



RED BLUFF TO HALF MOON BAY MASTERPLAN



Thompson Berrill Landscape Design P/L
in association with O'Brien Traffic, Alluvium, AW Maritime and Equal Access

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Note: The endorsement of the Red Bluff to Half Moon Bay Masterplan by Council does not constitute a 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.

Date	Revision	Amendment
10/05/2019	D	Revised Draft incorporating consultation feedback and DELWP comments
27/07/2017	C	Draft for Public Consultation
10/07/2017	B	Amended Draft
28/06/2017	A	Draft for BCC Comment

INTRODUCTION

The Red Bluff to Half Moon Bay Masterplan directly guides design, priorities and staging of works on Council managed land within the precinct, implementing the recommendations of current strategic plans including the *Bayside Open Space Strategy 2012* and *Bayside Coastal Management Plan 2014*.

The scope of the study area extends from Potter Street, Red Bluff including the B13 Love Street car park through to Half Moon Bay and Arkaringa Crescent, Black Rock.

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

The *Bayside Open Space Strategy 2012* (BOSS) classifies the Half Moon Bay area as Municipal open space. 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. Visits to these spaces are often two hours plus in duration. The sheltered and accessible beach, pier, public toilet facilities, car park, kiosk and free public boat ramp access ensure high levels of use at Half Moon Bay all year round.

The *Bayside Coastal Management Plan* (BCMP) was adopted by Council in 2014. Development of the BCMP included extensive consultation with the Bayside community and has informed strategic direction for actions and works proposed within the precinct. The key objectives for Red Bluff and Half Moon Bay include:

- Ensure protection of the foreshore environment, particularly areas of remnant coastal vegetation and habitats for native wildlife.
- Identify and protect areas of cultural heritage significance.
- Improve pedestrian access and safety on Cerberus Way and within existing parking areas.
- Improve safe vehicle circulation and car and boat trailer parking efficiency throughout the precinct.
- Identify and improve access and safety along the designated Coast Walking Trail, maintaining existing character while sustainably managing for increasing future use.
- Review and prioritise replacement and upgrade of existing facilities including the Bay Trail in accordance with Council Policy.
- Improve all ability access to the beach, paths, toilets, parking, picnic areas and club based facilities.
- Support improved public access and multi use of club based facilities including boat ramps.
- Improve public safety and awareness of risks at Red Bluff and White Cliffs.



Photo 1: Red Bluff to Half Moon Bay foreshore

LAND MANAGEMENT

The Red Bluff and Half Moon Bay Foreshore Precinct, between Potter Street and Arkaringa Crescent is Crown Land with Bayside City Council having Committee of Management responsibility in accordance with the requirements of the *Crown Land Reserves Act (1978)*, *Marine and Coastal Act (2018)* and *Bayside Coastal Management Plan (2014)*. Parks Victoria manage the Black Rock Jetty as Committee of Management. The Department of Environment, Land, Water and Planning (DELWP) are responsible for the sea wall and other coastal stability measures at Half Moon Bay and else where along the Port Phillip shoreline. The HMVS Cerberus is also managed by Council, but outside the scope of this plan.

The Masterplan is being prepared to guide future works and priorities on Council managed land. Management and any future redevelopment of the existing building and lease areas on the foreshore 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:

- Encourage consideration of joint partnerships and increased public access in any redevelopment proposals for aging infrastructure.
- Ensure no net increase in building footprint and seek rationalisation of existing buildings where possible in any redevelopment works.

HALF MOON BAY SURF LIFE SAVING CLUB

Half Moon Bay Surf Life Saving Club (HMBSLSC) was founded in 1910 and is one of the oldest life saving clubs in the state. The Club facilitates beach patrols, Nippers programs, training and social events for its club members and the public. The current club building was rebuilt in 1999 and includes public toilet facilities and change rooms managed by Council.

BLACK ROCK YACHT CLUB/BLACK ROCK SAILING SCHOOL

Black Rock Yacht Club began as an annexe of the Brighton Yacht Club in 1899. In 1904, the Black Rock branch of the Brighton Yacht Club was established. The original wooden club building was destroyed by fire in 1937 and replaced by a two-storey wooden club house. This was demolished in 1967 and the current club rooms were opened in 1969. The Club has since grown to over 700 members.

The Black Rock Sailing School is run from the same site as the Yacht Club, offering Yachting Australia Accredited training for all skill levels.

THE CERBERUS BEACH HOUSE (KIOSK AND RESTAURANT)

Popular with visitors and locals, the kiosk and restaurant caters for beach users all year round.

PRIVATE USE BOAT SHEDS

There are three privately licensed boat sheds (#207, #208, #210), located at Half Moon Bay. These are sited between the HMBSLSC and the Cerberus Beach House kiosk and restaurant.

BOAT RAMPS AND BLACK ROCK PIER

There is a public boat ramp which was upgraded in 2015 and separate ramps for the Yacht Club and HMBSLSC. Parks Victoria is Committee of Management for Black Rock Jetty.



Photo 2: HMBSLSC



Photo 3: Black Rock Yacht Club

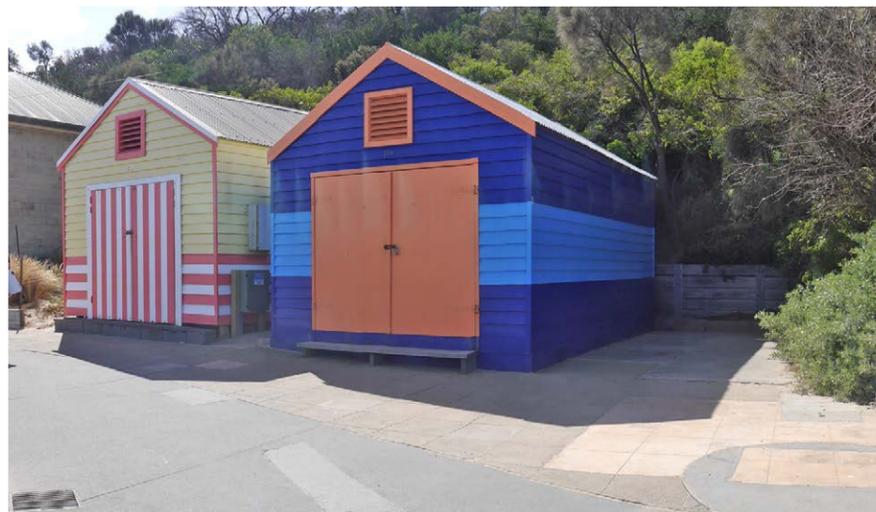


Photo 4: Boat sheds on Half Moon Bay Foreshore

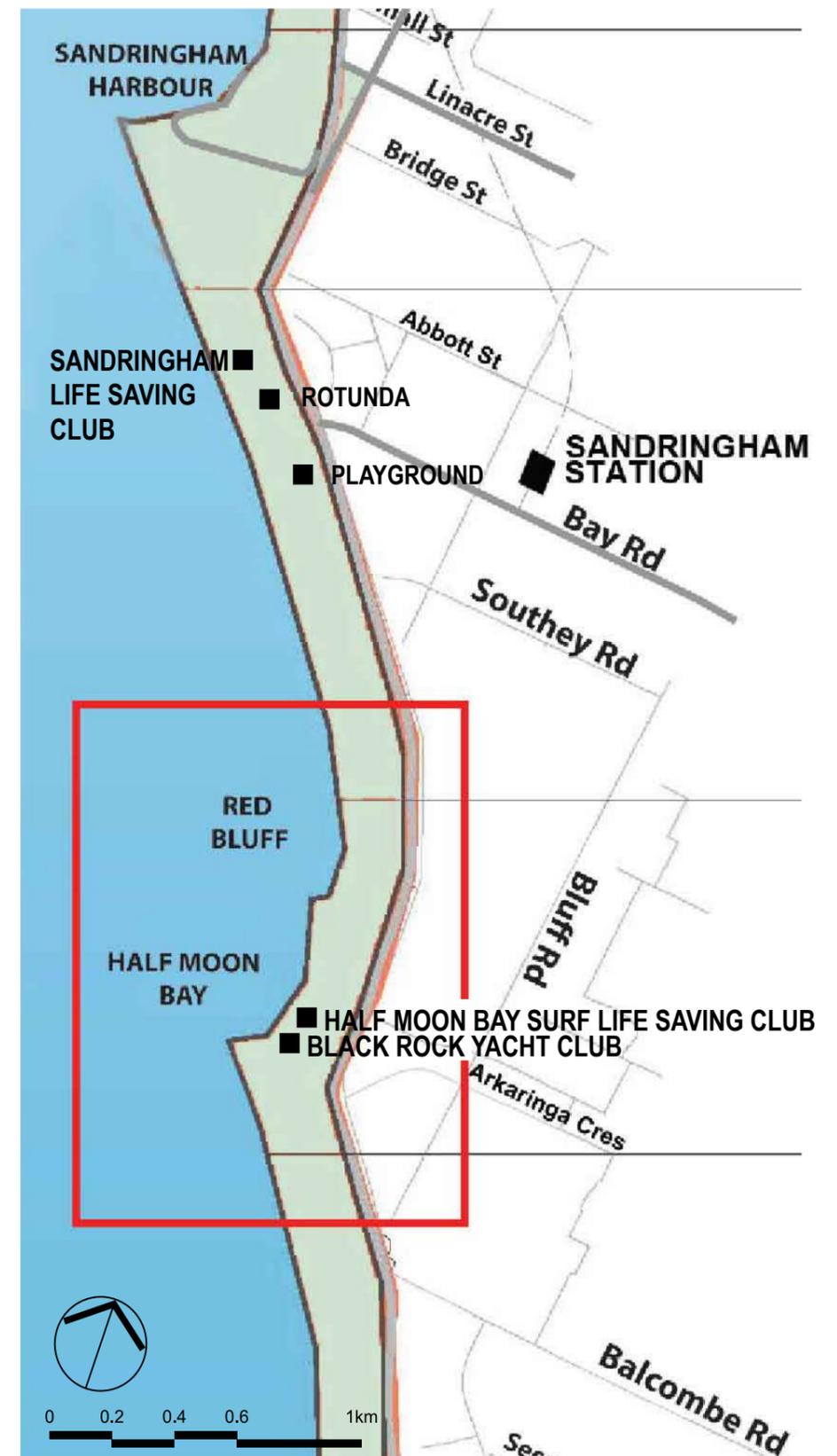


Figure 1: Context Plan
Bayside Coastal Management Plan 2014

CULTURAL HERITAGE

Aboriginal occupation of what is now known as the Bayside foreshore dates back many thousands of years, and the area contains registered cultural heritage sites and places that are protected under the provisions of the *Aboriginal Heritage Act (2006)*. The Act recognises Aboriginal people as the primary guardians of their cultural heritage and has established a process for Aboriginal groups to apply to be registered as Registered Aboriginal Parties (RAPs). Currently there is no appointed RAP for Bayside and requirements for ongoing protection and management of indigenous cultural heritage will continue to be co-ordinated by Council through the Office of Aboriginal Victoria.

Half Moon Bay has ten registered Indigenous archaeological sites within the precinct, including shell middens and rock wells. Ongoing protection of Aboriginal cultural heritage sites is a key requirement of the Masterplan. Specific recommendations will be guided by the preparation of a new Cultural Heritage Management Plan which is a high priority action.



Photo 5: Bunjils Eggs Sculpture Red Bluff

HMAS CERBERUS (HMVS)

There is also a Heritage Overlay (HO186) in the Bayside Planning Scheme. The HMVS Cerberus is protected as an historic shipwreck under the *Victorian Heritage Act (2017)* and listed on the Victorian Heritage Register. The site is becoming more fragile and dangerous to climb on and now lies within a Protected Zone. It is an offence to enter the Protected Zone or to climb onto the wreck without a permit from Heritage Victoria.

The former flagship of the Victorian Colonial Navy, HMVS Cerberus is internationally significant as a shipwreck example of a turret ship, or breastwork monitor class of warship. It was the first armoured warship built for Australia, and upon Federation became the Commonwealth of Australia's first capital ship. When it was built, along with its sister ship Magdala they were the first British ships to have low freeboard, breastwork protection, a central superstructure with fore and aft turrets, and the first warships ever built to operate solely on steam propulsion. The HMVS Cerberus represents the transition from large high profile wooden sailing warships armed with hundreds of cannon to a low profile 'floating raft' using explosive shells, revolving turret guns, and an iron hull and breastwork.

The HMVS Cerberus had an uneventful career for a naval vessel, with never a shot fired in anger in 53 years of service between 1871 and 1926. The HMAS Cerberus at Crib Point formally known as the Flinders Naval Depot is named after the HMVS Cerberus. After its use as a capital ship had expired, the HMVS Cerberus operated in Port Phillip as a port guard ship, a floating explosives store, and a submarine depot ship for the six J-Class submarines until being purposely sunk in 1926 for use as a breakwater for the Black Rock Yacht Club.

Friends of the Cerberus Inc. is a group of volunteers that works with Council, Heritage Victoria and the National Trust of Victoria to preserve HMVS Cerberus for future generations.



Photo 6: HMVS Cerberus and Timber Jetty 1920

SEA WALLS

During the Great Depression councils were encouraged to employ local men on relief work (also known as 'Sussos'). In the 1930 Sandringham City Council (recently separated from the Parish of Moorabbin) decided on a project to protect local beaches from further erosion by building bluestone walls and rock facings. The stones in this area and other seawalls on the foreshore at Sandringham and Black Rock were taken from the outer walls of the Old Melbourne Gaol.

SANDRINGHAM BEACH PARK

There is a Heritage Overlay (HO703) in the Bayside Planning Scheme which extends along the coast covering the area known as Sandringham Beach Park. This area is listed on the Register of the National Estate. The significance relates to the predominantly intact belt of native coastal vegetation and associated history of the adjoining Sandringham Gardens.

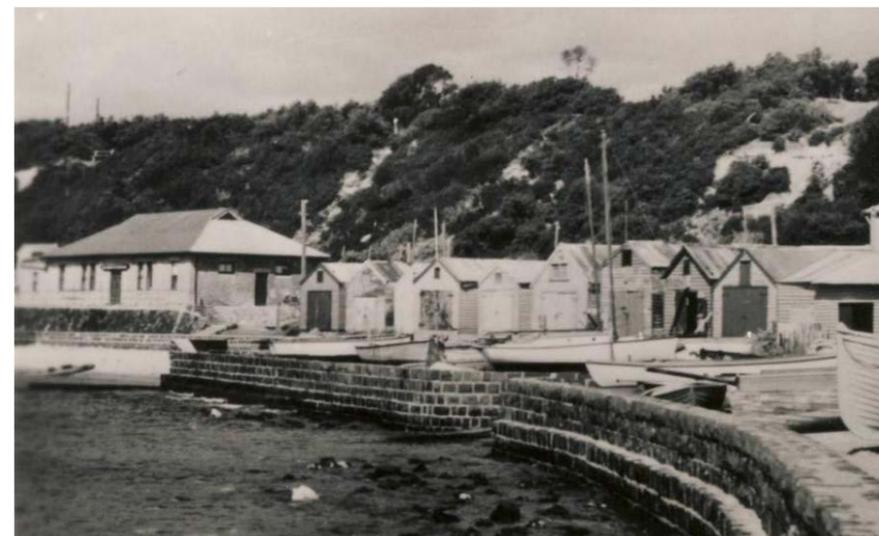
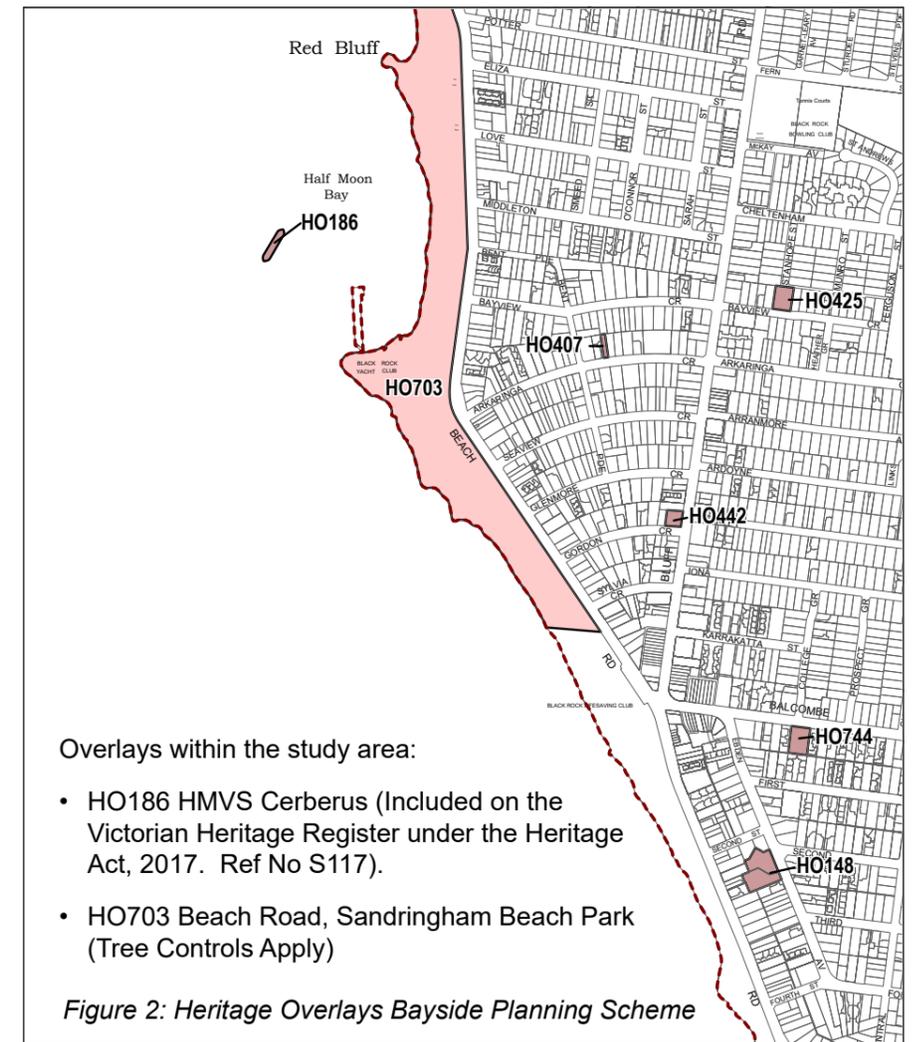


Photo 7: Half Moon Bay Seawall 1920



HALF MOON BAY SURF LIFE SAVING CLUB (HMBSLSC)

HMBSLSC was founded in 1910. The original building was demolished and rebuilt by the Club in 1999.



Photo 8: HMBSLSC and bathing boxes 1920

ZONING AND OVERLAYS

The site is Crown land managed by Bayside City Council. The site is zoned Public Park and Recreation Zone (PPRZ) in the Bayside Planning Scheme.

Erosion Management Overlay (EMO):

There is an Erosion Management Overlay (EMO) over the entire study area and coastline to protect areas prone to erosion, landslip or other land degradation process by minimising land disturbance and inappropriate development.

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)*. Priorities include:

- 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.
- Favouring coastal dependent uses.

Vegetation Protection Overlay (VPO):

Native vegetation at Red Bluff to Half Moon Bay is included in the Vegetation Protection Overlay (VP01) in the *Bayside Planning Scheme*. The VPO applies to the entire Red Bluff to Half Moon Bay precinct. A permit is required to remove, destroy or lop native vegetation.

Heritage Overlays (HO):

- HO186 – HMVS Cerberus (Included on the Victorian Heritage Register under the Heritage Act, 1995. Ref No S117).
- HO703 – Beach Road, Sandringham Beach Park (Tree Controls Apply)

DRAWING KEY

 CROWN LAND MANAGED BY COUNCIL

 HERITAGE OVERLAYS

 0 20 40 60 100m



Figure 3: Land Management

EXISTING CONDITIONS



Figure 4: Existing Conditions

FORESHORE FACILITIES

PUBLIC TOILETS

Half Moon Bay public toilet facilities are located on the north side of the HMBSLSC. They are accessible from the beach via a ramp or stairs and the Coastal Walking Trail via Bayview Crescent ramp. All three cubicles are fully accessible and provide changing facilities. During busy beach days there can be a wait when facilities are more frequently used for changing.

Assessment completed as part of the Bayside Public Toilet Strategy 2019-2023 concluded there is no need for new public toilet facilities in this section of the foreshore. Proposed works include:

- 2.2.1 Install signage to provide directions for visitors to the existing toilet facilities at Bayview Crescent ramp and Half Moon Bay foreshore. (H)
- 3.4 Review toilet layout at HMBSLSC in accordance with Crime Prevention Through Environmental Design (CPTED) principles and upgrade the toilet facilities to include an additional cubicle and external hand wash facility within the existing footprint. (M)
- 3.3 Investigate developing an adult changing facility in one of the existing toilet/change spaces to make access available to a broader range of community members. (M)
- 3.1 Investigate upgrading the access ramp to the front of the HMBSLSC to include handrails to both sides. (L)



Photo 9: Public toilets at HMBSLSC

BEACH SHOWER AND DRINKING FOUNTAINS

The beach shower and drinking fountain at Half Moon Bay is located next to the HMBSLSC and beach access. Proposed works include:

- 2.2.4 Reset the concrete edge around the perimeter of the shower enabling all ability use while minimising overflow to the adjoining path. (H)



Photo 10: Beach shower and drinking fountain at Half Moon Bay

HALF MOON BAY LOOKOUT

The informal lookout and picnic area located above White Cliffs, provides panoramic views to the south west of Half Moon Bay, the handrail was recently replaced. The proposed works include:

- 6.5 Replace stair access from Cerberus Way. (M)
- 6.7 Upgrade the picnic furniture. (L)

RED BLUFF LOOKOUTS



Photo 11: Half Moon Bay Lookout

Red Bluff lookouts are easily accessible from the Coastal Walking Trail and B13 car park. Situated on top of elevated Red Bluff cliffs they provide impressive views across the Bay. The lookouts are part of the Bayside Coastal Indigenous Trail. Here you will find the site of the Bunjil Eggs sculpture, which is the most prominent and formal lookout area in the precinct. The current timber post and wire fencing does not provide a sufficient barrier to prevent the public from climbing over the fence to explore the cliffs and beaches below. Not far from the Bunjil Eggs lookout, there are two smaller lookouts with a single timber picnic table and seating. The post and wire fence has no top timber rail and needs to be upgraded to restrict access to the fragile cliff top.

Proposed works include:

- 8.1 Undertake brush matting using Boxthorn and planting of low spiky indigenous vegetation to the coast side of fencing to reduce public access over the fence. (H)
- 8.3 Relocate cliff fencing back from the cliff edge. (M)



Photo 12: Red Bluff Lookout - Bunjil's Eggs



Photo 13: Red Bluff Lookout South

BAY TRAIL - SHARED PATH

The 2.5m wide concrete Bay Trail provides continuous off road access for both pedestrians and cyclists travelling along Beach Road. The Bay Trail crosses vehicle entry points at Cerberus Way and B13 car park. Works are currently being undertaken by Council to reset the B13 car park entries to enable cars to wait off the shared trail when turning in/out from Beach Road and to improve sightlines. Refer to Detail Plan B for details of ongoing upgrade works.



Photo 14: Bay Trail along Beach Road at B13 car park entry

COASTAL WALKING TRAIL

The unsealed Coastal Walking Trail runs parallel with Beach Road, winding its way through the coastal bushland offering elevated views out to the Bay. It varies in width and is increasingly popular with walkers and joggers of all ages and abilities. Cyclists are discouraged from using the coastal walking trail to minimise erosion, impacts on sensitive coastal vegetation, habitat values and for safety reasons.

In accordance with the *Bayside Coastal Management Plan (2014)* recommendations, the trail is to remain a compacted granitic gravel/sand walking trail up to 2.5m in width (site specific), inclusive of pruning to either side. Proposed works include:

- 4.1 Existing retaining walls are failing in the central area of the trail above Half Moon Bay and require stabilisation. (H)
- 6.1 Crossing point at Cerberus Way has poor sightlines. Refer to Detail Plan A.

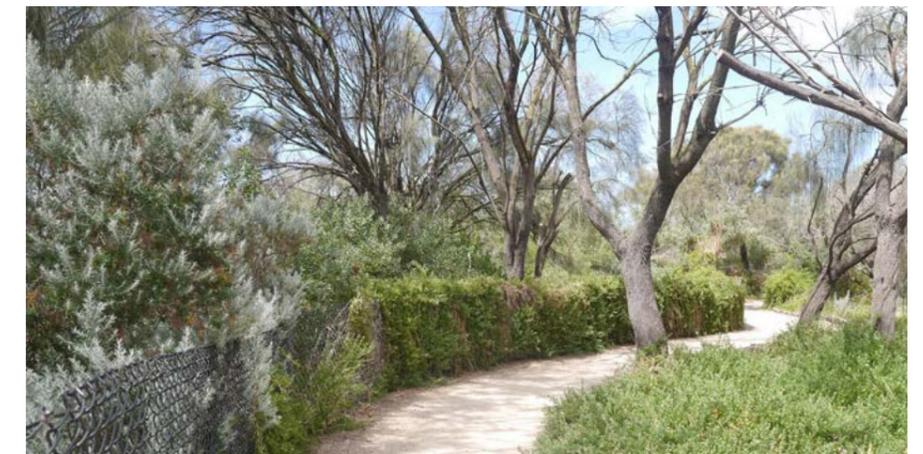


Photo 15: Coastal Walking Trail

BEACH ACCESS

Access to Half Moon Bay Beach is provided by a range of access ramps. The steep natural topography, erosive cliffs and historic development of the area mean that access is restricted for some users with limited mobility. Priorities for upgrades are as follows:

B13 LOVE STREET RAMP

The concrete ramp provides access from the Coastal Walking Trail and B13 car park to the beach. Proposed traffic management changes will increase use of the B13 car park and this ramp. The proposed works include:

- 2.1.1 Install directional signage to the top and bottom of the ramp (H)
- 2.1.2 Install new handrail to the other side of the ramp (M)
- 2.1.3 Monitor and maintain stone work along the ramp and replace stairs with ramp at entry to car park. (M)



Photo 16: B13 ramp

BAYVIEW CRESCENT RAMP

The concrete ramp provides local access from the Coastal Walking Trail to the beach and public toilet facilities. The retaining wall near the toilet facility is failing and requires urgent replacement to avoid closure of the ramp. The proposed works include:

- 2.2.2 Replace existing retaining wall on approach to the toilet block. Ensure protection of cultural heritage values and native vegetation in this area during works. (H)
- 2.2.1 Install directional signage to the ramp at the Bayview Crescent pedestrian crossing on Beach Road. (H)
- 2.2.3 Install handrail to both sides of the ramp.(L)



Photo 17: Bayview Crescent ramp

B14 CAR PARK BEACH ACCESS RAMP (WHITE CLIFFS)

The existing unsealed ramp provides direct connection from Cerberus Way pedestrian path and B14 car park to White Cliff Beach. The proposed works include:

- 2.3.2 Install directional signage to the top of the ramp.(H)
- 2.3.1 Repair existing post and cable fencing. (H)
- 2.3.3 Replace Bayside Arts Trail interpretive sign bases when required. (L)



Photo 18: B14 car park beach access ramp

BEACH RAMPS

There are two ramps from the Half Moon Bay promenade providing access to the beach foreshore. The ramp closest to the water is used predominately by the HMBSLSC to transport their rescue craft onto the beach, while the other ramp is used for pedestrian and beach cleaning access.

Half Moon Bay is one of Bayside's two accessible swimming beaches. Accessible beach matting is provided over summer and a beach wheelchair can be booked through the Half Moon Bay Surf Lifesaving Club.

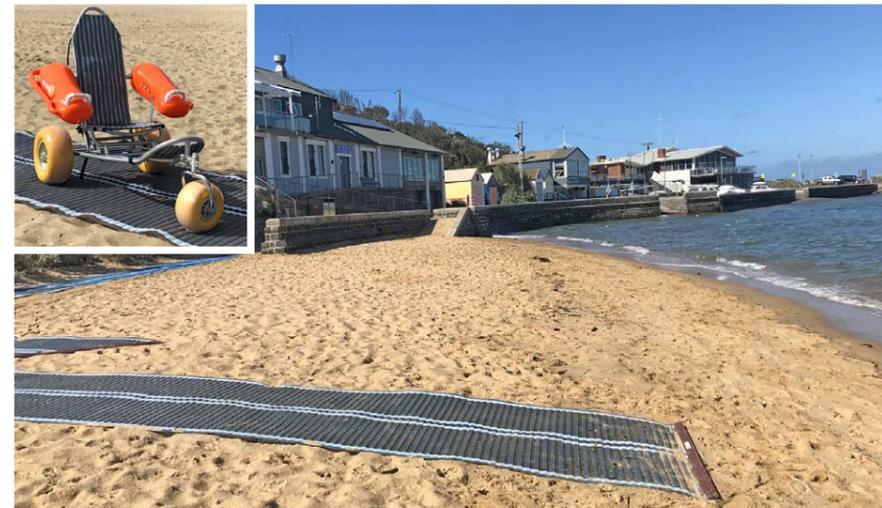


Photo 19: HMBSLSC access ramp and mobi-chair



Photo 20: Beach access ramp

HMBSLSC AND PUBLIC TOILET RAMP

To the front of the HMBSLSC there is a ramp and set of stairs, providing access from the beach foreshore and promenade to the public toilets and club facilities. The proposed works include:

- 3.2 Install handrails to both sides of the toilet beach access stairs including nosing strip and tactile ground surface indicators to comply with AS1428 (M).
- 3.1 Provide handrails to both sides of the HMBSLSC ramp to improve all ability access to HMBSLSC and public toilet facilities. (M)



Photo 21: Public toilet and HMBSLSC access ramp



Photo 22: HMBSLSC beach ramp

CAR AND BOAT TRAILER PARKING

EXISTING CAR PARKING

There is extensive car and boat trailer parking at Half Moon Bay. Accessed from Cerberus Way, the B14 lower car park provides 61 standard car spaces, 2 accessible spaces and 10 long spaces (i.e. for cars with trailers). The B15 upper car park provides 19 standard car spaces and 15 long spaces. There is no designated bus, bicycle or motorbike parking area. The B13 Love Street car park at Red Bluff provides 130 – 150 unsealed spaces (depending on efficiency of parking) and can also be used by boat trailers and other long vehicles including coaches. There is also parking along Beach Road.

Half Moon Bay experiences high levels of weekend visitation especially over the summer peak when demand for car parking frequently exceeds capacity. Boat trailer parking is less frequently used but peaks occur during popular fishing periods and sailing events when there are long queues to use the boat ramps.



Photo 24: B14 car park

It is not possible to visually tell from Beach Road or Cerberus Way whether there is any parking space within the B14 lower car park. This means all vehicles must complete a full loop, crossing both the Bay Trail and Coastal Walking Trail multiple times and creating significant congestion at the public boat ramp and entry/exit from Beach Road. There is also no direct walking path link between B14 and B15 car parks through to the beach with pedestrians forced onto the road. The parking area in front of the Yacht Club is closed to public vehicles on weekends and used only for club boat trailer parking. This area experiences high levels of congestion in peak periods.

The B13 car park is currently not well used, operating at only 30-40% capacity even during the summer peak despite being the closest car park to the beach. Current upgrade works are designed to improve access, safety and use of this car park. (Refer to the Detail Plans A, B and C)



Photo 23: B15 car park

HALF MOON BAY B14 AND B15 CAR PARKS

- Signage has been installed on Beach Road directing beach visitors to the B13 Love Street car park. This aims to reduce congestion and increase parking capacity in the Half Moon Bay car park and also improve safety for pedestrians accessing the beach.
- A designated boat trailer waiting lane has been line marked through the B14 car park to reduce congestion for through traffic when there are queues to use the boat ramp.
- A designated vehicle turn around area has been provided at the kiosk end of the car park and two-hour parking has been formalised for the spaces in front of the Yacht Club to increase turnover.
- Additional accessible parking spaces have been provided closer to the beach and existing space upgrades meet current standards.
- Provide a designated signed pedestrian route and crossings along Cerberus Way and through to the lower car park and in front of the Yacht Club to the beach.

Other proposed works include:

- 5.2 Relocating parking meters closer to more frequently used parking spaces. (H)
- 6.1 Improving safety at the Coastal Walking Trail crossing point with a raised crossing point to slow traffic and additional signage. Given poor sightlines for approaching vehicles retain as vehicle priority to ensure pedestrians exercise caution when crossing. (H)
- 6.4 Improving safety at the Beach Road entry to Cerberus Way by realigning the Bay Trail and providing right and left turn exit lanes to reduce congestion. (M)
- 6.6 Establishing WSUD stormwater treatment systems within all car parking areas where possible to improve water quality in the bay. (L)



Photo 25: Pedestrian path, Cerberus Way



Photo 26: New bollards installed at Cerberus Beach House



Photo 27: Parking at Black Rock Yacht Club

B13 LOVE STREET CAR PARK

Works are currently being undertaken by Council to reset, improve safety and amenity at B13 car park. Works are due to be completed in 2019 and include:

- Retaining a predominantly unsealed surface but improving safety at the north and south entries where crossing the Bay Trail. Retain both entry/exit points as there is insufficient space for long vehicle turnaround within the car park and too far between them to adopt single entry and exit points.
- Improving railings and clearly sign the beach access point and widen access for pedestrians using the Coastal Walking Trail through the car park.
- Providing two designated accessible parking spaces and new seats overlooking the Half Moon Bay to the HMVS Cerberus and another two seats at the path connection to the Red Bluff lookout.
- Monitoring car park use following changes to direct beach visitors to the B13 Love Street car park and reduce car park size and expand indigenous revegetation areas if capacity still exceeds demand.



Photo 28: B13 Love Street car park north entry under construction 2019

COASTAL PROCESSES

RED BLUFF AND WHITE CLIFFS

The distinctive colour and shape of the exposed cliffs is a key feature of the Bayside foreshore. Rainwater runoff has cut rills into the cliffs leading to cliff instability, and the seepage of ground water can lead to slumping of rock material on to the shore (Bird 2011). These processes are in addition to wave attack at the base of the cliff, however an outcrop of harder Black Rock Sandstone provides some protection to the cliff base. These processes will continue to act to destabilise the cliff and the area is expected to remain hazardous into the future, both at beach level, and at the lookouts and paths above.

Red Bluff continues to be used by walkers, for weddings/photos and occasional illegal parties. Use of security fencing from the beach out past the low water mark is an option, however this is unlikely to be successful in keeping the public from the site in the long term and will detract from the important visual amenity of the site.



Photo 29: Red Bluff

Assessment completed as part of the masterplan recommends using low level fencing and signage to more clearly alert visitors to the dangers of the area. Whilst members of the public may elect to bypass the fencing, particularly at low tide, this would be a conscious decision after being made fully aware of the relevant risks, refer to Figure 5. Alternative bypass routes are also to be clearly signed at beach level and on paths above.



Figure 5: Artist Impression of proposed fencing and signage at Red Bluff

The existing security fencing along the high tide line at White Cliffs is to be replaced with new risk/ warning signage installed to alert visitors to the dangers of accessing the unstable cliff area.



Photo 30: White Cliffs

HALF MOON BAY BOAT RAMPS

There are currently three boat ramps positioned along the northern side of the Half Moon Bay car park area; all ramps can be accessed by the public.

The boat ramps are protected from wind driven waves from the south and south-west, however the ramps are still exposed to rough chop on occasion. The area immediately offshore from the ramps is quite shallow and the public boat ramp requires regular dredging.

The public boat ramp was refurbished by Council in 2015 and will require little maintenance in the next 10 years. The Yacht Club and HMBSLSC ramps are of unknown age and in relatively poor condition, these ramps are likely to require demolition and reconstruction in the next 5 -10 years to remain in peak operational condition. The bluestone sea wall and returns either side of the ramps have been recently repaired by DELWP.



Figure 6: Existing boat ramps

HALF MOON BAY CAR PARK SEAWALL

The western side of the Half Moon Bay car park currently experiences significant overtopping during storm events. This area is currently protected by a low lying rock revetment.

Overtopping of the rock revetment is the result of a combination of wave heights and storm tide water levels. This has quickly degraded the asphalt pavement, making sections of the car park unusable.

Assessment completed as part of the masterplan, recommends the establishment of a low-level wall at the top of the revetment in the same style as the adjacent bluestone seawalls. Refer to Figure 7.



Photo 31: Existing Half Moon Bay car park rock revetment is regularly overtopped



Figure 7: Artists Impression of proposed new sea wall at Half Moon Bay car park

FLORA AND FAUNA

This area of foreshore includes Coastal Headland Scrub (EVC 161) and Spray-Zone Coastal Shrubland (EVC 876) providing important habitat and refuge for a range of indigenous native birds, bats, mammals, reptiles and insects in the otherwise built urban environment.

Red Bluff to Half Moon Bay is covered by a Vegetation Protection Overlay (VP01) in the Bayside Planning Scheme. The VPO applies to the entire foreshore precinct. The aim of the 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. A Permit is required to remove vegetation other than as part of weed control, fire prevention, public safety and road safety management actions.

There has been extensive historical and ongoing community involvement in protection and enhancement of native vegetation and habitat along Half Moon Bay and Red Bluff. Black Rock and Sandringham Conservation Association (BRASCA), Friends of Native Wildlife (FONW) and the local community all actively assist Council in rubbish removal, weed control revegetation and monitoring of flora and fauna.

Tree controls apply within the Heritage Overlay (HO703) Beach Road, Sandringham Beach Park.

The Bayside Native Vegetation Works Program identifies existing vegetation and management issues with a three year monitored list of actions. Vegetation quality assessment is undertaken every five years.

Key recommendations include:

- E1) Revegetate the Red Bluff cliff top with brush matting, cut Boxthorn and low Indigenous vegetation to the coastal side of the fence, to reduce public access and stormwater runoff over the eroding cliffs. (H)
- E2) Continue ongoing pruning to maintain safe sightlines at all road/car park path crossing points. (H)
- E3) Continue foreshore weed eradication works in partnership with local community groups and revegetate with local indigenous species in accordance with nominated EVC. (H)
- E4) Subject to recommendations and requirements of the Cultural Heritage Management Plan, carefully remove weeds and continue revegetation with local indigenous species behind the HMBSLSC and at beach level to protect existing midden sites. (M)

- E5) Undertake targeted removal of introduced Palm trees where accessible on the foreshore embankment. (L)
- E6) Establish raingardens to improve stormwater treatment and water quality discharged to the beach and bay from existing car parks. (L)
- E7) Commence active revegetation of the embankment below the Half Moon Bay lookout while maintaining sightlines.
- E8) Following improvements to the Coastal Walking Trail through the B13 car park, investigate closure and revegetation of the cliff top at the end of Potter Street. (L)
- E9) The steep grass fill embankment is unstable and revegetation in this area is a low priority due to cost and risk, in completion of works. (L)
- E10) Retain and protect areas of Mallee Drumstick fungus found on the Red Bluff cliffs. Avoid ground disturbance and ensure establishment of 'no go zones' during path and car park upgrade works. (O)

DRAWING KEY

-  SIGNIFICANT VEGETATION Coastal Headland Scrub EVC (161)
-  SIGNIFICANT VEGETATION Spray-zone Coastal Shrubland (876)
-  OPPORTUNITIES FOR ADDITIONAL REVEGETATION
-  Modified Coastal Headland Scrub EVC (161)
-  Mallee Drumstick Fungus *Battarrea stevenii*
-  Vegetation management zone to retain safe sightline at crossing points



Figure 8: Environmental Management

OVERALL IMPLEMENTATION PLAN



Figure 9: Overall Implementation Plan

DETAIL PLAN A – HALF MOON BAY



- A5 Establish new direct pedestrian crossings throughout B14 car park including relocation of existing light poles. (H)
- A2 Establish disabled parking bay and line marking to adjacent shared area. (H)
- A11 Remove steps up on to the pier and replace with accessible ramp with handrails to both sides. (L)
- A12 Liaise with Parks Victoria to install seating to the pier and ramp area (M)

- A8 Liaise with relevant stakeholders to reinstate interpretive signage to the southern end of the pier. (H)
- A13 Install new seating area at the western corner of B14 car park, with views to the bay. (L)
- A2 Establish disabled parking bay and line marking to adjacent shared area. (H)
- A9 Liaise with DELWP to extend seawall behind the existing rock revetment to protect car parking and path from wave action during high tide/storm events. (M)
- A10 Establish a new Gross Pollutant Trap (GPT) and litter baskets to improve stormwater management and water quality in the bay. (M)
- A6 Relocate existing parking meter closer to more frequently used parking areas. (H)
- A7 Re line mark B14 car park to establish defined boat launching waiting area to reduce traffic congestion. (H)
- A15 Establish new pedestrian crossing and drainage to improve pit inlet efficiency. (M)

- A21 Replace existing handrail and picnic furniture at the Half Moon Bay Lookout. (L)
- A20 Replace ageing pine log stairs from Cerberus Way and install handrails to both sides. (M)
- A23 Replace fencing and install risk warning signage at White Cliffs. (H)

A22 Replace existing Bayview Crescent ramp retaining wall on approach to the toilet block, ensure protection of cultural heritage values and native vegetation during works. (H)

A18 Realign the B15 Cerberus Way entry from Beach Road to establish right and left hand exit lanes to reduce traffic congestion and improve safety on the bay Trail. (M)

A19 Establish rain gardens in B15 car park to improve stormwater treatment and water quality. (L)

A16 Establish raised pavement vehicle priority crossing, new signage and improved sightlines for the coast walking path crossing on Cerberus Way. (H)

A17 Upgrade pedestrian path links down Cerberus Way to improve safety. Relocate planted indigenous vegetation where possible and offset impacts on native vegetation with closure of the nearby duplicated unsealed path. (H)

DRAWING KEY

- EXISTING GARDEN BEDS
- EXISTING GRASS
- EXISTING SEALED ROAD PAVEMENT
- EXISTING SEALED PATH
- EXISTING UNSEALED PATH
- EXISTING BAY TRAIL SHARED PATH
- EXISTING SEA WALL
- EXISTING SEATS
- EXISTING PATH RAMP
- EXISTING POST AND CABLE FENCE
- EXISTING COASTAL FENCE
- EXISTING CHAIN MESH FENCE
- EXISTING BUILDINGS
- TO BE REMOVED
- PROPOSED NATIVE GARDEN BED
- PROPOSED WSUD GARDEN BED
- PROPOSED SEALED ROAD PAVEMENT
- PROPOSED BAY TRAIL SHARED PATH
- PROPOSED SEALED PATH (CONCRETE)
- PROPOSED UNSEALED PATH (GRANITIC GRAVEL)
- PROPOSED PATH RAMP
- PROPOSED DISABLED PARKING BAY
- PROPOSED SEA WALL
- BOLLARDS
- REMOVABLE BOLLARDS
- PAY STATION RELOCATION

0 10 20 30 50

Figure 10: Half Moon Bay

DETAIL PLAN B – HALF MOON BAY WEEKEND AND EVENT MANAGEMENT

HMBLSLSC patrols the foreshore with members trained and prepared for emergency situations. The existing beach access is constrained by the building making it difficult for patrols to quickly manoeuvre rescue craft and equipment from their storage area at the southern end of the building to the beach, especially on busy beach days.

Black Rock Yacht Club (BRYC) utilise the public parking area in front of the club for rigging boats on Thursday night and all day Saturday and Sunday over summer.

At these times the area in front of BRYC is closed to public parking by the club. Retention of safe pedestrian and emergency access through this area to the beach can still be an issue when there are lots of boats rigging and launching.

Larger sailing and other events at Half Moon Bay are managed through specific event management plans prepared by the event organiser. Event management plans are then reviewed by Council and if required DELWP. Proposals include:

- (C1) New signage has been established on Beach Road directing Half Moon Bay beach visitors to the B13 Love Street Car Park and boating visitors to Cerberus Way to reduce congestion on the Half Moon Bay promenade and improve public safety on busy days.
- (C2) HMBLSLSC will need to continue to move emergency craft to the beach ahead of events and busy periods to reduce congestion and risk to public on the existing ramps.
- (C3) The 3.0m wide central emergency vehicle and pedestrian 'clear zone' has been line marked in front of the The Yacht Club to retain this area clear of boats while rigging.
- (C4) Review event management plans to assist BRYC in managing existing public parking exclusion zones on weekends and during sailing events.
- (C5) Bollards to restrict unauthorised vehicle access through to HMBLSLSC and to protect pedestrian queuing at the cafe have been installed.
- (C6) Undertake a Cultural Heritage Management Plan to determine:
 - Sustainable management of existing cultural heritage values around the HMBLSLSC.
 - Potential expansion of the HMBLSLSC footprint toward the existing bathing boxes and widening of the existing building and public toilet access ramp to improve all ability access.
- (C7) Retain and protect the existing bluestone seawall and ramps.



Existing BRYC boat rigging area



Existing access to beach



Retain existing emergency beach access from B14 car park.

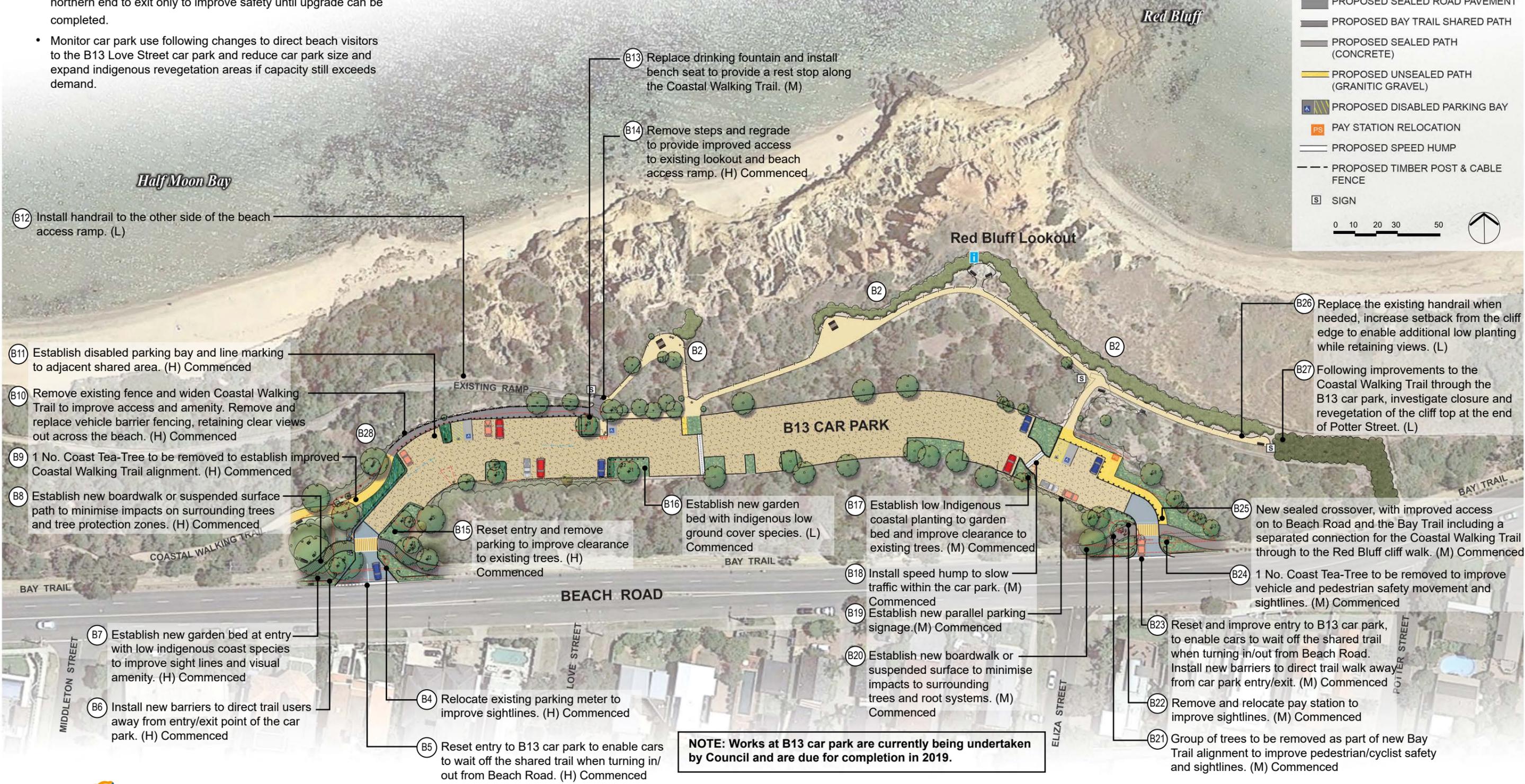
Figure 11: Half Moon Bay Weekend and Event Management

DETAIL PLAN C – RED BLUFF AND B13 LOVE STREET CAR PARK

OVERALL DESIGN INTENT

- Retain car park as predominantly unsealed but improve safety at the north and south entries where crossing the Bay Trail. Retain both entry/exit points as there is insufficient space for long vehicle turnaround within the car park and too far between them to adopt single entry and exit points.
- Upgrade the more popular southern entry first and change the northern end to exit only to improve safety until upgrade can be completed.
- Monitor car park use following changes to direct beach visitors to the B13 Love Street car park and reduce car park size and expand indigenous revegetation areas if capacity still exceeds demand.

(B2) Install new risk warning signage and extend brush matting and low Indigenous planting on the coast side of the fence to discourage access and reduce erosion from stormwater runoff, while retaining views. (H)



NOTE: Works at B13 car park are currently being undertaken by Council and are due for completion in 2019.

Figure 12: B13 Love Street car park

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