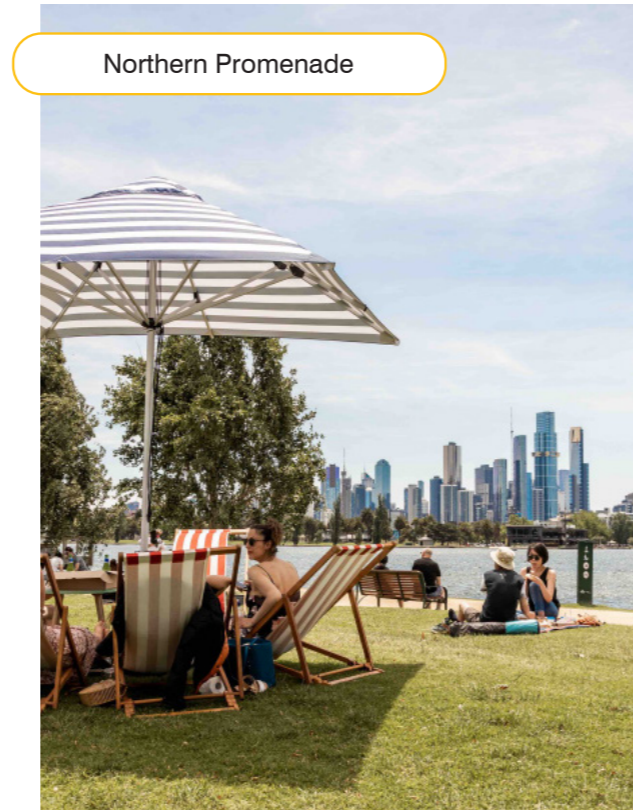
THE WIER WETLANDS INDICATIVE SECTION



Northern Promenade Activation

Northern Promenade is a long promenade walk that connects the Boathouse Event Lawn, Cascade Wetlands and Weir Wetlands. Being a main thoroughfare, it is designed for daily passive activities with exercise stations along the promenade. It also serves as a spatial extension for spillover events from the Boathouse Event Lawn.

- Lakeside events
- Picnics
- Active recreation and fitness



Lakeside at Carousel (Source: Lucas Worcester)



Active Fitness (Source: Topio)



Jogging and Running



Yoga on Lakeside (Source: Lower Mill Estate)



Markets (Source: Homegrown Markets Speers Point)

Cascade & Weir Wetlands Activation

Thriving wildlife communities would be inhabiting the Cascade and Weir Wetlands, making them the perfect spots to observe and appreciate nature.

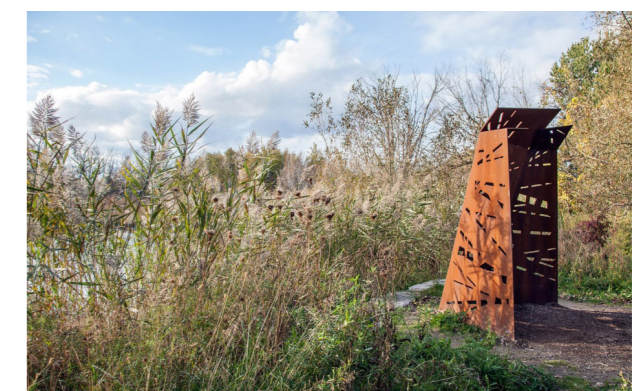
- Bird watching
- Ecology walking
- Nature encounter and experience
- Education tours



Birdwatching (Source: Backyard Bird Watchers)



Guided Educational Tours (Source: ACT Parks and Reserve)



Bird Hide by PLANT Architect Inc (Source: Cameron Lintott)



Educational Walks (Source: John Gollings)



Self-Guided Tours (Source: ACT Parks and Reserve)



Interpretation by TCL (Source: Ben Wrigley)

8.4 LAKE CROSSING BRIDGE & ESPLANADE ECOLOGY HUB

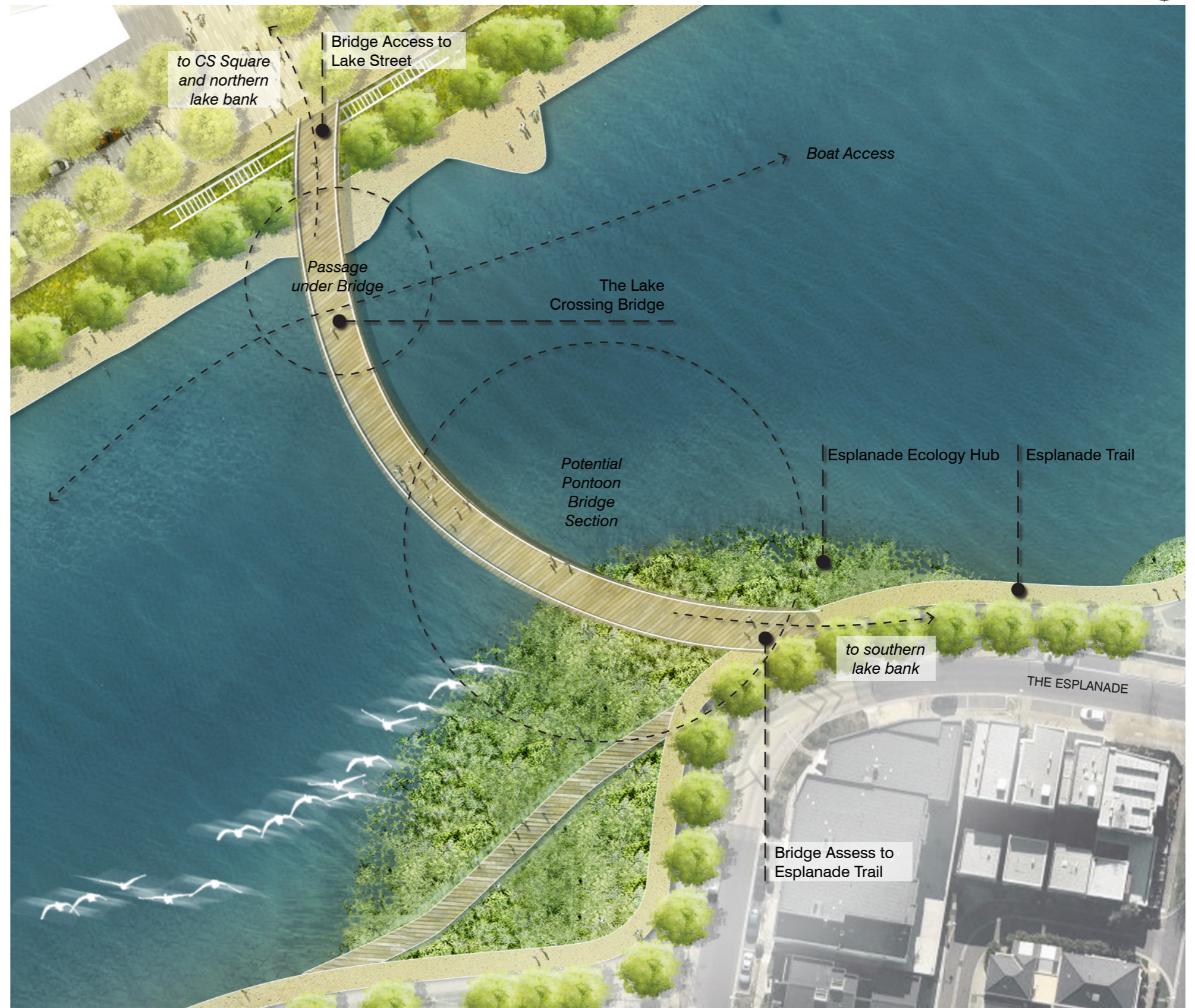
Lake Crossing Bridge

One of the main items and feedback from the initial consultation for the Lake Caroline Precinct, reflected the lack of connection across the water. Many residents noted that in the early days of the Caroline Springs development there was a mid-crossing point through the lake, and it was highly desired to be reinstated.

In order to balance the various requirements of access across the Lake, and along it, the Lake Crossing Bridge is proposed as a hybrid of two structures - part floating pontoon, and part elevated structure.

The Lake Crossing Bridge will be a quality bridge element designed for pedestrians and cyclists only. It will provide a direct connection for residents on the south-west of the Lake to the retail and Caroline Springs Shopping Precinct. For visitors to the Lake, it provides an alternative sequence of loops for walking, running and recreation.

The south portion of the bridge will be of pontoon construction and the northern part of the bridge will 'lift' off the water surface, to allow access beneath the bridge for small water craft (canoes, row boats) and allow wildlife to seamlessly access all areas of the lake.



It is intended that the bridge will be a fully accessible, well lit crossing, providing a grade connection to the upper level of Lake Street, above the promenade. The additional connection across the Lake will assist with passive surveillance and increased pedestrian and cyclist activity.



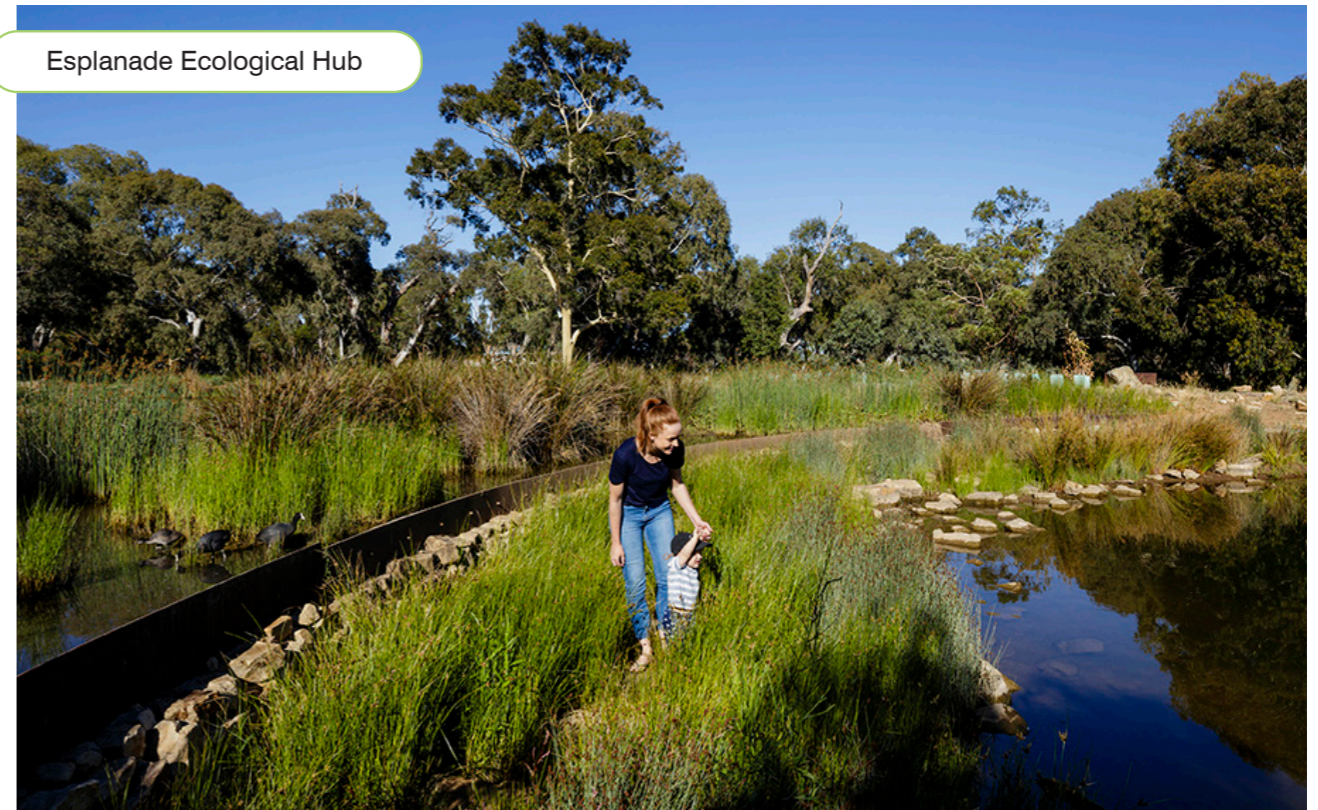
Boardwalk Bridge

(Source: Architonic)



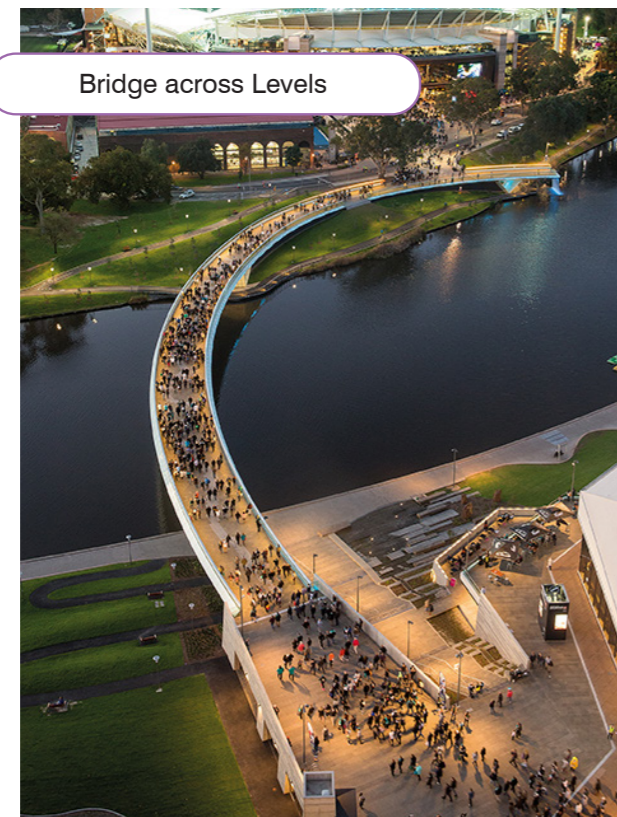
Pontoon Bridge

West India Quay Floating Bridge (Source: David Boardman)



Esplanade Ecological Hub

Oaklands Park and Wetland by TCL (Source: Sam Noonan)



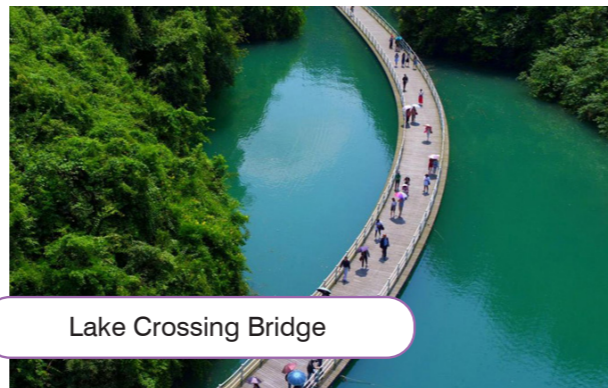
Bridge across Levels

Riverbank Pedestrian Bridge by TCL (Source: John Gollings)



Passage under Bridge

Nymburk Pedestrian Bridge by SHP (Source: Milos Vejchoda)



Lake Crossing Bridge

Enshi Floating Bridge (Source: unknown)

Esplanade Ecology Hub
The Esplanade Ecology Hub will enhance the existing 'fringe' of wetland ecology along the edge of the lake, and provide additional wildlife habitat at the launching point of the bridge.

The extended habitat provides an immersive departure point for the Lake Crossing Bridge.



Esplanade Ecological Hub

Adelaide Botanic Garden Wetlands by TCL (Source: John Gollings)



Boardwalk in Wetlands

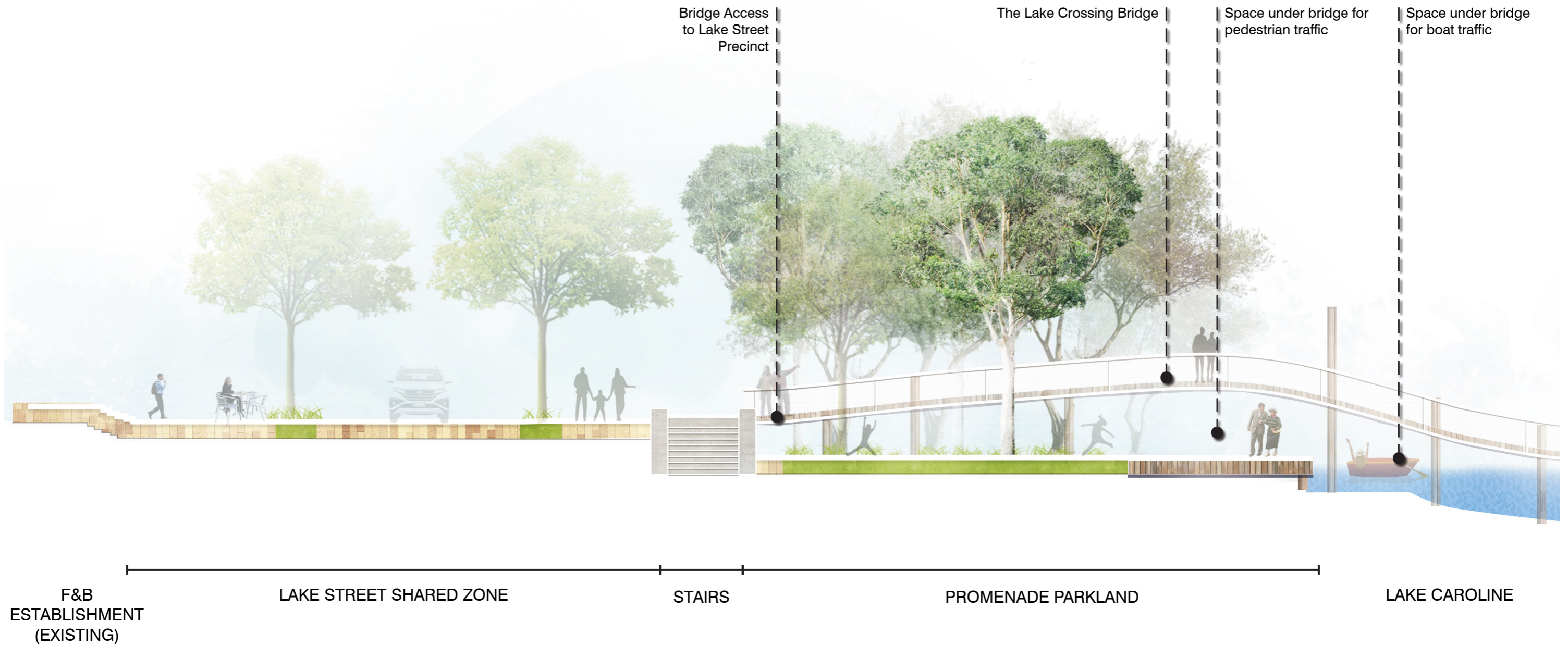
Oaklands Park and Wetland by TCL (Source: Sam Noonan)



Boardwalk in Wetlands

Nature Walks (Source: ACT Parks and Reserve)

LAKE CROSSING BRIDGE INDICATIVE SECTION



8.5 LAKE STREET TRANSFORMATION

Lake Street is proposed as a significant upgrade to the existing street to allow for traffic calming, pedestrian priority and regular activation through markets and festivals.



It is proposed to include consistent, flush, and high-quality paved materials across the footpath, parking, and road carriageway. The plan also features significant street tree planting, café spillout areas from existing retailers, and reduced traffic flow. Speed limits will be introduced to Lake Street to provide a safer environment for pedestrians, and priority parking zones will be included to provide better carpark access for the elderly, families with children and people with disability.

The transformation of this street would facilitate safe and direct connections from the lake side to the retail and shopping precinct. It would stimulate investment along the western edge of Lake Street. Businesses that provide community facilities and stimulate further activation would be recommended.



Lake Street Shared Zone

Londsdale Street by TCL (Source: John Gollings)



Priority Parking Zone

Priority Parking Zone (Source: Central Korat)



Safer Speed Limit

Lower Speed Limit in Melbourne CBD (Source: Victoria Walks)

The upgraded Lake Street will enable a variety of activation opportunities, including café spill out from adjacent businesses, regular weekend markets, and partial or full street closure to facilitate larger festivals and events.



Sunday Markets

Meander Market (Source: City of Adelaide)



Events on Lake Street

Johnston Street Fiesta (Source: Colombiantojos)



Quality Paving

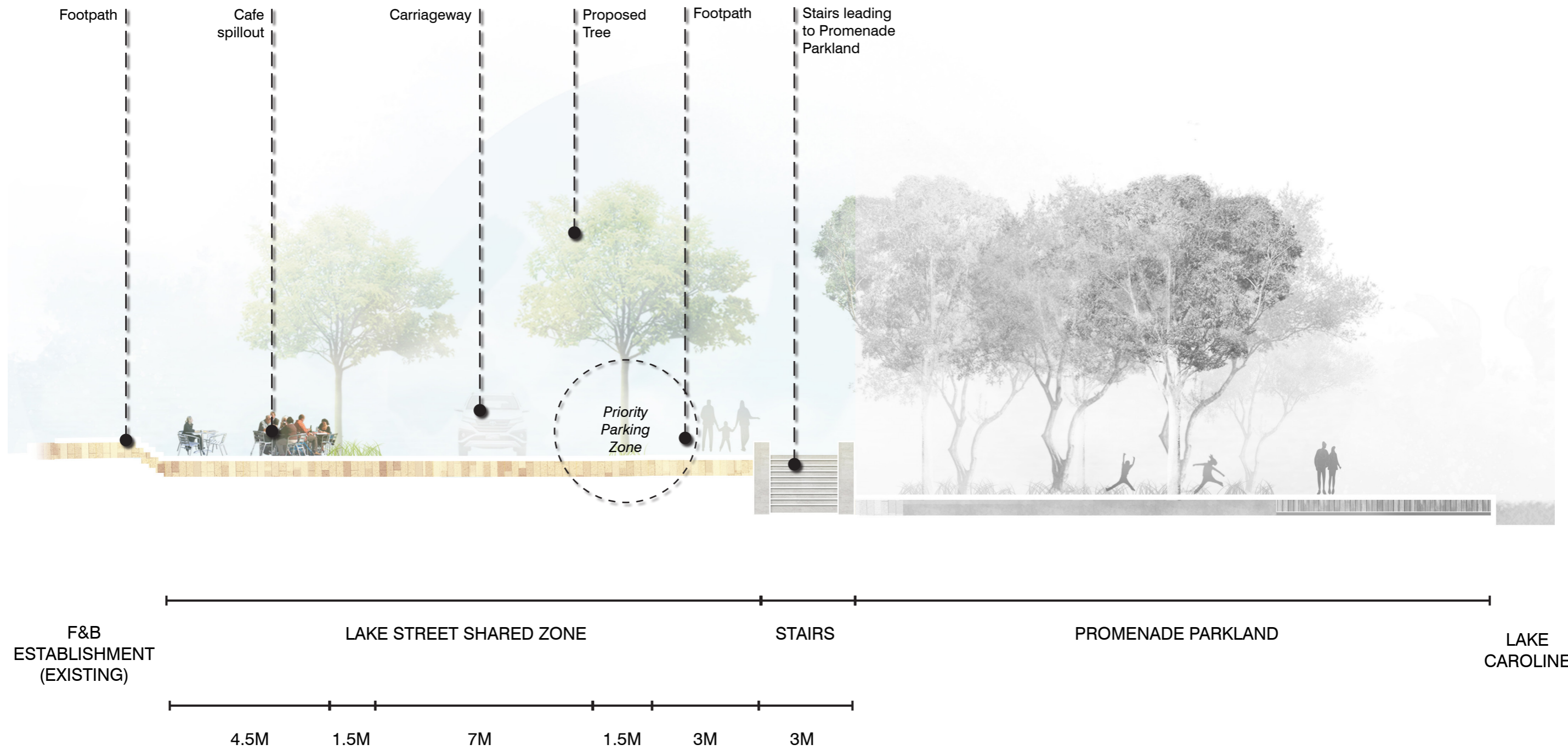
Shared Zone (Source: Gehl Architects & Landscape Projects)



Lake Street Shared Zone

Street in Barcelona (Source: unknown)

LAKE STREET INDICATIVE SECTION



Lake Street Activation

Lake Street remains a key vehicular traffic corridor between CS Square and its surroundings. It is envisioned as a pedestrian-friendly slow zone, with lower speed limit applied to enhance walkability.

On normal days Lake Street would function as an ordinary street, with outdoor dining and weekend markets on footpath. The street could be closed off at certain times of the year to house larger festivals and events, including Remembrance Day and ANZAC Day Dawn Service at CS War Memorial.

- Café spillout from adjacent businesses
- Regular weekend markets
- Street closure to facilitate larger festivals



Festival on Street (Source: Beat Magazine)



Street Parade (Source: Colombiantojos)



Farmers Markets (Source: City of Adelaide)



Street Party (Source: Time Out)



Sunday Market on roadside (Source: Arts Centre Melbourne)



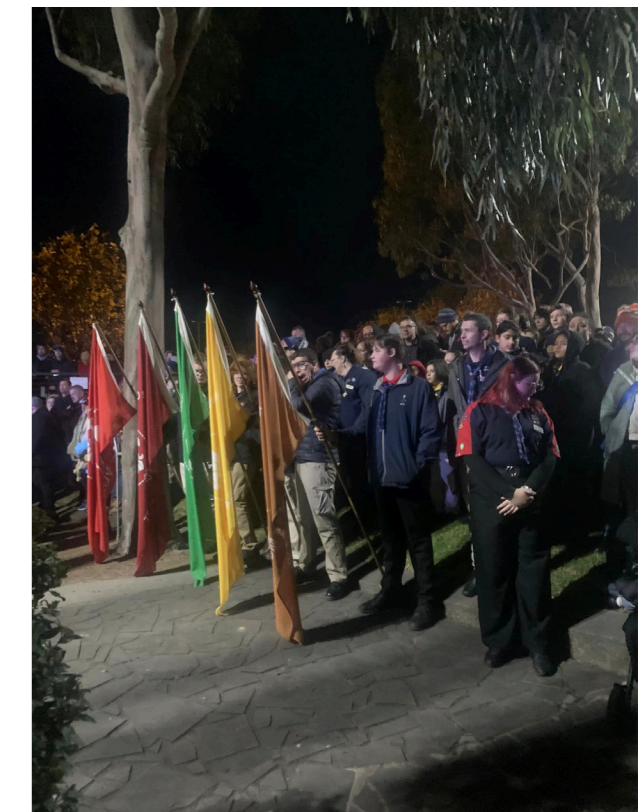
Roadside Activation (Source: Damian Schultz)



Cafe Spillout (Source: TkKurikawa)



ANZAC Day Service (Source: Caroline Springs RSL Sub Branch)



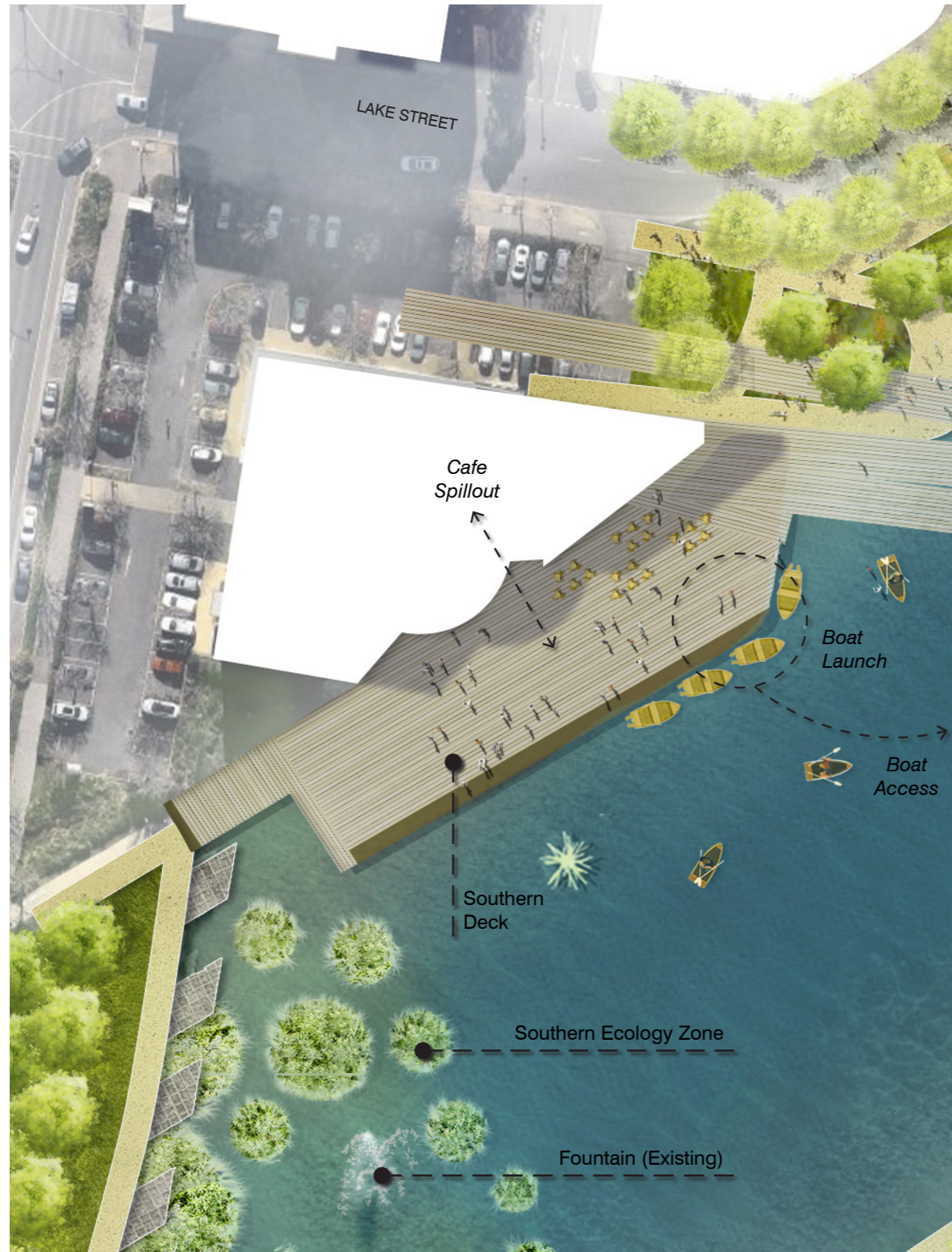
ANZAC Day Dawn Service (Source: Caroline Springs RSL Sub Branch)

8.6 PROMENADE PARKLAND REFRESH

The Promenade Parkland seeks to reinvigorate the existing promenade landscape and rationalise the complex mounding, pathways and spaces. The project area includes the Park Promenade, Southern Deck and Northern Promenade Deck, which will be redesigned to accommodate daily events and special events.

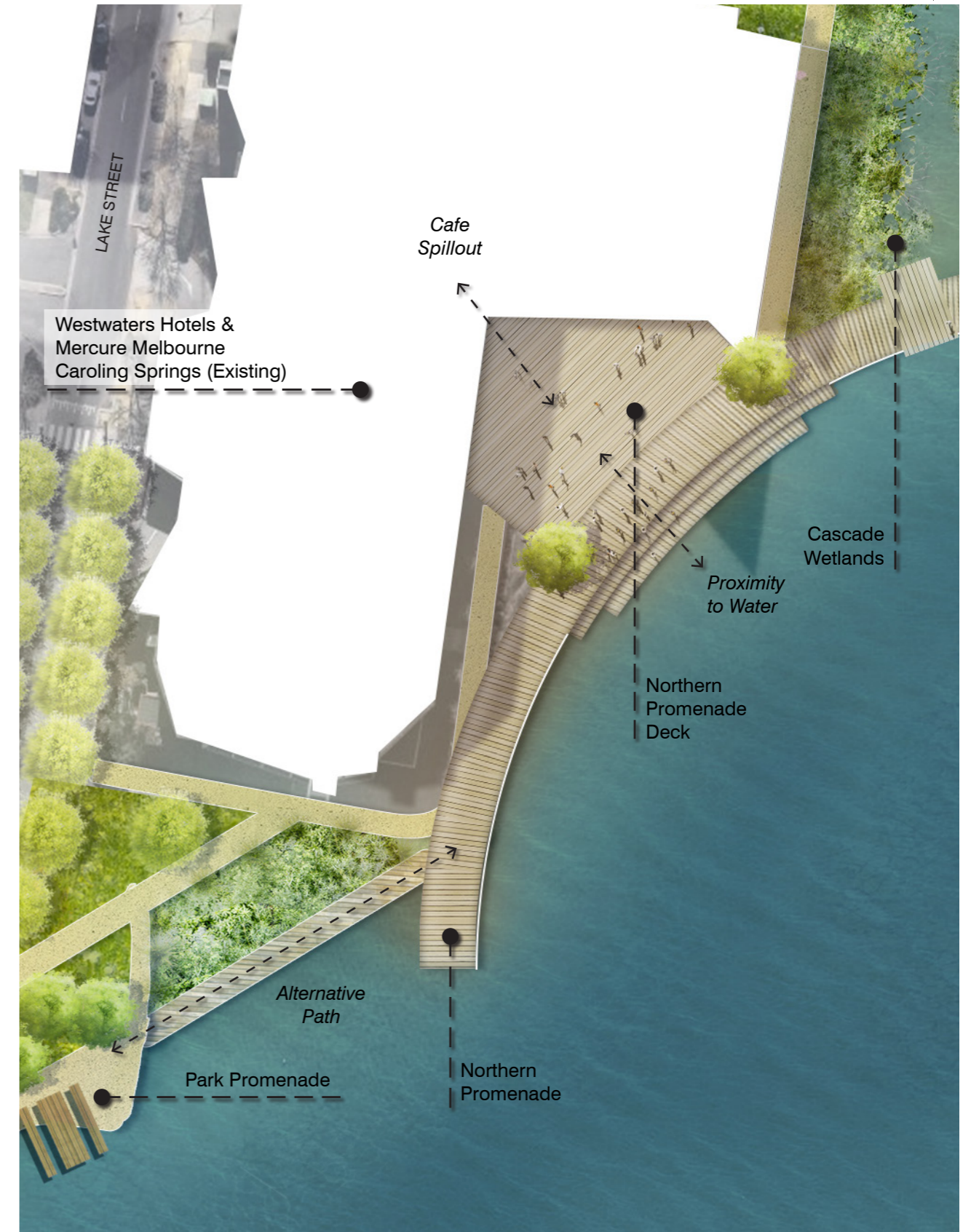


SOUTHERN DECK



NORTHERN PROMENADE DECK

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Park Promenade

This is proposed to be simplified into a generous lawn that can host significant trees for shade and amenity. A simple linear footpath or boardwalk would interface with the lake edge. This would allow for picnics, events, markets and festivals when required, and passive activation at other times.

Existing facilities and amenities will be reviewed and upgraded to support daily activation of the Promenade Parkland. The park interface with CS War Memorial will be enhanced to better facilitate the RSL events.



Promenade Parkland

North Terrace by TCL (Source: John Gollings)



Boardwalk Promenade

Yarra River Promenade (Source: Victoria Walks)

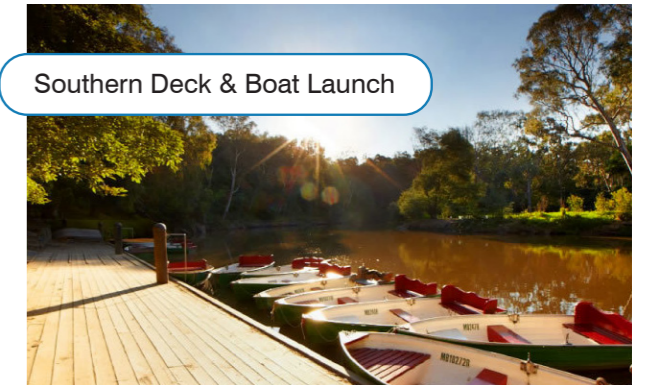
Southern Deck

The existing deck is proposed to be expanded out into a generous multi-use space for outdoor activation, and boat launch zone.

It is intended that the food and beverage offering and steps to the lower deck would be upgraded to enable more flexibility. It would be the ideal location for functions and pavilion set ups. Additional tree planting can be provided in the on-ground locations to create better existing amenity.

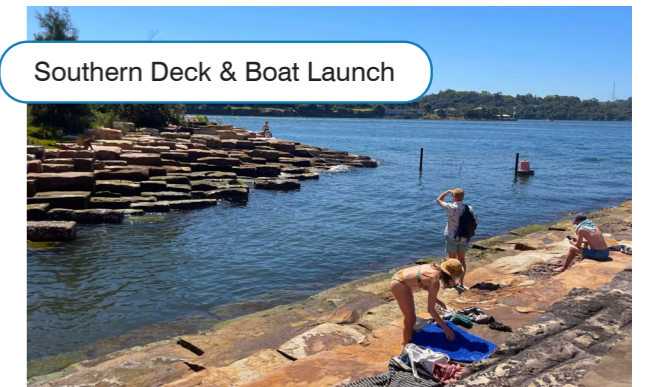
Northern Promenade Deck

A new deck is proposed to replace the existing path outside Westwaters Hotels to provide a generous multi-use space. Similar but smaller to its counterpart Southern Deck, Northern Promenade Deck is intended to house the spillover from existing hotels.



Southern Deck & Boat Launch

Boat Hire (Source: Studley Park Boathouse)



Southern Deck & Boat Launch

Barangaroo Reserve (Source: Bec Dreher)

CS War Memorial



CS War Memorial



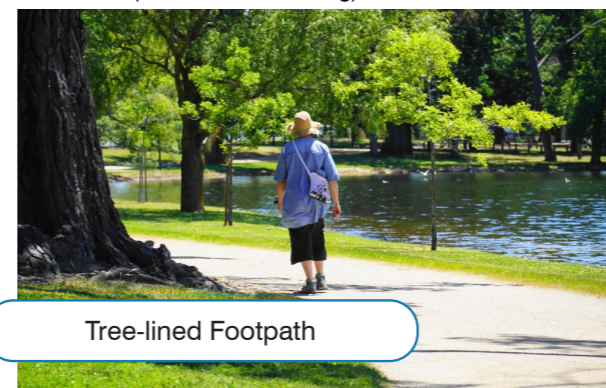
Remembrance Day (Source: Caroline Springs RSL Sub Branch)

Lake Edge Linear Lawn



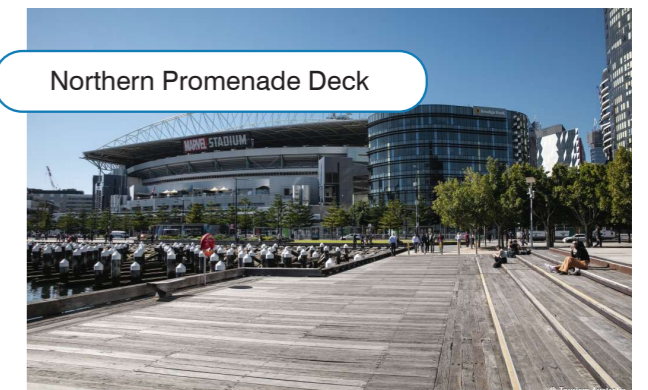
Yarra Trail (Source: David L Young)

Tree-lined Footpath



Lake Wendouree (Source: Days Out with George)

Northern Promenade Deck



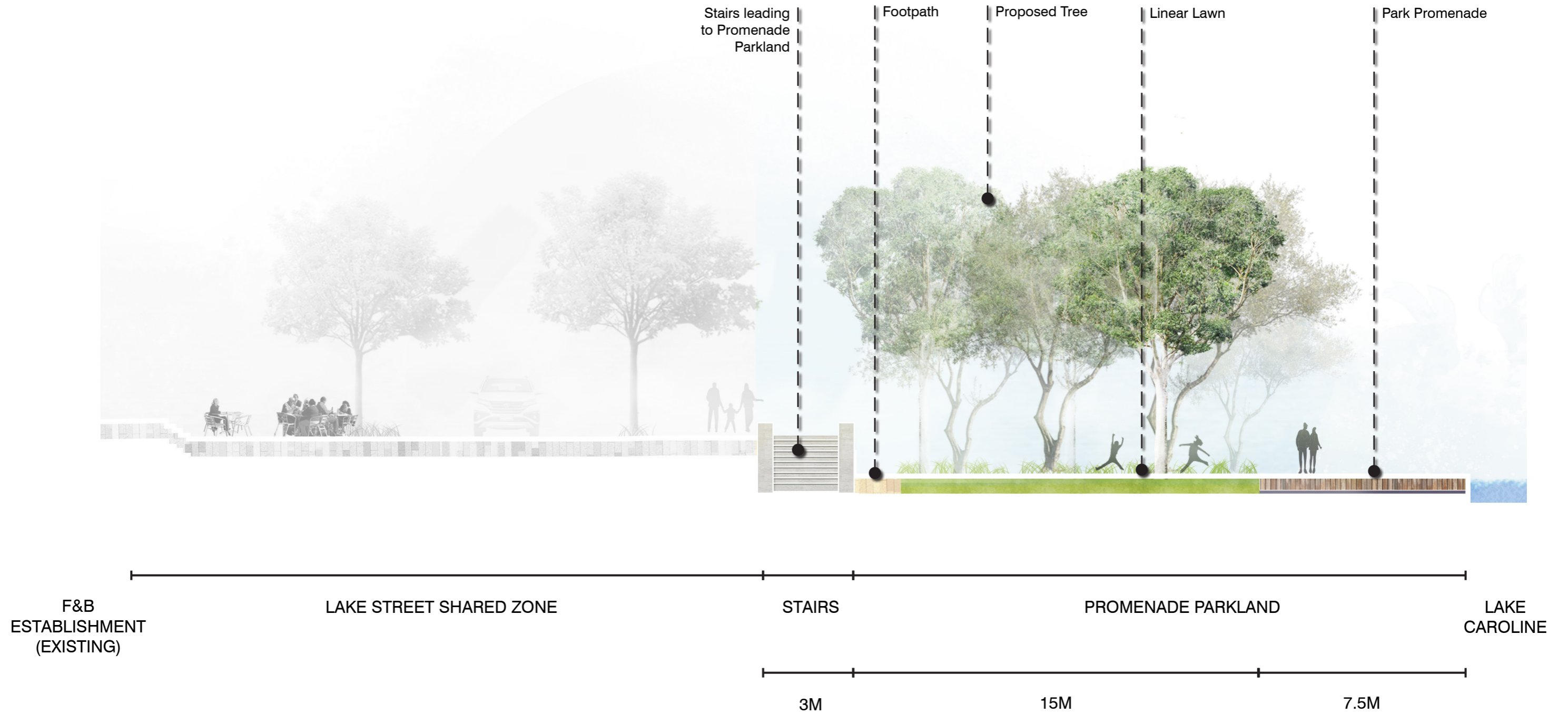
Victoria Harbour at NAB by TCL (Source: unknown)

Northern Promenade Deck

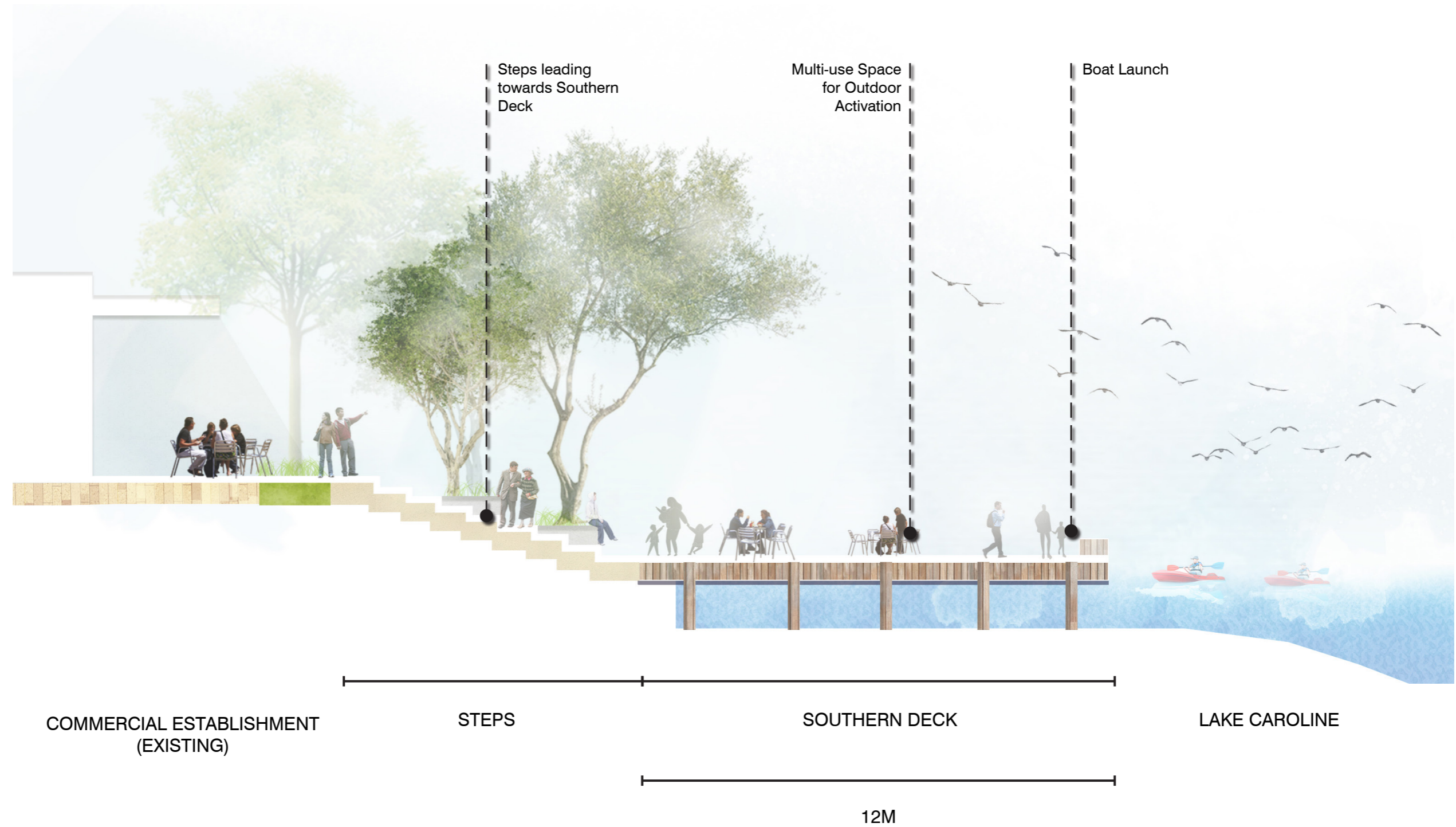


South Wharf Promenade (Source: The Boatbuilders Yard)

PROMENADE PARKLAND INDICATIVE SECTION



SOUTHERN DECK INDICATIVE SECTION



Promenade Parkland Activation

The focus area of the Promenade Parkland Activation includes the Park Promenade, the western portion of Northern Promenade and the Deck outside the Westwaters Hotel. Together they form a long and continuous promenade walk along the north lake bank. Similarly to the Northern Promenade, it is designed as a main thoroughfare dotted with pocket spaces for daily passive activities, such as picnics and strolling.

The large pocket spaces along the Park Promenade and Deck are also designed as secondary event spaces for festivals, events and celebrations, particularly Remembrance Day and ANZAC Day Dawn Service at CS War Memorial.

- Lakeside festivals
- Lake event viewing
- Picnics
- Active recreation and strolling
- Cafe spillout to deck
- Lakeside popup food and beverage (subjected to further feasibility study)



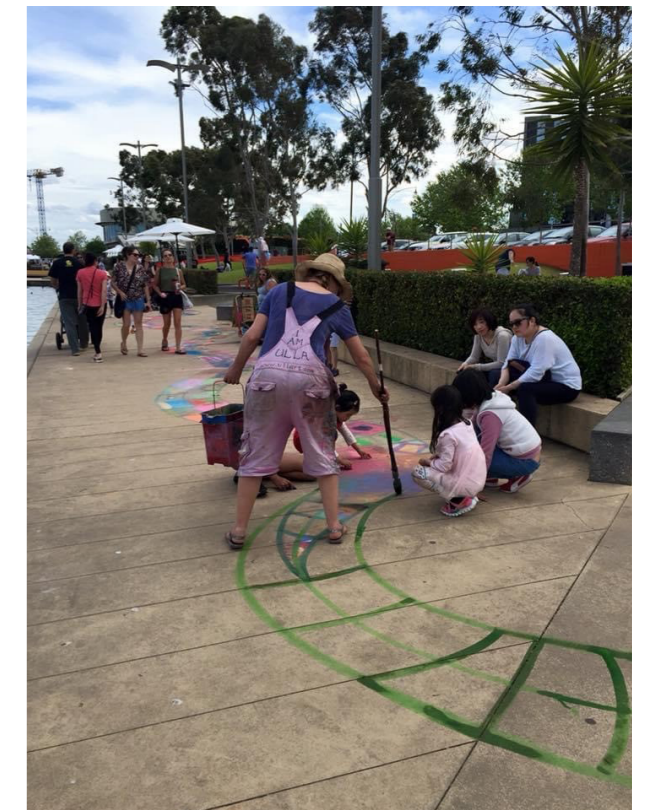
Lakeside Alive (Source: unknown)



Fireworks (Source: Melton City Council)



Lakeside Alive (Source: City of Melton)



Lakeside Alive (Source: unknown)



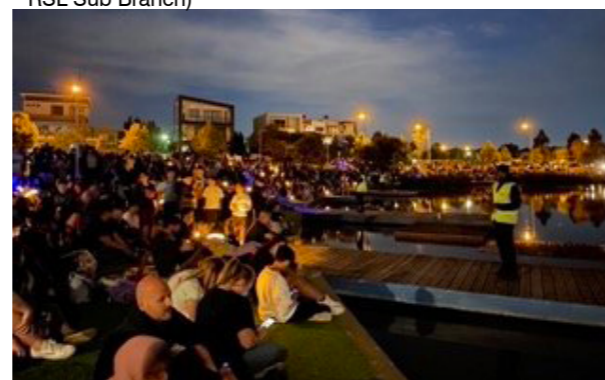
Dawn Service at CS War Memorial (Source: Caroline Springs RSL Sub Branch)



Picnic on Lawn



Lake Events (Source: Lake Macquarie City)



Caroline Springs Community Carol by Candlelight (Source: Imagine Nations Church Melbourne)



Strolling and Dog Walking



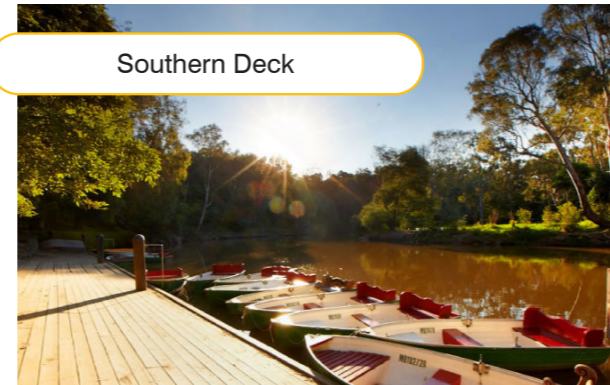
Cafe spillout (Source: The Boatbuilders Yard)

Southern Deck & Boat Launch

Southern Deck is one of the two boat launching points in the Lake. The deck is designed as a spacious area for events and functions, while still allowing pedestrian movement around the lake circuit walking loop. The operation of the boat hire could be supported by Boathouse Cafe.

The Southern Deck and Boat Launch area could also support activities such as rowing and dragon boat racing.

- Café spillout and dining
- Paddle boat hire
- Watersports launching point, e.g. rowing, dragon boats, kayaking and canoeing
- Outdoor booking on deck
- Small scale events
- Floating picnic
- Lakeside popup food and beverage (subjected to further feasibility study)



Southern Deck

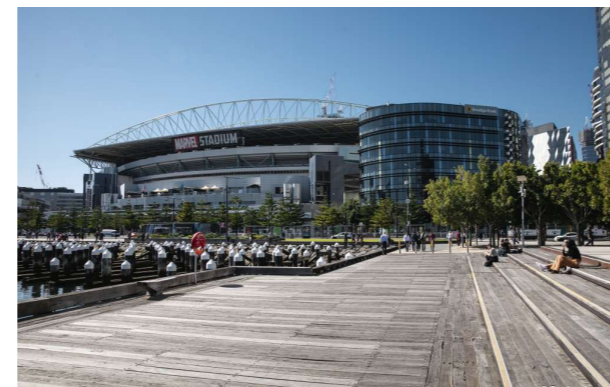
Boat Hire (Source: Studley Park Boathouse)



Cafe Spillout (Source: The Boatbuilders Yard)



Lakeside Bar (Source: Timeout)



Timbre Deck at Victoria Harbou by TCL (Source: unknown)



Dining along Pier (Source: BLU Crabhouse & Raw Bar)



Floating Picnic (Source: Herald Sun)



Watersports Launching Point (Source: Sedgemoor Model Boat)



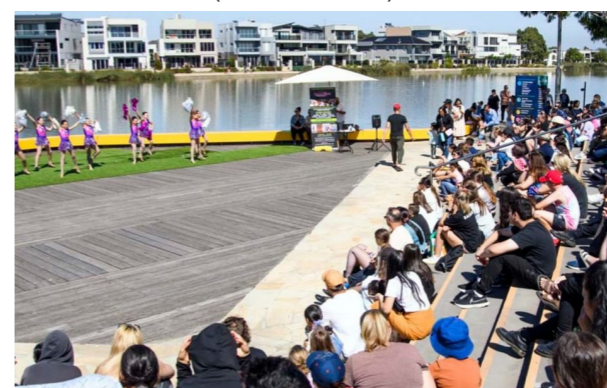
Small scale events (Source: unknown)



Outdoor Booking (Source: Tourism Australia)



Paddle Boat Hire and Kayaking (Source: Dockside Mildura Marina)



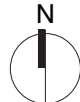
Lakeside Alive (Source: City of Melton)



Wedding on Lakeside (Source: Royal Botanic Gardens Melbourne)

8.7 SOUTHERN ECOLOGY ZONE

The Southern Ecology Zone will transform the southern end of Lake Caroline into a lush habitat zone, enhancing the existing ecology already thriving in this area. It will provide a visually inviting entry view and foreground to the lake. The amenity is appropriate for the surrounding land use which is primarily residential.

1:1000@A3 



Additional significant tree planting along the Esplanade and Caroline Springs Boulevard will provide a visual buffer to the busy adjacent road.

The existing triangular pocket park will be redesigned to complement the lake habitat. The area provides opportunities for lookouts, boardwalks, education and interpretation.



Southern Ecology Zone

Adelaide Botanic Garden Wetlands by TCL (Source: John Gollings)



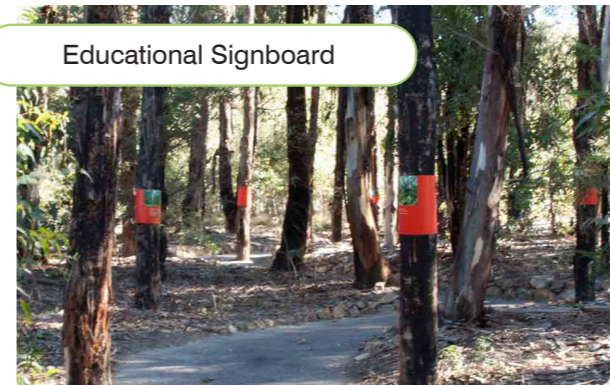
Floating Wetlands

Redcliffe Golf Course Floating Wetland (Source: Fytogreen)



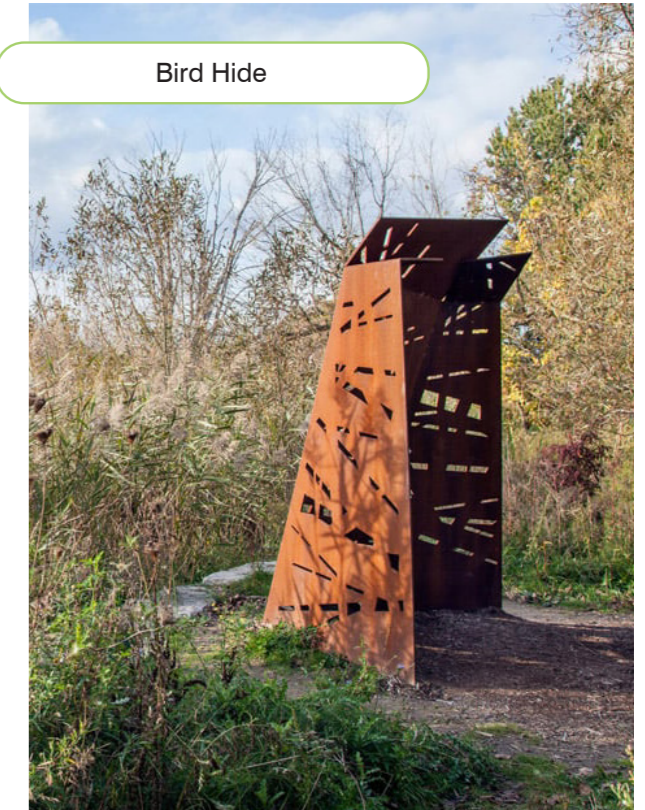
Southern Ecology Park

Oaklands Park and Wetland by TCL (Source: Sam Noonan)



Educational Signboard

Educational Walks (Source: Emily Taylor)



Bird Hide

East Point Park Bird Sanctuary by PLANT Architect Inc (Source: Cameron Lintott)



CS Boulevard Linear Lawn

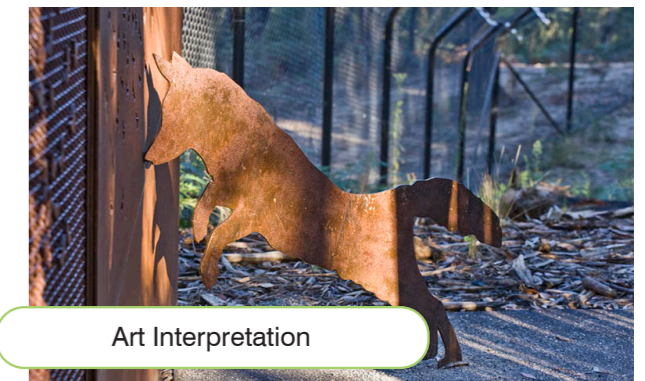
Yarra Trail (Source: David L Young)

A series of Floating Wetlands will be installed within the lake, adjacent to the Southern Wetlands, to provide additional water cleansing and filtration for the overall health of the lake. This will be facilitated by the existing fountain, upgraded to improve the aeration and water movement in the lake.



Boardwalk

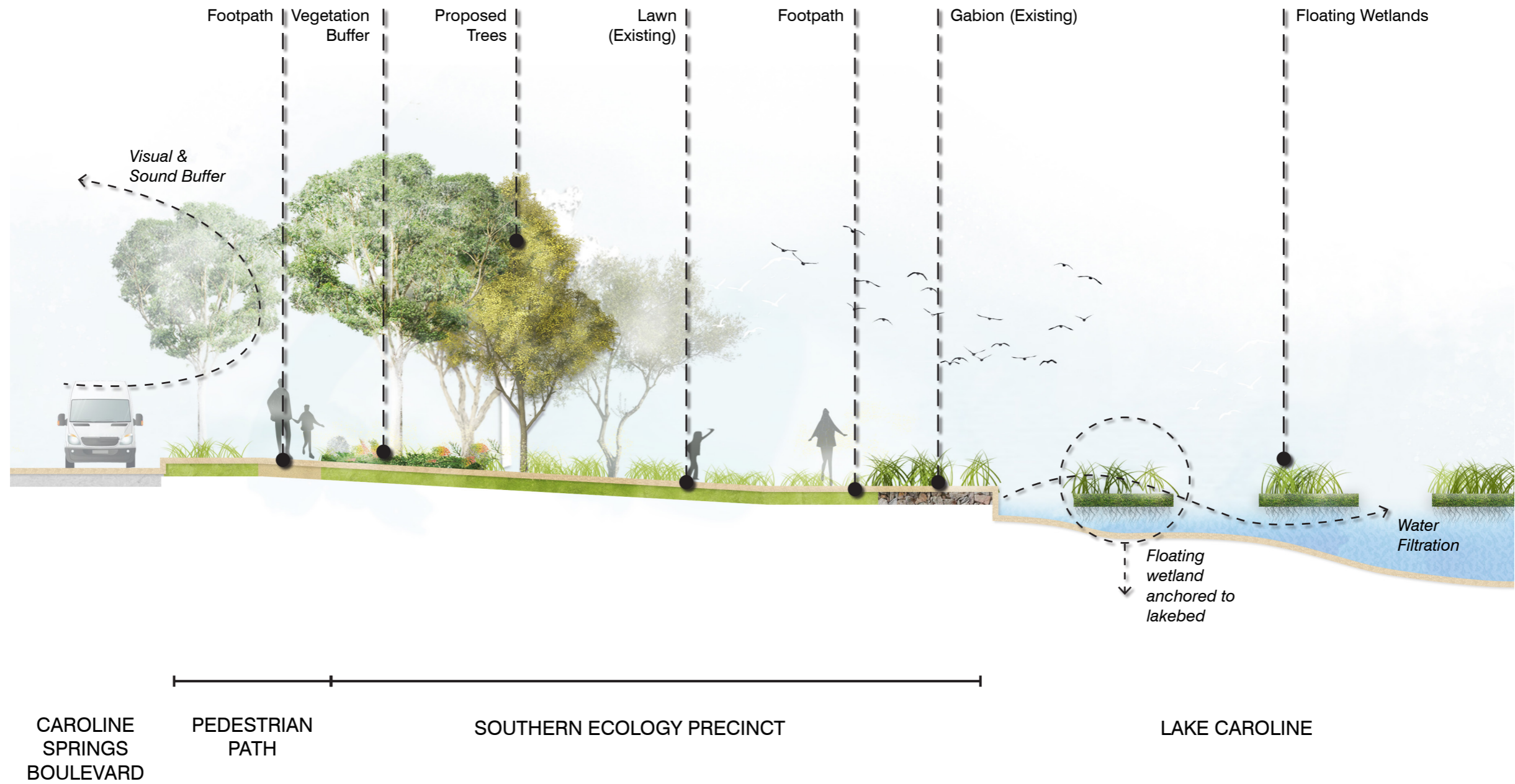
South Parkland Wetlands by TCL (Source: Jackie Gu)



Art Interpretation

Interpretation by TCL (Source: Ben Wrigley)

SOUTHERN ECOLOGY ZONE INDICATIVE SECTION



Southern Ecology Zone Activation

Thriving wildlife communities would be inhabiting the wetlands in Southern Ecology Zone, making this a perfect spot to observe and appreciate nature.

The existing lawn along Caroline Springs Boulevard would be retained and upgraded to continue providing open space for passive activities, such as picnic and gatherings.

- Picnic
- Active recreation and fitness
- Bird watching
- Ecology walking
- Nature encounter and experience
- Education tours



Southern Ecology Wetlands

Self-Guided Tours (Source: ACT Parks and Reserve)



Interpretation by TCL (Source: Ben Wrigley)



Nature Encounter (Source: Parks Victoria)



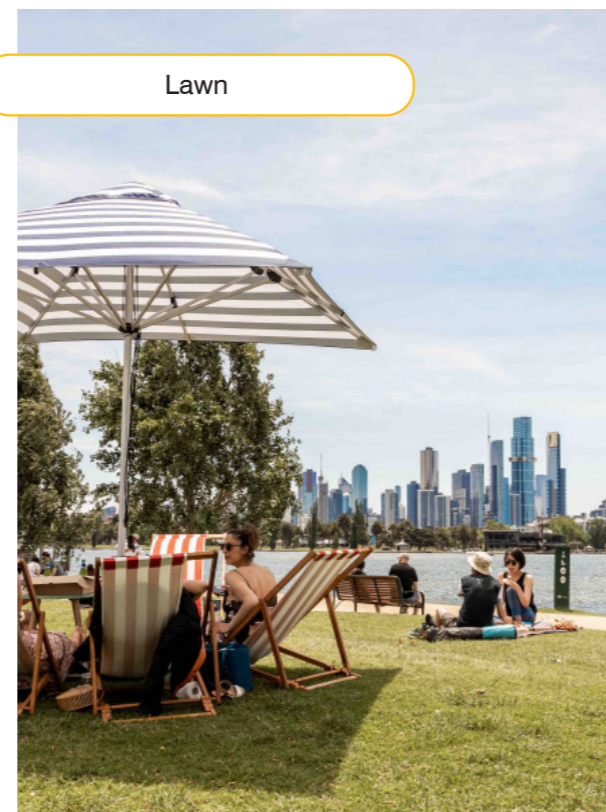
Guided Educational Tours (Source: ACT Parks and Reserve)



Educational Walks (Source: John Gollings)



Guided Ecological Walks (Source: Sydney Barani)



Lawn

Lakeside Picnic (Source: Lucas Worcester)



Jogging and Running



Yoga (Source: Cape Town Managzine)



Picnic on Lawn

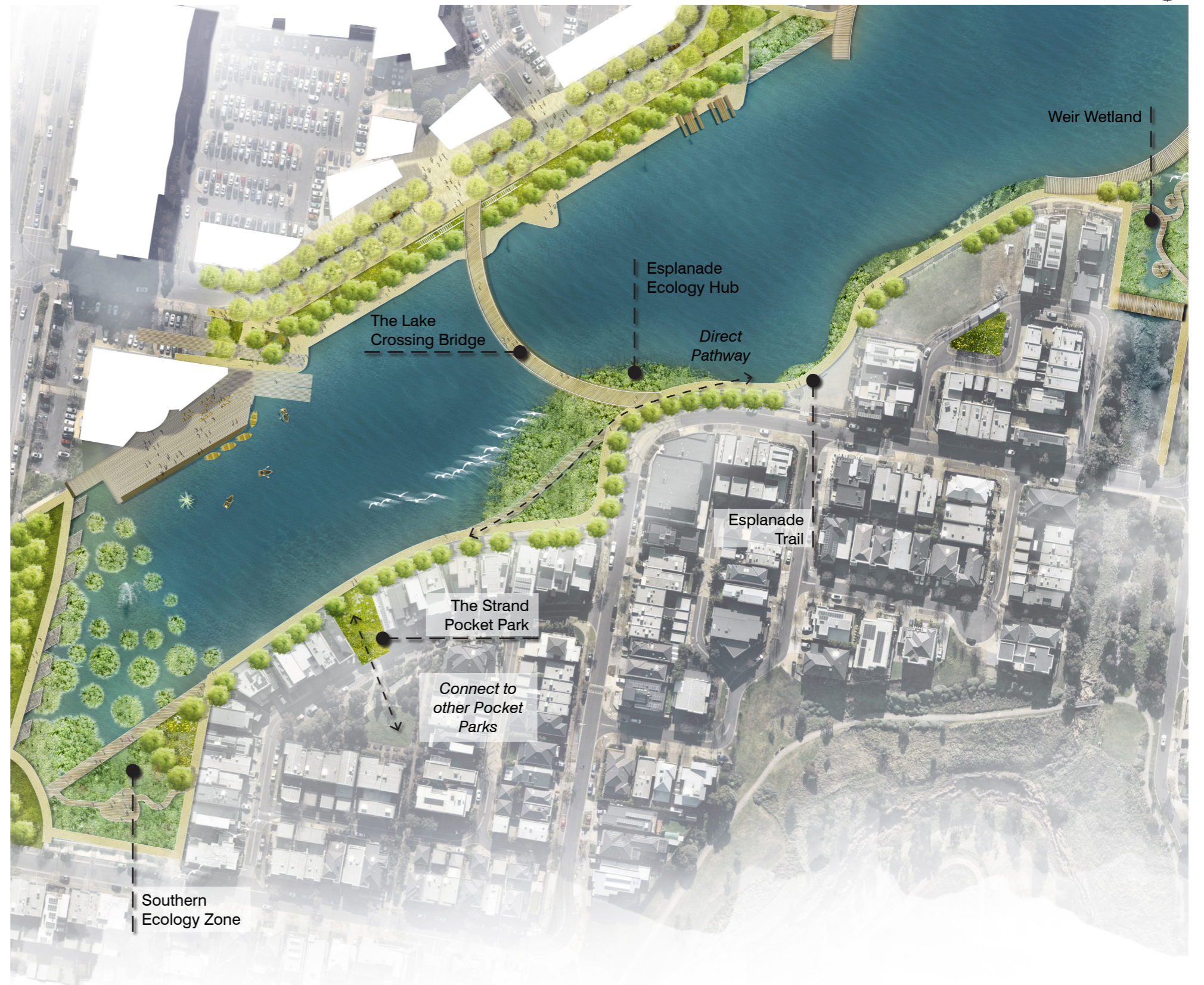


Community Exercise Group (Source: NBC News)

8.8 ESPLANADE GREENING

The Esplanade Trail will be upgraded to see improvements in lighting, furnishings and general amenity. It will be characterised by a planted lake edge, generous footpath with tree plantings carefully placed between house boundaries to avoid blocking views of the lake.

The Esplanade Trail will connect the Northern Promenade to the Floating Wetlands. The Lake Crossing Bridge will be accessed from the trail as well.





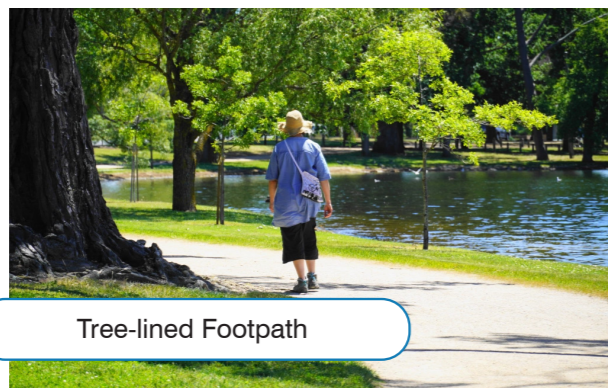
Esplanade Trail

Jawbone Flora and Fauna Reserve (Source: Mamma Knows West)



Esplanade Trail

Tidbinbilla Sanctuary by TCL (Source: ACT Parks and Reserve)



Tree-lined Footpath

Lake Wendouree (Source: Days Out with George)

Tree Canopy Size Matters

Trees provide significant environmental, social and economical benefits to communities. TCL recognise their value and have conducted research on the effect of street tree and the following content is extracted from TCL TiCKLe Booklet "A Case for Trees" (2023), to better illustrate the benefit of increased canopy cover in Lake Caroline.

Environmental Benefit

They enrich the environment of developing and established communities. In urban and suburban contexts well planned tree canopy coverage significantly reduces local temperatures and the urban heat island effect. Trees are also able to improve the air quality of local communities through filtration of pollutants and sequestering carbon and producing oxygen. Tree roots absorb stormwater reducing the amount of nitrogen, phosphorus and heavy metals entering our drainage systems. Trees are a major feature in the environmental health of our urban ecosystems, increasing the biodiversity, provision of habitat for native fauna, and contributing to the linking eco-corridors.

Social Benefit

Trees contribute to the psychological and physical health of urban communities. They establish and define a collective identity of local communities aiding in a sense of belonging and pride. This contributes to the improvement of an individuals' mental health, providing settings for connection to nature, quiet reflection and relaxation. Trees can also improve the health of individuals through improvements to air quality, reduction in exposure to harmful UV, and localised heat stress.

Economic Benefit

Trees are a valuable asset to the economy of local communities. They improve the aesthetic character of local neighbourhoods and increase the value of properties. Extensive research has also demonstrated that retail areas also benefit, with consumers spending up to 12% more in areas with the presence of large trees. Trees are also an asset with a very high return, with each tree estimated to return \$200 AUD annually due to the extensive benefits they provide communities. Economic benefits also include the reduction in household energy usage and improvements in the lifespan of infrastructure through the establishment of microclimates and protection of streets and buildings from the temperature extremes of heat and cold.

In a snapshot, street trees provide the following benefits:

- 5-20°C cooler underneath canopies
- Large trees with dense canopies can remove 60-70 times more air pollution than smaller trees
- Larger trees raise property values proportionally
- Tree with large canopy offers more shade protection against sun exposure
- Tree with large canopy offers better respiratory health by producing oxygen and intercepting pollutants more effectively
- Tree with large canopy offers better protection on street infrastructure and paving against exposure

ESPLANADE TRAIL INDICATIVE ELEVATION

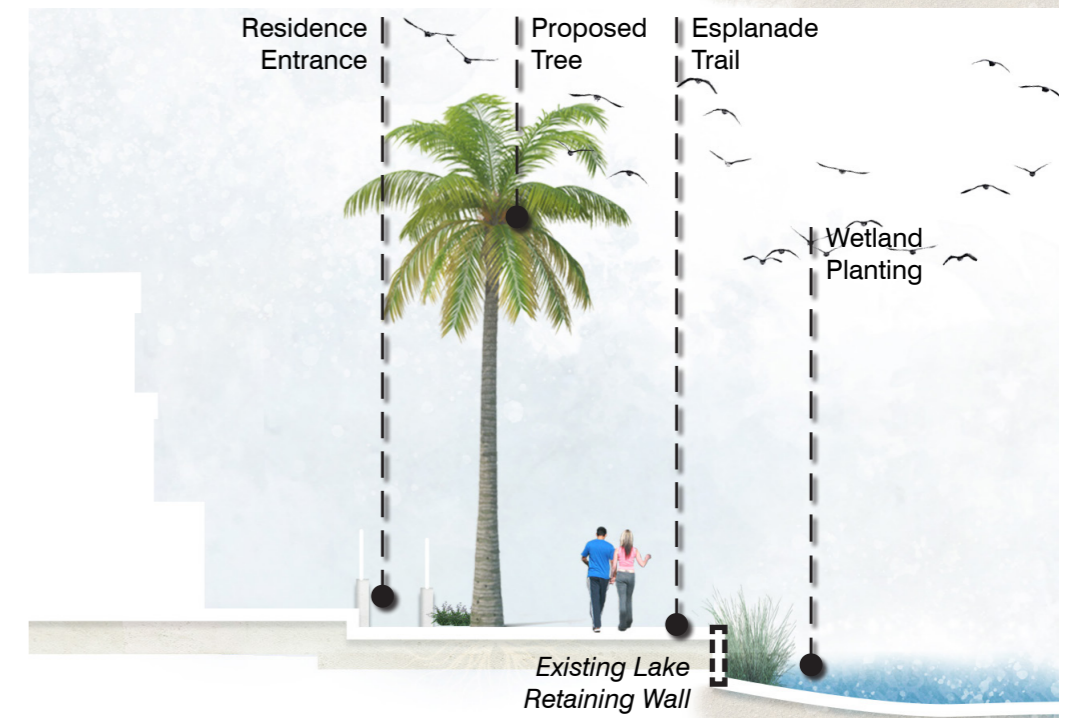
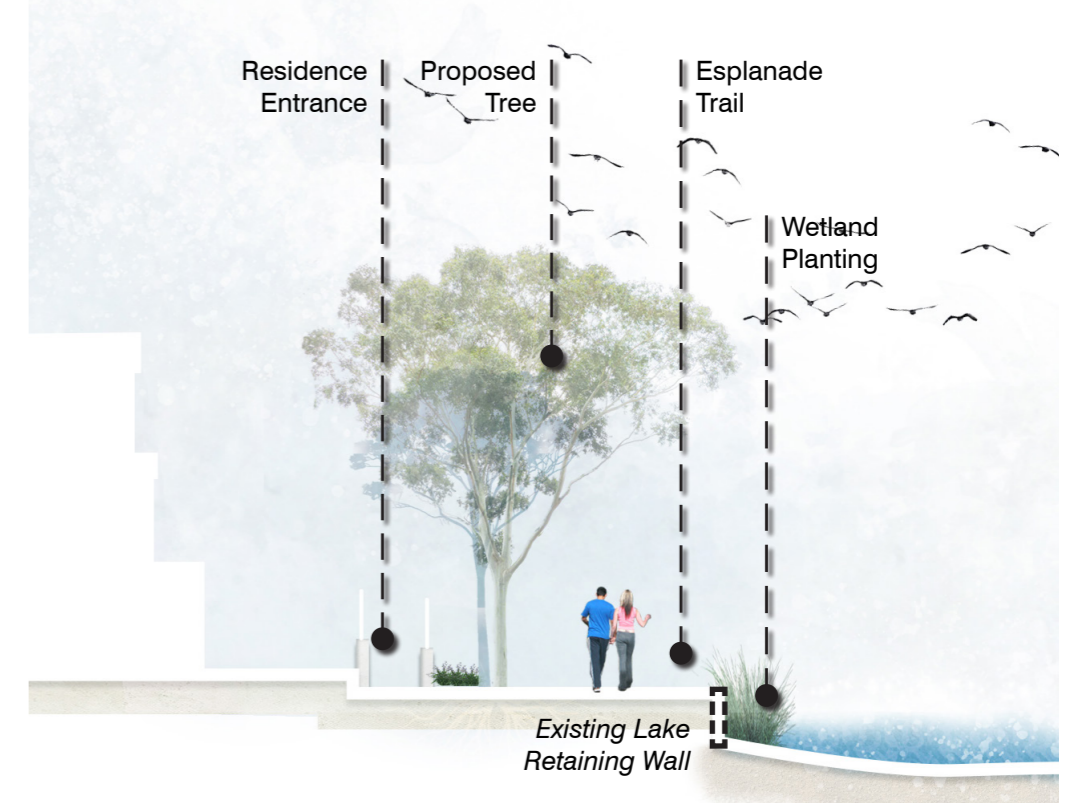


TREE TYPE 1 - 30% CANOPY COVER



TREE TYPE 2 - 5% CANOPY COVER

ESPLANADE TRAIL INDICATIVE SECTION



RESIDENCE
(EXISTING)

ESPLANADE
TRAIL

LAKE CAROLINE