



NORTH ROAD FORESHORE MASTERPLAN

Head Street to Royal Brighton Yacht Club



DRAFT

Thompson Berrill Landscape Design P/L

December 2018

CONTENTS

| | |
|---|----|
| Introduction | 1 |
| Land Management | 2 |
| Cultural Heritage | 3 |
| Zoning and Overlays | 4 |
| Existing Conditions | 5 |
| Foreshore Facilities | 6 |
| Parking and Vehicle Access | 7 |
| Coastal Processes | 8 |
| Coastal Management | 9 |
| Stormwater Management | 10 |
| Flora and Fauna | 11 |
| Vegetation Management | 12 |
| North Road Foreshore Detail Plan A | 13 |
| Middle Brighton Baths Detail Plan B | 14 |
| Bibliography | 15 |
| <i>Attachment 1: Bay Trail Links-Concept Design (GHDWOODHEAD, October 2018)</i> | 16 |

Note: The endorsement of the North Road Foreshore Masterplan by Council does not constitute as decision to proceed with any identified opportunities. It provides a long term concept to guide decision making and will be subject to future decisions and funding considerations by Council.

The North Road Foreshore Masterplan has been prepared for Bayside City Council by Thompson Berrill Landscape Design P/L.

| Date | Revision | Amendment |
|------------|----------|------------------------|
| 04/12/2018 | C | Draft for Consultation |
| 23/08/2018 | B | Revised Draft |
| 28/06/2018 | A | Draft for BCC Comment |



PAGE

INTRODUCTION

The draft North Road Foreshore Masterplan aims to guide, design and prioritise works on Council managed land along the foreshore, implementing the recommendations of Council endorsed strategic plans including the *Bayside Open Space Strategy 2012* and *Bayside Coastal Management Plan 2014*.

The scope of the study area extends from Head Street through to Chelsea Street along the foreshore in Brighton and includes the North Point Café, car park and public boat ramp as well as Sandown Street Dog Beach and Royal Brighton Yacht Club.

The draft Masterplan will inform Council's capital works program, funding applications and priorities for infrastructure renewal, replacement and redevelopment over the next decade. The draft Masterplan will also be a key tool to assist Council and other stakeholders in obtaining required coastal management consent from Department of Environment, Land, Water and Planning (DELWP) for implementation of projects within the precinct.

The Bayside Open Space Strategy 2012 (BOSS 2012) classifies the foreshore precinct to be of Municipal and Regional importance in Bayside. It caters for Bayside residents, tourists and other regional visitors from outside the local area. Municipal and Regional open spaces in Bayside are intended to cater for a diverse range of interests and have a wider catchment because of the unique features they offer. The North Road precinct is the northern most part of Bayside connecting to the more urban foreshore areas of the City of Port Phillip. This landscape has progressively been developed since the 1920's with public facilities including cafés, bike paths, walking paths and a public boat ramp.

The Bayside Coastal Management Plan was adopted by Council in 2014. Its development included extensive consultation with the Bayside community and has informed strategic directions for actions and works proposed within the precinct. The key objectives for the draft Masterplan include:

- Ensure protection of the foreshore environment, particularly areas of remnant coastal vegetation and habitats for native wildlife.
- Increase public awareness of, and improve and protect areas of cultural heritage significance.
- Investigate opportunities for new tree planting to provide additional shade and enhanced landscape amenity for foreshore users.
- Improve pedestrian and cyclist access, circulation and safety on the Bay Trail and Coast Walking Path within the precinct.
- Improve vehicle access circulation and safety at North Road (B1) car park.
- Identify opportunities for use of boat trailer parking facilities for additional car only parking when not in use in the North Road (B1) car park.
- Improve all ability access facilities, including toilets and parking within the precinct.
- Identify potential Water Sensitive Urban Design (WSUD) and stormwater harvesting opportunities within the precinct.
- Improve lighting strategy within the precinct focusing on Crime Prevention Through Environmental Design (CPTED) and lighting efficiency.
- In partnership with DELWP upgrade coastal erosion protection and investigate opportunities to improve public access to the Bay.



Photo 1: North Road Foreshore

LAND MANAGEMENT

The North Road precinct is Crown Land managed by Council, with the exception of a small section of land adjacent to the café at the end of North Road, owned directly by Council.

NORTH POINT CAFE AND KIOSK

North Point Café opens every day except Christmas Day and has a kiosk as well as sit-down café facilities. The North Point Café is housed within what was previously a Coast Guard building. The current lease for the café is due to expire in 2021.

Management and any future redevelopment of the North Point Café and leasing is guided by the requirements of the *Victorian Coastal Strategy (2014)*, Council Policy and the recommendations of the *Bayside Coastal Management Plan (2014)*. These include:

- Investigate redevelopment of the café and public toilet facility in accordance with the Victorian Coastal Strategy and Design Guidelines to reduce flooding and improve visitor facilities. The planning and detailed design for these works will be undertaken via a separate process.

ROYAL BRIGHTON YACHT CLUB

The Brighton Yacht Club was established in 1875, and the club was granted Royal Warrant in 1924 by His Majesty King George V. The club has an active sailing and social club membership with use of the pier and marina managed by Parks Victoria. Most of the facilities are for use by club members only, however the café is open to the public.



Photo 2: North Point Café



Photo 2: North Point Café Kiosk



Photo 4: Royal Brighton Yacht Club

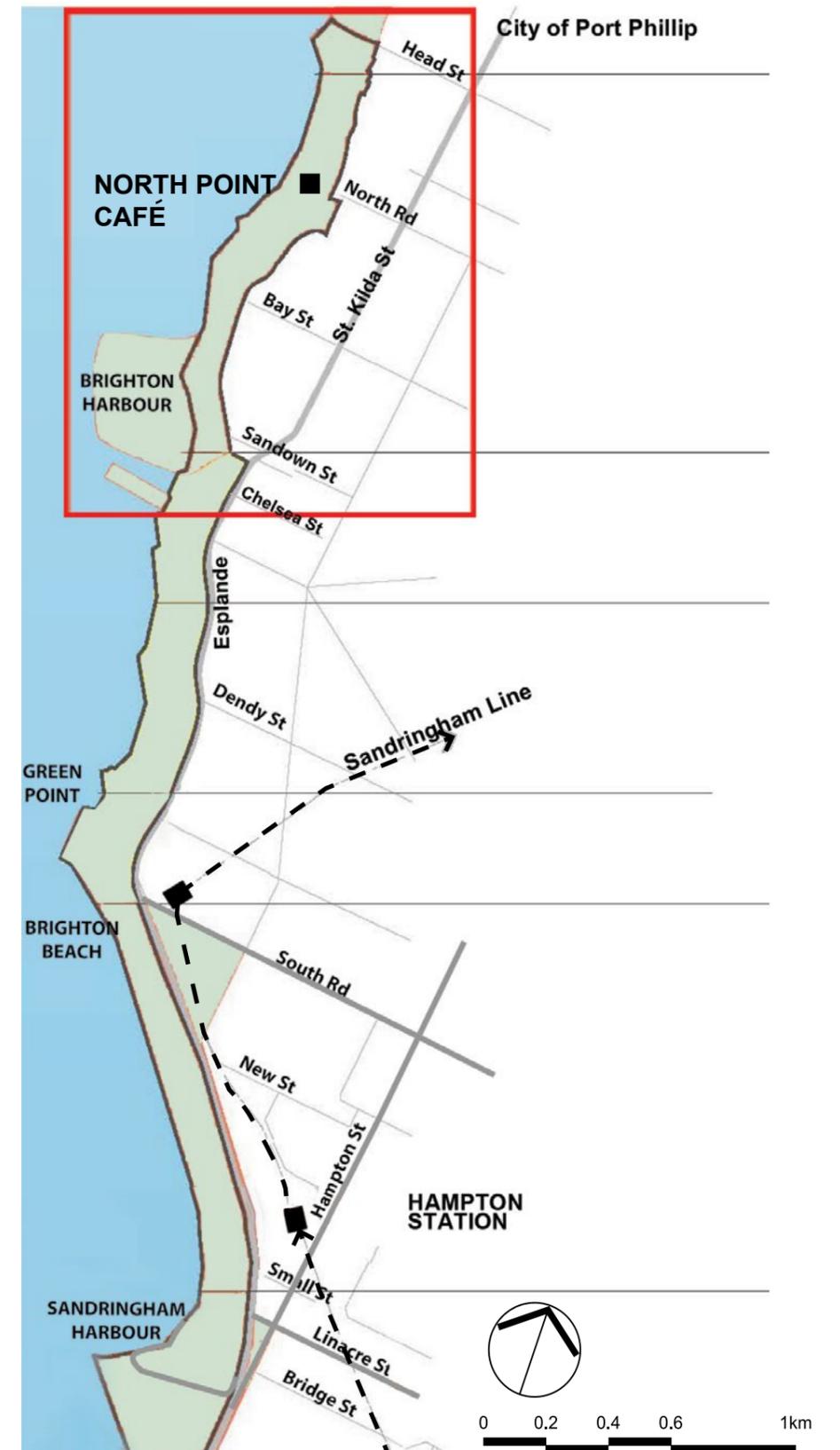


Figure 1 Context Plan - Head Street to Chelsea Street
Bayside Coastal Management Plan 2014

CULTURAL HERITAGE

Indigenous occupation of what is now known as the Bayside foreshore dates back many thousands of years and the area contains registered cultural heritage sites (i.e. middens) that relate to this occupation. These sites and all other cultural heritage places are protected under the provisions of the *Aboriginal Heritage Act 2006* and the *Aboriginal Heritage Regulations 2018*. The Act recognises Aboriginal people as the primary guardians of their cultural heritage and has established a process for Indigenous groups to apply to be registered as Registered Aboriginal Parties (RAPs). There is currently no appointed RAP for the Bayside area.

Indigenous and historical cultural heritage must be protected during Masterplan implementation works, and on sites where major groundbreaking works is involved, a due diligence Cultural Heritage Assessment is required.

Other historical features of the foreshore include the reclaimed historic bluestone sea walls and groyne structures. The North Road Precinct also includes some popular and important viewing interpretation points and sculptural elements on the Bayside Coastal Trail.

BARRAIMAL (EMU) CONSTELLATION SCULPTURE

Designed by Glenn Romanis (2008), the sculpture depicts Barraimal (Emu) as a constellation and how it is seen using the constellations of the Southern Cross, (Crux), the Pointer, Scorpio, Sagittarius and using the Colsack Nebula (the dark shadows under the milky way) to create its head, neck and back. Scorpio shapes the body and Sagittarius the nest and eggs.

In this work, Caroyln Briggs (Elder of the Boon Wurrung) is cross-referenced with scientific knowledge and the seasonal visibility of the constellation in the sky. The constellation is seasonally visible, June, July or August.



Photo 5: Barraimal (Emu) Constellation Sculpture

29 SEACOMBE DRIVE - "OSTEND"

Located on 29 Seacombe Drive, the Ostend flats, designed by prominent Melbourne architect I.G. Anderson were constructed in 1934/35. It is one of the earliest, and most striking examples of the Moderne style applied to flats in Victoria.

The buildings are of exceptional architectural importance within both Melbourne and the State of Victoria. They represent a unique link with the culture of Victoria in the 1930s and demonstrate an integration of Bayside, coastal living within the city environment. The flats are individually covered under a specific Heritage Overlay (HO329).



Photo 6: Ostend Flats

HEAD STREET - BRIGHTON CONCRETE PIER

The Head Street Brighton Concrete Pier (also known as Elwood Pier) is popular for wedding ceremonies and is in very high demand all year round as it offers unobstructed views out to Port Phillip Bay. The pier is owned and managed by Melbourne Water and is covered under a specific Heritage Overlay (HO515).

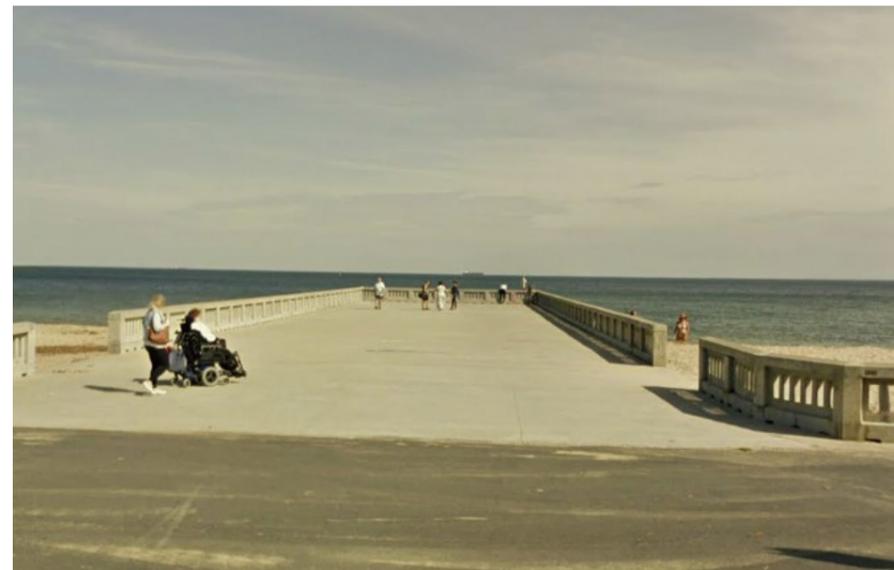


Photo 7: Head Street, Brighton - Concrete Pier

NORTH ROAD, BRIGHTON

North Road Streetscape is covered under a specific Heritage Overlay (HO721) covering the area between the foreshore and the railway line. The wide boulevard is notable for its collection of trees including Palms, Pines and Elms which are subject to tree controls within the overlay.



Photo 8: North Road

BLUESTONE SEAWALLS

The existing bluestone sea walls extend in several sections along the foreshore and provide an important role in protecting the coast walking path from erosion. While not formally protected in the Bayside Planning Scheme they are of local significance to the history of the area.



Photo 9: Existing bluestone sea wall Cole Street to Head Street

ZONING AND OVERLAYS

The Precinct is zoned Public Park and Recreation Zone (PPRZ) in the *Bayside Planning Scheme*.

Vegetation Protection Overlay (VPO):

Native vegetation within the North Road precinct is included in the Vegetation Protection Overlay (VP01) in the *Bayside Planning Scheme*. The VPO applies to the entire Foreshore precinct. A permit is required to remove, destroy or lop native vegetation.

Special Building Overlay (SBO):

The Special Building Overlay (SBO) covers areas liable to inundation by overland flows from the urban drainage system. The SBO applies to North Road, Chatsworth and Glyndon Avenue on the foreshore in the *Bayside Planning Scheme*.

Design Development Overlay (DDO):

The Design Development Overlay (DDO1) relating to building height controls on the coast applies to the whole of the foreshore reserve. Buildings must not exceed two storeys and must comply with requirements as outlined in the *Victorian Coastal Strategy (2014)* and the *Bayside Coastal Management Plan (2014)*. Including:

- Investigate opportunities for multi-use of existing buildings in any redevelopment proposals.
- No net increase in building footprint and seek rationalisation of existing buildings where possible in any redevelopment works.
- Prioritise coastal dependent uses.

Heritage Overlays (HO):

- HO515 - Head Street, Concrete Pier
- HO721 - North Road, Brighton
- HO161 - The Esplanade, Middle Baths
- HO329 - 29 Seacombe Drive "OSTEND"

| DRAWING KEY | |
|---|-----------------------------------|
|  | CROWN LAND MANAGED BY COUNCIL |
|  | COUNCIL OWNED AND MANAGED LAND |
|  | PARKS VICTORIA |
|  | MELBOURNE WATER ASSETS |
|  | HERITAGE OVERLAYS |



Figure 2. Land Management

EXISTING CONDITIONS



Photo 10: Coast Walking Path



Photo 11: Bay Trail Middle Brighton Baths



Photo 12: Bay Trail Boardwalk



Photo 13: Bay Trail North Road and Coast Walking Path

DRAWING KEY

- BAY TRAIL
- FORESHORE TRAIL
- SECONDARY PATHS
- BOAT ACCESS RAMPS
- BOARDWALK
- PUBLIC OFF STREET CAR PARKS
- RESTRICTED CLUB PARKING
- T PUBLIC TOILETS
- DRINKING FOUNTAINS
- BBQ / PICNIC FACILITIES
- SEATING
- LIGHTPOLE

Figure 3. Existing Conditions

FORESHORE FACILITIES

NORTH ROAD FORESHORE PLAYGROUND

The popular North Road foreshore playground is well serviced by car parking and accessible via the Bay Trail and the foreshore walking trail. The playground is well protected by native vegetation and shade sails located in the seating area. The picnic facilities include a drinking fountain, picnic tables and shaded seating. The open grass area between the playground and carpark is popular for informal ball games and group fitness activities.

Following extensive public consultation in March 2017, the playground is currently being upgraded and will re-open in October 2018.



Photo 14: North Road Foreshore Playground (prior to redevelopment)

OPEN GRASSED AREAS

Open grassed areas along the foreshore between Head Street and Dudley Street provide excellent views out over the Bay and back towards the City. There is limited shade within these areas.



Photo 15: Open grassed areas

NORTH ROAD BOAT RAMP AND JETTY

The public boat ramp and jetty are owned and maintained by Council. The ramp was recently upgraded after damage during severe storms in 2014 and now includes a fish cleaning and scaling table. Due to the shallow launch depth, it can only be used by small boats.



Photo 16: North Road Boat Ramp and Jetty

TOILETS

There are two public toilet facilities located within the North Road precinct.

The recently refurbished public toilet facility located between the Middle Brighton Baths and Royal Brighton Yacht Club provides one male, one female and one accessible toilet, as well as a drinking fountain.

The public toilet facilities located adjacent to North Point Café and are utilised by café patrons, staff and the general public. There is one male, one female and one accessible toilet.

Investigations for a new accessible facility catering for individuals with high level needs within the North Road precinct has been recommended in the *Bayside Public Toilet Strategy 2012*.



Photo 17: Middle Brighton Baths Public Toilets



Photo 18: North Road Public Toilets

SANDOWN STREET DOG BEACH

The Sandown Street Spit or Beach (dog friendly beach) provides an all year round off-leash dog area. The main access point to the dog beach is from Sandown Street.

The dog beach is popular with Bayside residents as well as other dog owners from all over Melbourne, including professional dog walkers and dog photographers. The beach is also occasionally used by kite surfers. The area is predominantly sand with some dunes with indigenous coastal vegetation. The area is fenced along the beach and rubbish bins and 'poo' bag dispensers area maintained by Council.



Photo 19: Sandown Street Dog Beach

DRINKING FOUNTAINS

Drinking fountains are available along the foreshore and all provide dog drinking bowls. An outdoor beach shower was recently installed near Dawson Avenue for Elwood beach users.



Photo 20: Drinking fountain at Bay Street

PARKING AND VEHICLE ACCESS

The B1 Foreshore car park provides parking for both vehicles and vehicles with attached boat trailers utilising the boat ramp. The car park provides 23 standard length car parking spaces, including one accessible space, and 45 long parking spaces. 23 of the long parking spaces in the central area are signed No Stopping - Vehicles with Attached Boat Trailers Excepted.

A smaller car park at the end of North Road provides nine car parking spaces including one accessible space. Both of these car parks have unrestricted ticketed parking between 8am and 8pm. Assessment of existing parking use was completed by O'Brien Traffic and is summarised as follows:

End North Road Parking

Average parking occupancy in the nine North Road spaces was 80% on weekdays increasing to 100% on weekends. A reduced time limit could be considered for these spaces to increase parking availability adjacent to the café and playground.

North Road B1 Foreshore car park

Average standard car parking occupancy (23 spaces) was 52% on weekdays increasing to 86% on weekends. Average standard car parking occupancy of long length car park spaces without further restrictions (22 spaces) was 48%, on weekdays increasing to 94% on weekends. The highest levels of use were on the north side adjoining the playground and café with double car parking in long bays more common on peak days. Average dedicated boat trailer parking use was 17% on weekdays increasing to 52% on weekends. Boat trailer parking use is variable depending on fishing conditions and tidal depth at the boat ramp. Figure 4 indicates almost exclusive use of standard car use of the No Stopping – Vehicles with Attached Boat Trailers Excepted parking while two months later in Figure 5 the situation is reversed and all but one of those was a vehicles parked was without a boat trailer.

Assessment of a two year period indicates that additional long car parking spaces are not required in order to accommodate vehicles towing boat trailers and the current boat trailer parking restrictions for the central two rows, 23 spaces, provides sufficient capacity. The draft Masterplan recommends a short term change to the line markings on the long spaces along the southern side to indicate that there are no further restrictions on standard parking to increase availability for cars.

Longer term the following modifications are planned for the car park layout refer Figure 14:

- Amend entry road to remove the narrow central median, creating more usable pedestrian space adjacent to the toilet block and North Point Café and improving sightlines at the entrance to the car park.
- New zebra crossing providing right-of-way to pedestrians crossing between the playground and the Café/public toilets.
- Amend the entry arrangement to include a trafficable roundabout to reduce the complexity of the existing line marking arrangement.
- Amend the eastern parking lane to provide more efficient 90-degree parking on both sides and two accessible car parking spaces closest to the Café.



Figure 4: North Road Foreshore B1 car park use (Sunday, 17/09/2017)



Figure 5: North Road Foreshore car park Boat Trailer use (Sunday, 12/11/2017)

- Rearrange the central area to create a central car only access aisle with combination of standard length and long length car parking spaces while retaining existing trees.
- Convert the north side long length car parking spaces to 90-degree standard length car parking spaces to maximise capacity nearest the playground and the Café.

This amended car parking layout will provide 51 standard length car parking spaces (including two accessible car parking spaces) and retain 25 long length boat trailer parking spaces.

Bicycle parking

Provide additional bicycle parking facilities at the North Point Café/Public Toilets and playground.



Photo 21: North Road Median strip at the Café

COASTAL PROCESSES

BRIGHTON PROMENADE

Brighton Promenade is a high profile and well used section of the Bayside foreshore, incorporating the North Point Café, public boat ramp and playground. Overtopping of the existing rock seawall in the section between Cole Street and Dudley Street has become increasingly frequent, causing damage to the existing path fencing which is now in poor condition in many sections

The overtopping has also led to loss of vegetation and undermining and periodic closure of the popular Coast Walking Trail. The effects of anticipated sea level rise and increasing frequency/severity of storm events is likely to exacerbate these problems in the future.



— AREAS CURRENTLY AFFECTED BY OVERTOPPING



Photo 22: Storm damage Cole Street to North Road May 2017

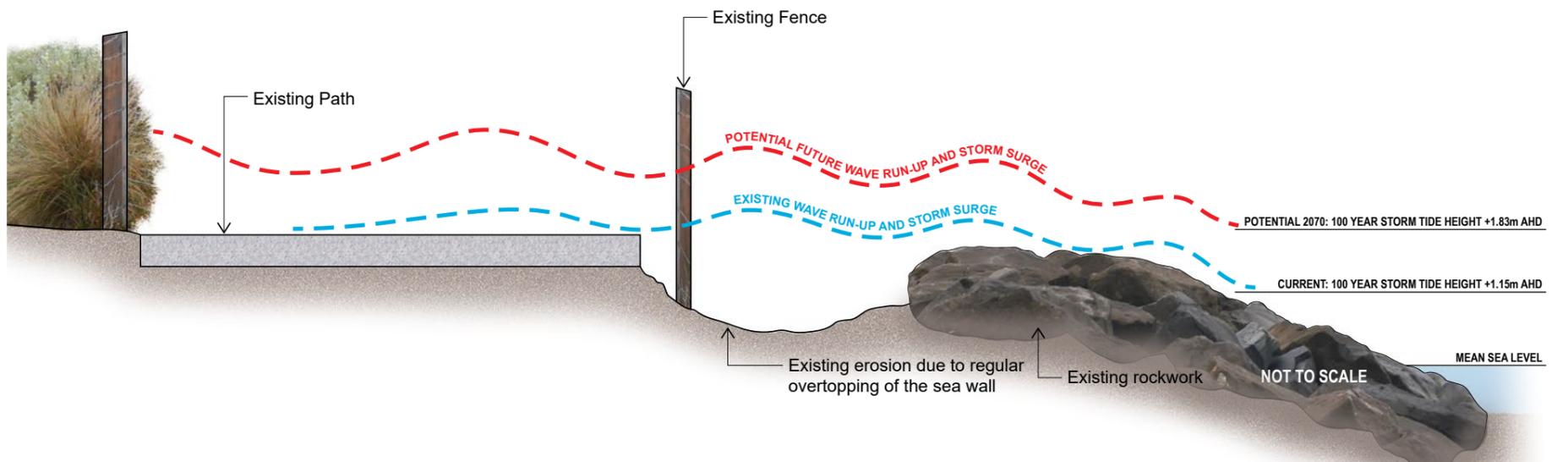


Figure 7: North Road Foreshore potential wave run-up and storm surge

Figure 6 shows that this stretch of coastline experiences seasonal longshore drift caused by the seasonal prevailing winds and waves are the primary cause of coastal erosion. The summer months of November to April are subjected to southerly and south-westerly winds which produce waves from these directions, whereas the winter months of May to October are dominated by westerly and north-westerly wind and wave effects. Wind and wave actions from the south-west are significantly enhanced by the large fetch distance (the maximum distance over water that winds can generate waves) in this direction. A net northward longshore drift at Brighton results from its west-facing aspect and its relation to this dominant wave regime.

Brighton's susceptibility to coastal erosion is projected to increase as a result of climate change. As sea levels rise and storm severity increases, both storm surge levels and storm wave heights will also increase. If proposed protective works are not implemented this is expected to result in more frequent overtopping of the existing rock revetment, inundation of the pedestrian and cyclist paths, and erosion of the foreshore. There will also be an increased likelihood of damage to properties and roads that are relatively low-lying in the area.

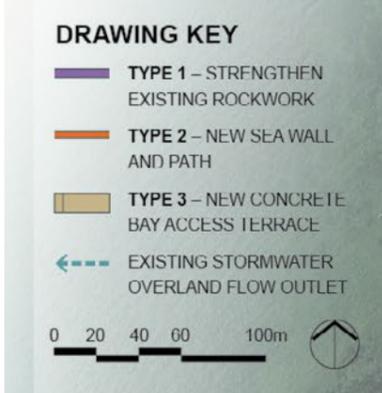
Figure 6: Areas affected by overtopping

COASTAL MANAGEMENT

Council, in consultation with the Department of Environment, Land, Water and Planning (DELWP), is planning the staged repair and upgrade of the Brighton Promenade as part of the draft Masterplan.

- The existing rock sea wall will be strengthened and raised in height while maintaining views to the Bay.
- Sections of coast walking path in poor condition will be replaced with new seating provided.
- Low indigenous coastal vegetation will be restored where possible while retaining views.
- Habitat for Rakali (native water rat) and other native fauna will be protected.
- Improved public access to the Bay will be provided at North Road.

The renewal of the promenade and sea wall path aims to deliver a sustainable and cost effective response to the existing and future impacts of coastal erosion, while ensuring that the landscape amenity and public access to the Bay are retained and enhanced.



Cole Street to North Road

In areas where the path is close to the shoreline and rockwork is already subject to regular over-topping causing a loss of coastal vegetation, the recommended approach is to establish a concrete block work seawall along the edge of the existing path. The concrete cap could match other sections of historic bluestone seawall at Brighton, Sandringham, Black Rock and Hampton while the block work could



Photo 23: Existing rockwork and path between Cole Street and North Road

be formed using coloured concrete (similar to bluestone) but at a significantly lower cost. The use of block work also enables the height of the wall to be raised again at a later date if required. The works between Cole Street and North Road are a high priority as the path is in poor condition and regularly subject to inundation. (Refer Type 2)



Artist impression: Type 2 new seawall and path replacement

North Road Precinct

At North Road the path needs to be retained at the existing level. This is to ensure that overland stormwater flows from the local street network after heavy rainfall can outfall to the bay. Use of a seawall in this area is not possible without increasing risk of flooding to adjoining private properties. The recommended approach is to remove the existing rocks which are already subject to wash out and replace them with a precast concrete terrace. The new concrete terrace and path

could be set at the existing path level to extend back to the end of North Road. The terrace will both minimise erosion from wave action and erosion from stormwater flows. These works are a medium priority. The North Road Precinct is also a popular visitor destination and the terracing can be designed to provide improved public access to the bay otherwise not possible in this section of the foreshore. (Refer Type 3)



Photo 24: Existing rockwork and path at North Road



Artist impression: Type 3 North Road beach access terrace

Boat Ramp to Dudley Street

In areas where the path is set further back from shoreline and existing indigenous coastal vegetation is intact, the recommended approach is to extend and increase the height of the existing rockwork. This approach will retain and expand Rakali habitat and allow additional indigenous coastal revegetation. The new and existing rockwork will

be screened from the path and foreshore reserve by low indigenous vegetation while views to the Bay will remain uninterrupted. Works in the area between North Road and Dudley Street are a lower priority and could be done reactively (i.e. when needed) as the existing seawall is less frequently over-topped in this section. (Refer Type 1)



Photo 25: Existing path and vegetation south of the boat ramp



Artist impression: Type 1 strengthening rockwork and low coastal vegetation

When the underground stormwater drainage system exceeds capacity after heavy rainfall, it is critical that overland stormwater flows down the local street network can outfall to the Bay without obstruction to avoid

flooding of adjoining private properties. The key areas are at Cole Street, Martin Street and North Road. In these areas increasing the height of the seawall above the existing path level is not possible.

STORMWATER MANAGEMENT

Assessment indicates the North Road Foreshore has a total of ten local sub-catchments which have been delineated between Head Street and Chelsea Street. The foreshore contains nine Council owned pipe outfalls and two Melbourne Water owned pipe outfalls (Head Street drain and Meek Street drain).

Flooding along Melbourne Water's Meek Street drain between Glyndon Avenue and Dudley Street is designated by a Special Building Overlay (SBO) in the Bayside Planning Scheme.

When the underground stormwater drainage system exceeds capacity after heavy rainfall, it is critical that overland stormwater flows down the local street network can outfall to the Bay without obstruction to avoid flooding of adjoining private properties. The key areas are at Cole Street, Martin Street and North Road.

When the large Melbourne Water Drain between Glyndon Avenue and Dudley Street exceeds capacity overland flows are directed to the bay as shown in Figure 9.

NORTH ROAD TO BOAT RAMP

North Road and Chatsworth Avenue receive overland flow from the local catchment and the much larger adjacent catchment as shown on the Special Building Overlay (SBO). As a result, the local road network does not have sufficient capacity to take the overland flow. The North Point Café is low lying and any future redevelopment of the sea wall must retain a clear overland flow path from North Road. Refer Figure 8.

Key recommendations include:

- There is an opportunity to build a low solid wall fence at the edge of the Café property boundary to provide protection from flood events.
- As part of potential future redevelopment of the North Point Café establish improved flood protection consistent with the requirements of the Special Building Overlay (SBO). (H)
- Investigate establishment of WSUD treatment system as part of future redevelopment of the North Road (B1) car park. (L)

GLYNDON AVENUE AND DUDLEY STREET

Glyndon Avenue and Dudley Street receive overland flow from the local catchment and the much larger adjacent catchment as shown on the *Bayside Planning Scheme*. There is a garden bed wall at the end of Glyndon Avenue however this does not present an obstruction as there are gaps to allow overland flow on either side. There is a low point in the residential area around Dudley Street. Overland flow from Glyndon Avenue and Dudley Street enters the Bay at several locations associated with low points in the landscape.

Key recommendations include:

- Liaise with Melbourne Water to investigate opportunities for a Gross Pollutant Trap (GPT) along the Meek Street Drain. (M)
- Between Dudley Street and North Road, ensure proposed future sea wall improvements do not impact on overland flow paths and exacerbate flooding. (H)

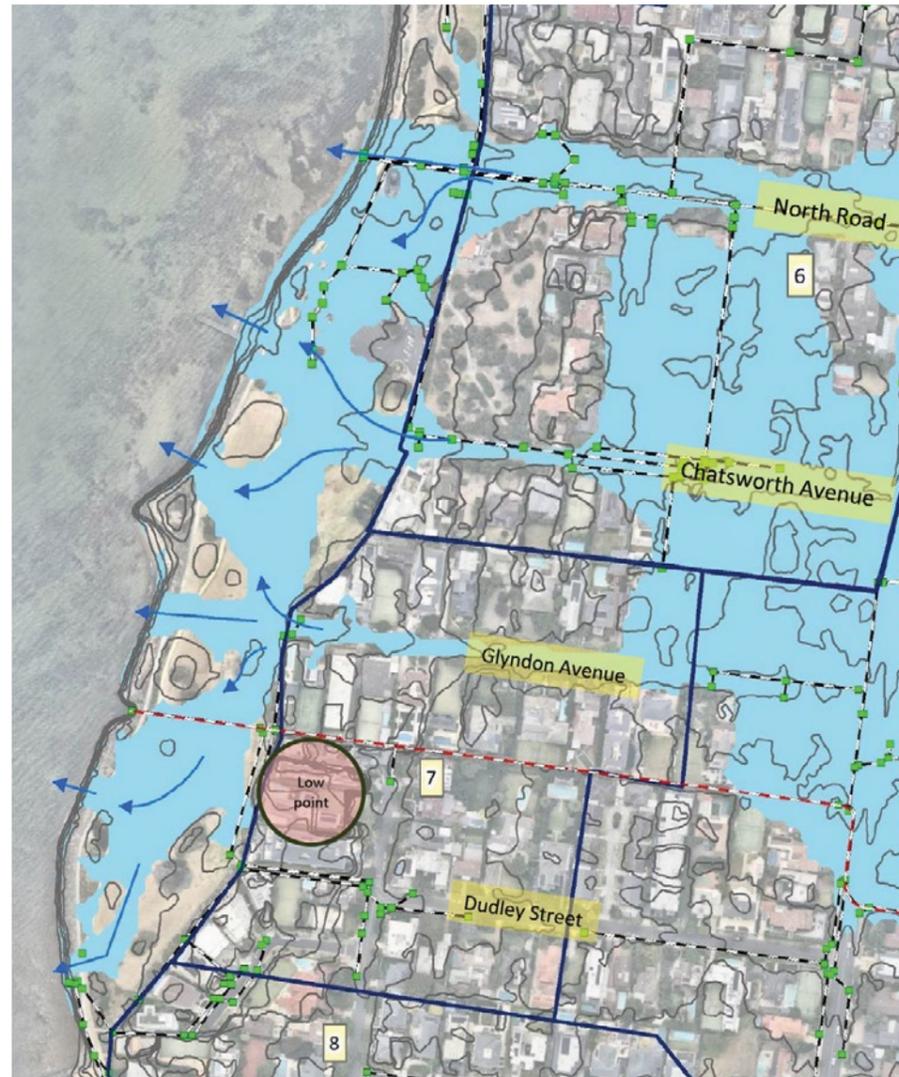


Figure 9 : Drainage Assessment for North Road Foreshore, (Alluvium 2018)



Photo 26: North Point Café



Photo 28: Glyndon Avenue Stormwater Outfall (Melbourne Water)



Photo 27: Glyndon Avenue low raised wall



Photo 29: Meek Street drainage pit (Melbourne Water)

FLORA AND FAUNA

The foreshore between Head Street and Royal Brighton Yacht Club has been extensively modified and the majority of current vegetation has been planted or has recolonised the area after disturbance. Pre 1750 reconstruction of the vegetation and wetlands which existed within this area, suggests the coast in this area would have included a matrix of heath, woodland and coastal scrub, dominated by Coast Tea Tree *Leptospermum laevigatum*, Moonah *Melaleuca lanceolata*, Coast Banksia *Banksia integrifolia* and Drooping She-Oak *Allocasuarina verticillata*. There are two areas of significant indigenous vegetation at North Road Reserve and Sandown Spit (Sandown Street Dog Beach) and extensive indigenous revegetation has been undertaken over many years by Council and local community groups.

The North Road Foreshore Precinct is covered by a Vegetation Protection Overlay (VP01) in the Bayside Planning Scheme. The VPO applies to the entire foreshore precinct. The aim of this overlay is to protect and preserve trees and areas of significant vegetation, implementing key requirements of the State Planning Policy Framework and ensuring any new development minimises loss of native vegetation. The overlay and ongoing Council management of the foreshore aims to maintain and enhance habitat and habitat corridors and to encourage the regeneration of native vegetation.

NORTH ROAD RESERVE

The established area of Coast Tea tree *Leptospermum laevigatum* on the southern side of North Road behind the café is extremely old with some trees dated to older than 120 years. Refer Figure 10 (*Botanicus 2002*) *Leptospermum laevigatum* (Coast Tea tree) is a shrub that is primarily confined to coastal dunes except where it has invaded adjacent heathlands after fire or disturbance. Soil testing has confirmed that these trees have established on an area of fill, consistent with land reclamation works along the foreshore dating from the 1880's and are some of the oldest trees remaining on the Bayside Foreshore. Council monitors the ongoing health of these trees and efforts are aimed at promoting natural regeneration and enhanced habitat value within the reserve.

Recommendations:

- Review alternative path and public lighting options to extend area available for Coast Tea tree *Leptospermum laevigatum* regeneration and to improve habitat values. (H)
- Improve definition of the café lease area boundary to reduce encroachment of service areas into the reserve. (H)



Photo 30: Coast Tea tree at North Road

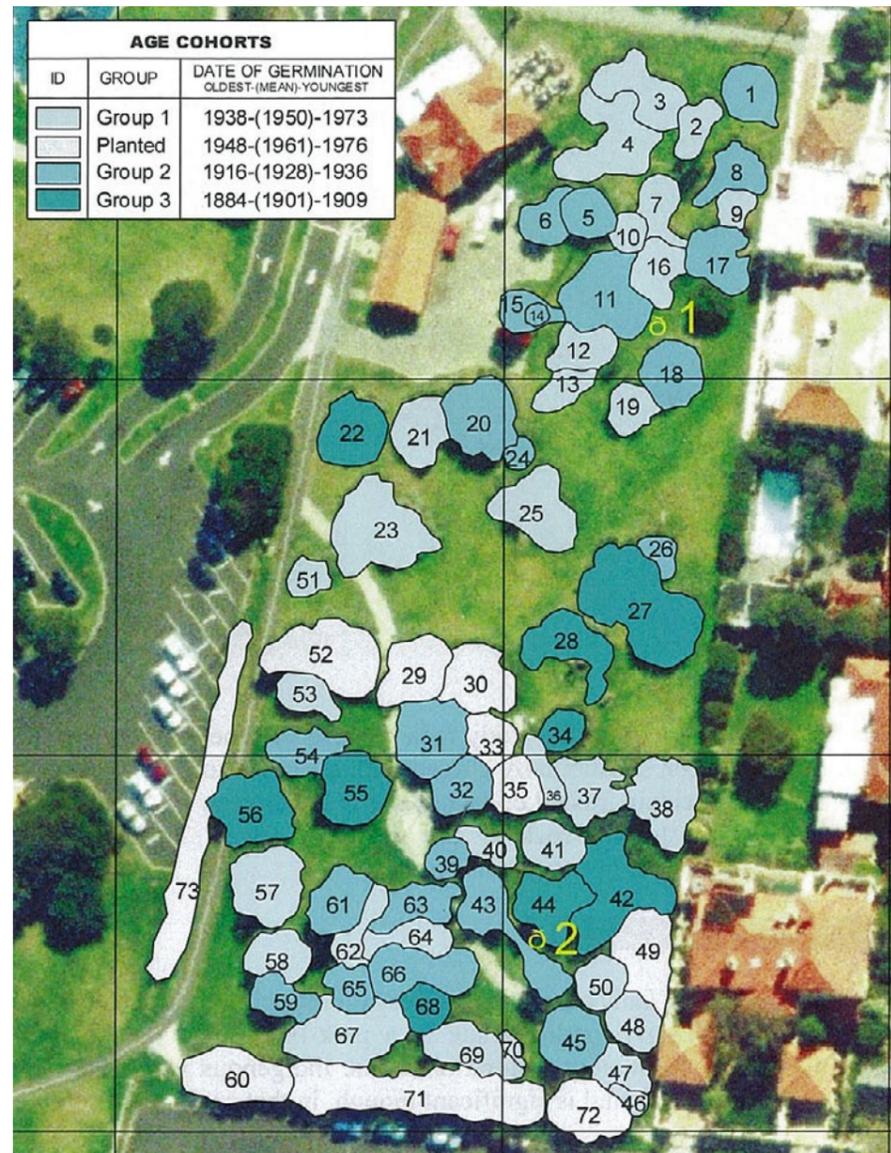


Figure 10: Coast Tea tree Assessment North Road Reserve (*Botanicus 2002*)

SANDOWN SPIT (SANDOWN STREET DOG BEACH)

A population of the regionally significant Strand sedge *Carex pumila* has been found within the Dog Beach between Sandown Street and Bay Street. The sand spit has accumulated in this area following construction of the Middle Brighton Pier (circa 1938) and the vegetation present has likely colonised the area from the adjacent beach which has been extensively modified post development. Refer Figure 11 (*Botanicus 2004*). Council monitors the ongoing health of this rare population with weed control efforts aimed at promoting natural regeneration.

Recommendations:

- Investigate the impacts of dog use on areas of the significant species *Carex pumila* (Strand Sedge) on Sandown Spit, including trampling and disturbance and install additional fencing where required to protect the vegetation. Refer to *The Mapping of Carex pumila (Strand Sedge) on Sandown Spit, Botanicus, February 2004*. (H)
- Install signage highlighting biodiversity values of the indigenous vegetation on the Sandown Spit. (H)



Photo 30: Sandown Street Dog Beach



Figure 11: Mapping of *Carex pumila* (Strand Sedge) at Sandown Street Dog Beach Sandown Spit, *Botanicus, February 2004*.

RAKALI HABITAT

Rakali *Hydromys chrysogaster* (a native water rat) are known to use the Bayside foreshore in this area including artificial rock structures, breakwaters and groynes, which provide shelter and food resources. Potential threats to Rakali include habitat degradation and predation by domestic dogs. Council undertakes ongoing monitoring of the population.

Recommendations:

- Ensure protection of Rakali habitat as part of future seawall reconstruction works. (H)

VEGETATION MANAGEMENT

The foreshore in this area has been extensively modified and vegetation management seeks to maintain a balance between the need for ongoing renewal of indigenous coastal revegetation, and improved provision of trees and shade while retaining popular views to the Bay and city from adjoining paths, grass areas and private property.

Zone 1 Bay Street to Royal Brighton Yacht Club

- Establish a new avenue of overstorey shade trees at approximately 30m centres along this exposed west facing section of foreshore which can get extremely hot during the summer. Carefully position trees within the grass area and integrate with existing trees on private land to retain views to the Bay from adjoining house windows and balconies. Refer to Figure 12 for planting options. (H)
- Retain and protect existing low indigenous vegetation on the coast side of the path, extending new planting through to Sandown Street while retaining clear and unobstructed views to the harbour. (H)

Zone 2 Shandford Avenue to North Road

- Establish a new avenue of overstorey trees at approximately 30m centres to improve shade along the path. Carefully position trees to integrate with existing trees and garden beds where possible to retain filtered views to the Bay from adjoining grass areas and houses. (H)
- Reinstate low indigenous vegetation on the coast side of the path following sea wall improvement works and retain existing views to the Bay and city skyline. (H)
- Revegetate the high flow stormwater overland flow path from Chatsworth Avenue to the boat ramp with low indigenous sedges/rushes. (L)

- Retain existing open grass areas. Progressively replace dead shrubs with low coastal groundcovers within existing garden beds. (O)

Zone 3 North Road to Head Street

- Remove or uplift dense shrubs from walkways and entries to improve sightlines and safety. (H)
- Revegetate difficult to mow stormwater detention areas with low indigenous sedges/rushes to improve habitat values. (L)
- Retain existing open grass areas. Progressively replace dead shrubs with low coastal groundcovers within existing garden beds. (O)

Garden beds adjoining private property

Liaise with adjoining residents to ensure a consistent approach to maintenance of garden beds directly adjoining the private property boundaries and fences in accordance with the Vegetation Protection Overlay and Council's Nature Strip Planting Policy as follows:

- Retain existing native and indigenous trees. Residents may request Council to prune only where the tree branches overhang or impact on existing fencing or buildings.
- Retain existing native and indigenous shrubs. Residents may apply to Council for permission to prune only to maintain shrubs (not trees) at their existing fence height.
- Replace existing exotic and weed species with equivalent local indigenous species over time.
- Infill garden bed planting with drought tolerant indigenous low shrubs, groundcovers and grasses (available at Bayside Community Nursery or other indigenous plant nursery).



Allocasuarina verticillata
Drooping she-oak



Banksia integrifolia
Coast Banksia



Phoenix canariensis
Canary Island Date Palm



Araucaria heterophylla
Norfolk Island Pine

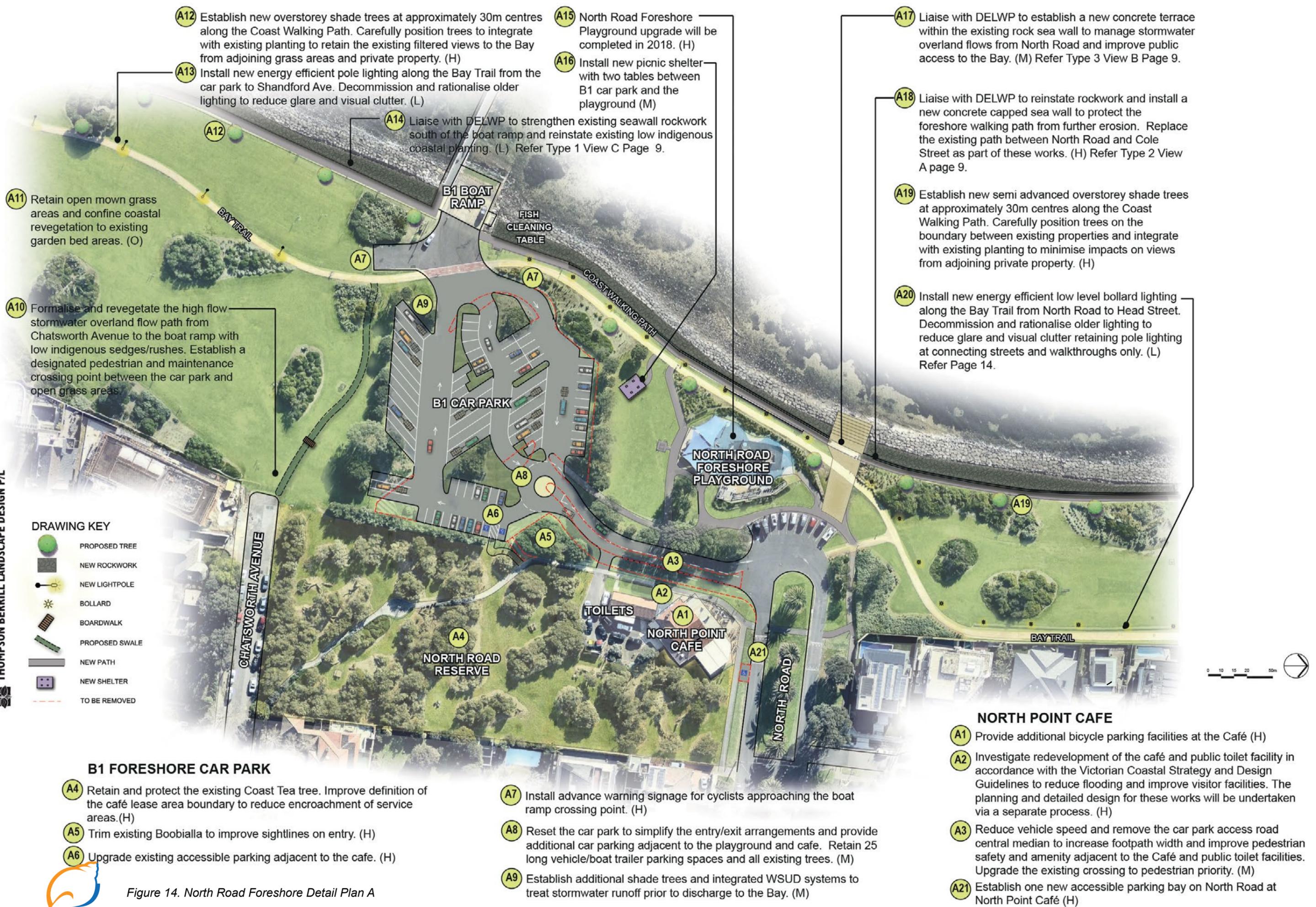
Figure 12: New shade tree planting options



DRAWING KEY

 PROPOSED TREE PLANTING

Figure 13. Vegetation Management



- A12 Establish new overstorey shade trees at approximately 30m centres along the Coast Walking Path. Carefully position trees to integrate with existing planting to retain the existing filtered views to the Bay from adjoining grass areas and private property. (H)
- A13 Install new energy efficient pole lighting along the Bay Trail from the car park to Shandford Ave. Decommission and rationalise older lighting to reduce glare and visual clutter. (L)

- A15 North Road Foreshore Playground upgrade will be completed in 2018. (H)
- A16 Install new picnic shelter with two tables between B1 car park and the playground (M)

- A17 Liaise with DELWP to establish a new concrete terrace within the existing rock sea wall to manage stormwater overland flows from North Road and improve public access to the Bay. (M) Refer Type 3 View B Page 9.
- A18 Liaise with DELWP to reinstate rockwork and install a new concrete capped sea wall to protect the foreshore walking path from further erosion. Replace the existing path between North Road and Cole Street as part of these works. (H) Refer Type 2 View A page 9.

- A11 Retain open mown grass areas and confine coastal revegetation to existing garden bed areas. (O)
- A10 Formalise and revegetate the high flow stormwater overland flow path from Chatsworth Avenue to the boat ramp with low indigenous sedges/rushes. Establish a designated pedestrian and maintenance crossing point between the car park and open grass areas.

- A19 Establish new semi advanced overstorey shade trees at approximately 30m centres along the Coast Walking Path. Carefully position trees on the boundary between existing properties and integrate with existing planting to minimise impacts on views from adjoining private property. (H)
- A20 Install new energy efficient low level bollard lighting along the Bay Trail from North Road to Head Street. Decommission and rationalise older lighting to reduce glare and visual clutter retaining pole lighting at connecting streets and walkthroughs only. (L) Refer Page 14.

DRAWING KEY

- PROPOSED TREE
- NEW ROCKWORK
- NEW LIGHTPOLE
- BOLLARD
- BOARDWALK
- PROPOSED SWALE
- NEW PATH
- NEW SHELTER
- TO BE REMOVED

B1 FORESHORE CAR PARK

- A4 Retain and protect the existing Coast Tea tree. Improve definition of the café lease area boundary to reduce encroachment of service areas. (H)
- A5 Trim existing Boobiialla to improve sightlines on entry. (H)
- A6 Upgrade existing accessible parking adjacent to the cafe. (H)

- A7 Install advance warning signage for cyclists approaching the boat ramp crossing point. (H)
- A8 Reset the car park to simplify the entry/exit arrangements and provide additional car parking adjacent to the playground and cafe. Retain 25 long vehicle/boat trailer parking spaces and all existing trees. (M)
- A9 Establish additional shade trees and integrated WSUD systems to treat stormwater runoff prior to discharge to the Bay. (M)

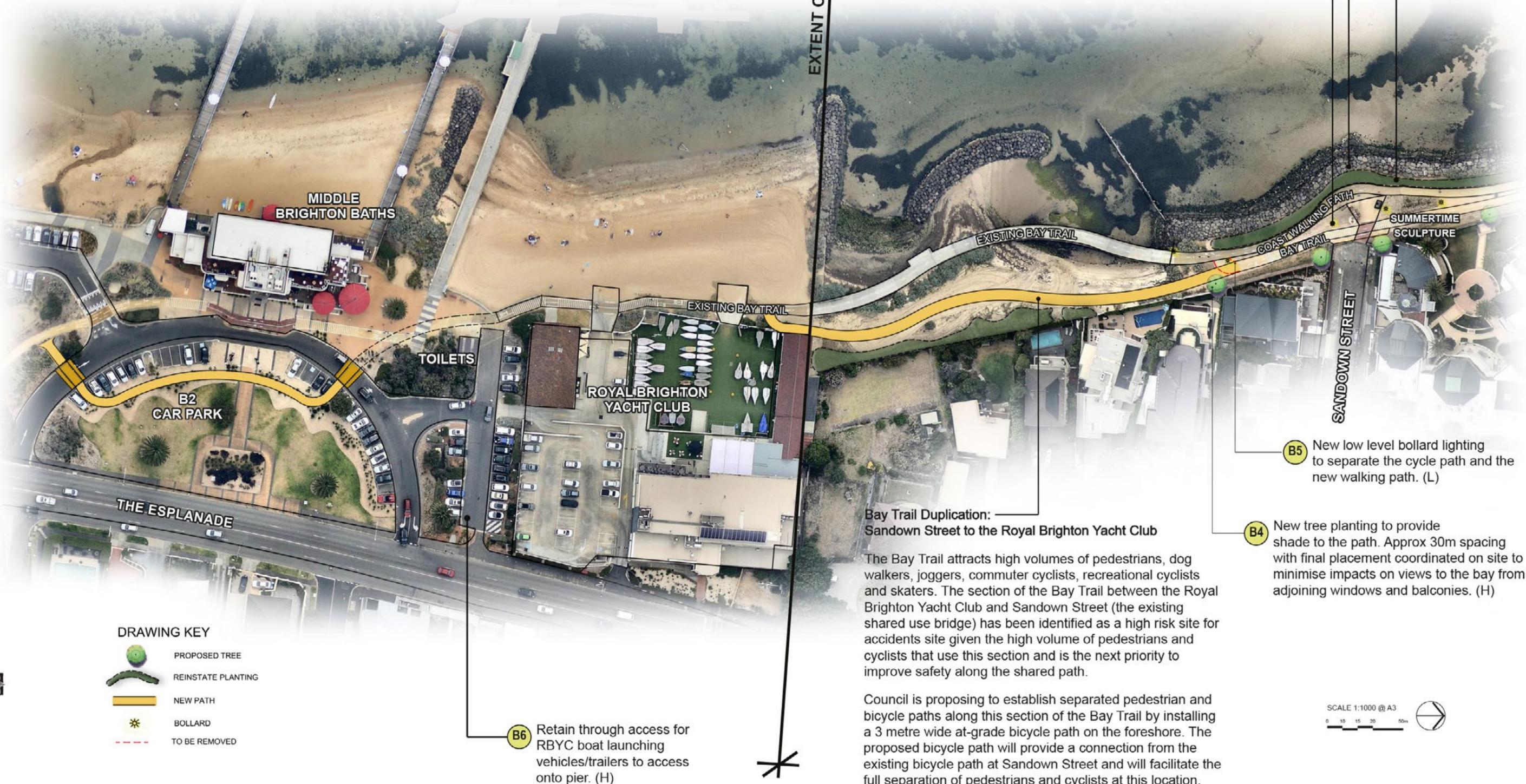
NORTH POINT CAFE

- A1 Provide additional bicycle parking facilities at the Café (H)
- A2 Investigate redevelopment of the café and public toilet facility in accordance with the Victorian Coastal Strategy and Design Guidelines to reduce flooding and improve visitor facilities. The planning and detailed design for these works will be undertaken via a separate process. (H)
- A3 Reduce vehicle speed and remove the car park access road central median to increase footpath width and improve pedestrian safety and amenity adjacent to the Café and public toilet facilities. Upgrade the existing crossing to pedestrian priority. (M)
- A21 Establish one new accessible parking bay on North Road at North Point Café (H)

Figure 14. North Road Foreshore Detail Plan A

NOTE: Works along the foreshore between Middle Brighton Baths and the Royal Brighton Yacht Club are separate scope of works. Refer to Bayside City Council Have your say: Middle Brighton Baths Draft Changes to bike path.

THOMPSON BERRILL LANDSCAPE DESIGN P/L



- B1** Reinstate low indigenous planting on the adjoining new seawall rockwork at the end of Sandown Street. (H)
- B2** Establish new stormwater overland flow path outlet through the raised seawall rockwork at Sandown Street. (H)
- B3** Upgrade existing pole lighting at Sandown Street and other walkthroughs. (L)

B5 New low level bollard lighting to separate the cycle path and the new walking path. (L)

B4 New tree planting to provide shade to the path. Approx 30m spacing with final placement coordinated on site to minimise impacts on views to the bay from adjoining windows and balconies. (H)

B6 Retain through access for RBYC boat launching vehicles/trailers to access onto pier. (H)

Bay Trail Duplication: Sandown Street to the Royal Brighton Yacht Club

The Bay Trail attracts high volumes of pedestrians, dog walkers, joggers, commuter cyclists, recreational cyclists and skaters. The section of the Bay Trail between the Royal Brighton Yacht Club and Sandown Street (the existing shared use bridge) has been identified as a high risk site for accidents site given the high volume of pedestrians and cyclists that use this section and is the next priority to improve safety along the shared path.

Council is proposing to establish separated pedestrian and bicycle paths along this section of the Bay Trail by installing a 3 metre wide at-grade bicycle path on the foreshore. The proposed bicycle path will provide a connection from the existing bicycle path at Sandown Street and will facilitate the full separation of pedestrians and cyclists at this location. Council is now seeking your feedback on the proposal.

DRAWING KEY

- PROPOSED TREE
- REINSTATE PLANTING
- NEW PATH
- BOLLARD
- TO BE REMOVED

SCALE 1:1000 @ A3

Figure 15. Middle Brighton Baths Detail Plan B

BIBLIOGRAPHY

Access Design Solutions, *North Point - Site Visit - Proposed Development - Disability Access*, Access Design Solutions, August 2015.

Bayside City Council, *Bayside Open Space Strategy*, Bayside City Council, 2012.

Bayside City Council, *Bayside Public Toilet Strategy*, Bayside City Council, 2012.

Bayside City Council, *Bayside Open Space Lighting Policy*, Bayside City Council, 2008.

Bayside City Council, *Bayside Domestic Animal Management Plan*, Bayside City Council, 2012.

Bayside City Council, *Have Your Say - Middle Brighton Baths - Draft Changes to Bike Path*, Bayside City Council, November 2017.

Bayside City Council, *Have Your Say - North Road Foreshore Playground*, Bayside City Council, November 2017.

Botanicus Australia, *Carex Pumila on Sandown Spit*, Botanicus Australia Pty Ltd, February 2004.

Botanicus Australia, *Management of Leptospermum Laevigatum at North Road*, Botanicus Australia Pty Ltd, June 2002.

Ecology Australia, *Bayside Native Vegetation Works Program Stage 1*, 2008.

Ecology Australia, *Bayside Native Vegetation Works Program Stage 2*, 2011.

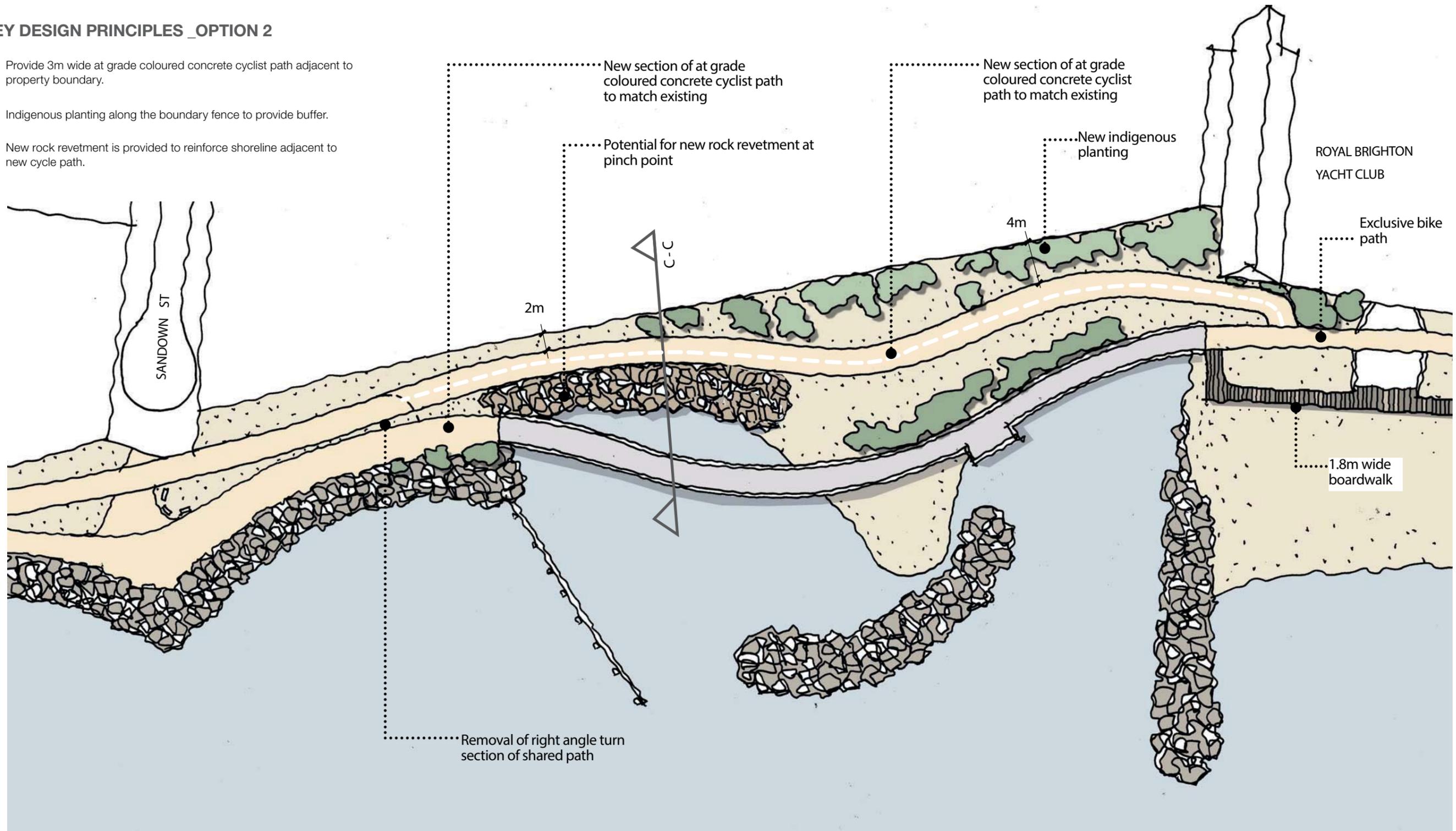
Urban initiatives, *Bayside Coastal Management Plan*, Bayside City Council, 2014.

Victorian Coastal Council, *Victorian Coastal Strategy*, Victorian Coastal Council, 2014

ATTACHMENT 1: BAY TRAIL LINKS - CONCEPT DESIGN (GHDWOODHEAD)

KEY DESIGN PRINCIPLES _OPTION 2

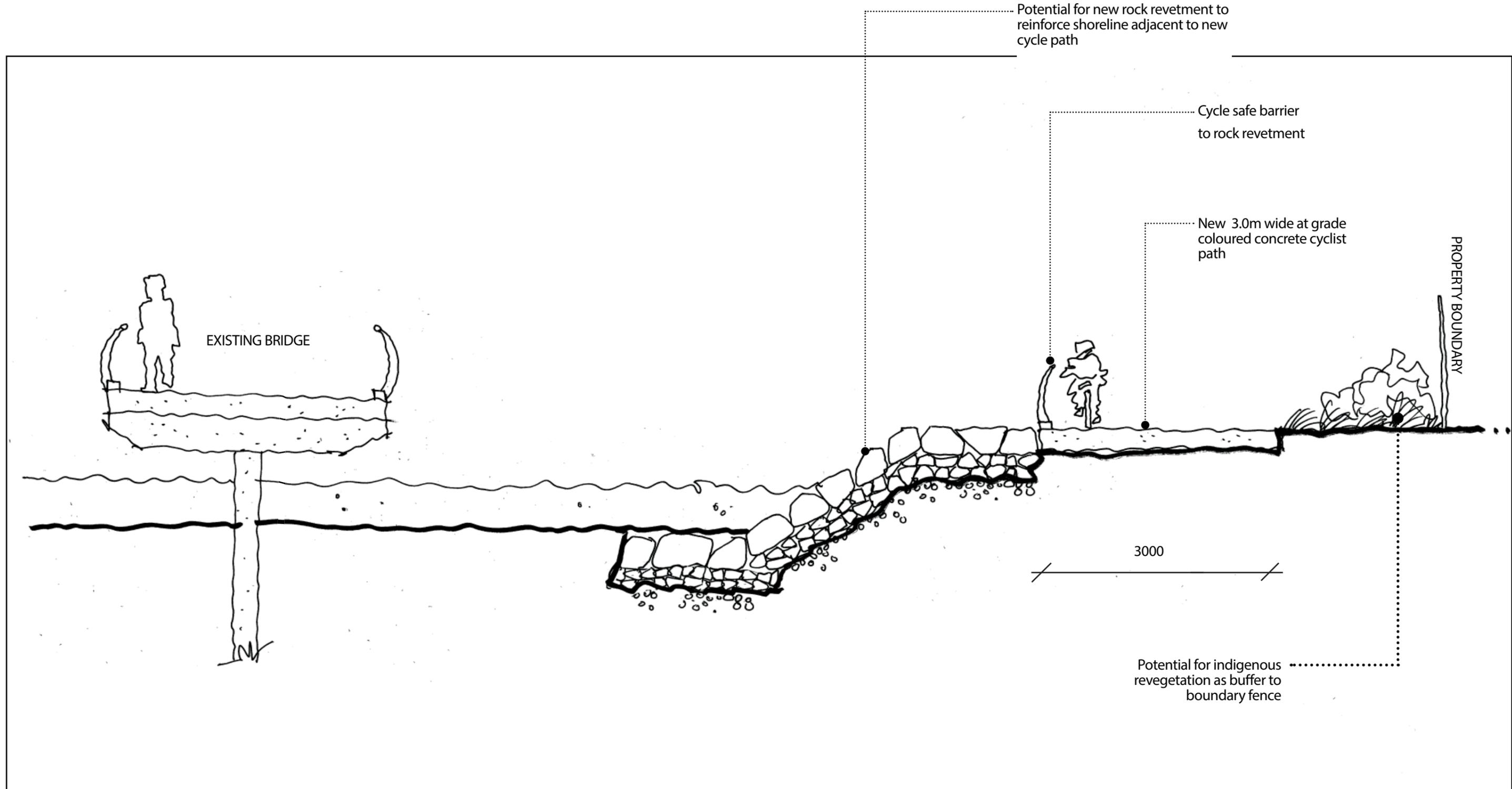
- Provide 3m wide at grade coloured concrete cyclist path adjacent to property boundary.
- Indigenous planting along the boundary fence to provide buffer.
- New rock revetment is provided to reinforce shoreline adjacent to new cycle path.



BAY TRAIL LINKS - CONCEPT PLAN 1:500 @ A3



ATTACHMENT 1: BAY TRAIL LINKS - CONCEPT DESIGN (GHDWOODHEAD)



BAY TRAIL LINKS - SECTION CC 1: 50@ A3