



# DENDY STREET BEACH MASTER PLAN

REPORT PREPARED BY URBAN INITIATIVES. 22 NOVEMBER 2013



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# 1.0 INTRODUCTION

## STUDY INTRODUCTION



Figure 1. Study area



### HISTORY

Aboriginal peoples' occupation of the study area is likely to have extended over thousands of years. This occupation would have taken the form of temporary camps used on a seasonal basis, making use of diverse resources in the area.

There is one registered Aboriginal cultural heritage place located within the precinct. This Aboriginal cultural heritage place consists of a shell midden (7822-0014) recorded in 1989 by Ellender and Weaver.

Dendy Street Brighton and the adjoining stretch of beach got its name from Henry Dendy, who in 1840 obtained the original land grant from Colonial authorities for eight square miles of Port Phillip land, in what is known as Brighton today. Following legal disputes over the status of the land above the high water mark along The Esplanade in Brighton, the Colonial Government sought to clarify ownership by transferring the land, then known as the Brighton Beach Reserve, to the Borough of Brighton in 1877.

Privately owned bathing boxes had been a feature of the Brighton foreshore since as early 1862 but applications for the construction of bathing boxes greatly increased in the early years of the 20th century following the completion of the single line railway tram from St Kilda to Brighton Beach in 1906. In the 1930s many bathing boxes were moved to Dendy Street Beach from other Brighton beaches and the Brighton Bathing Box Association was formed circa 1935.

Today there are 86 bathing boxes at Dendy Street Beach. This collection of simple, brightly painted, gable roofed, timber structures are a widely recognised feature of the Brighton foreshore and a significant local tourist attraction. The bathing boxes received local heritage protection when Bayside City Council approved 22 heritage precincts in 2000. These precincts protected various properties, landscapes and trees, including the bathing boxes.

### LOCATION

Dendy Street Beach is approximately 12 kilometres from central Melbourne. The beach is situated between Middle Brighton Baths to the north and Green Point to the south. Dendy Street Beach lies within the northern ward of Bayside city Council.

### MASTERPLAN

The Bayside City Council appointed Urban Initiatives in July 2012 to undertake the public engagement and design process required to develop an integrated Masterplan for Dendy Street Beach. The Masterplan articulates Council's vision for the future development of the site and provides the framework for the ongoing management and future decision-making that will affect Dendy Street Beach.

Generally, works proposed in the Masterplan seek to improve the appearance, amenity, safety and functionality of Dendy Street beach. Implicit in the development of the plan was the recognition of the distinct character and historical significance of Dendy Street beach,



## STUDY INTRODUCTION - CONT

its iconic bathing boxes and their natural setting. The bathing boxes are a popular local landmark and a strong drawcard for local and international tourists. Proposals canvassed in this plan are designed to build on the special sense of place found at Dendy Street beach.

The plan addresses the many issues related to access and circulation throughout the site while also critically evaluating existing amenities.

The Masterplan identifies and prioritises improvements to existing site infrastructure, as well as proposing a range of new amenities. The plan outlines the preferred building envelope for a new public building to house the Brighton Life Saving Club as well as a café or kiosk and public changerooms and toilets. It also illustrates a redeveloped and landscaped public car park. The plan identifies the preferred site

and form for the stormwater capture and treatment system that is being developed by Council following a recent study that looked at options including a diversion of stormwater to a treatment and infiltration raingarden. This will ultimately result in only larger rain events discharging across the beach, in a location to the north of the current beach outfall.

The Masterplan articulates parameters for the siting, size, form and materiality of both the building project and the stormwater diversion scheme.

### THE SITE

The site is centred on the Brighton bathing boxes and the BLSC but also extends to include the grassed slopes to the north and including Holloway Bend in the south. The site's broader open space and urban context has, however, been considered in developing the Masterplan.

## MASTER PLAN AIMS AND OUTCOMES

The particular aims identified by Council in the project brief were:

- To preserve and enhance the unique characteristics of the precinct, especially those relating to the bathing boxes
- To reinforce and promote the precinct as an attractive beachside location
- To ensure accessibility throughout and to the site for all
- To provide a safe and secure environment
- To provide scope for improvement to beachside and ancillary facilities
- To resolve the Lifesaving Club's functional needs and its interface with the public realm

- To provide wayfinding and interpretation opportunities to enhance the visitor experience
- To improve the existing carparking area
- To celebrate the main entry to the site and the various sub-precincts within the site
- To consider appropriate locations for increasing the number of bathing boxes

The desired Masterplan outcomes sought by Council were:

- A vision for the future of the Dendy Street Beach Precinct that is supported by the community and a wide range of stakeholders
- A Masterplan that outlines the

long-term vision for the area, the key development principles and implementation actions

- A three year Capital Works Program with approximate costings, and priority actions identified for year one
- Facilitation of the Dendy Street Beach Precinct as a significant beach tourism and recreational facility in the City





# 2.0 MASTER PLAN PROCESS

The Masterplan has been developed collaboratively between Urban Initiatives and Council officers following a detailed public consultation workshop.

This process included an initial meeting with a full range of relevant Council officers representing Recreation, Events and Social Development, Asset Management, Traffic Engineering and Transport Planning, Capital Works, Drainage and Infrastructure, Property and Environmental Sustainability and Open Space. The meeting refined the scope of the project and examined the site's history, pattern of use, existing conditions and a range of future opportunities.



Figure 2. Site analysis plan



A - View of the bathing boxes from the carpark



B - Entry to the beach from the car park and Life Saving Club building



C - View towards Holloway Bend from Green Point



D - The Bay Trail shared use path



E - Southern toilet block



F - Northern grassed bank



## COMMUNITY WORKSHOP

The consultants then prepared a suite of site analysis plans and diagrams that were presented to a community workshop held at the BLSC on Wednesday September 5, 2012.

The Brighton Life Saving Club, the Friends of the Brighton Dunes and the Brighton Bathing Box Association were represented at the meeting, along with approximately 50 local residents and bathing box owners. Additional liaison occurred throughout the development of the plan with representatives of the BLSC while interested agencies, namely Parks Victoria and the Department of Sustainability and Environment, were briefed on the project. Other parties invited to the consultation workshop included Tourism Victoria, Aboriginal Affairs Victoria, Life Saving Victoria, Victoria Police, the 2nd – 11th Brighton Sea Scout Group, the Bayside Tourism Network and Bicycle Victoria.

At the workshop the consultant presented a summary of the site conditions and discussed issues identified by the site analysis

process and by Council officers. The ensuing workshop discussion was structured around a series of site analysis and opportunity plans and a list of related questions (Appendix No. 1: Workshop Presentation, Workshop Discussion Plans and Workshop Questionnaire).

The principal issues discussed were:

- Possible building footprints for a new public building to house the life saving club and public amenities
- The form, size and condition of the car park
- Ramp proposals to allow compliant accessible route to the life saving club, the beach and the foreshore promenade
- The condition and number of beach access tracks
- The proposed stormwater capture and treatment project and its siting on the northern slopes
- Site circulation, specifically the foreshore promenade and the Bay Trail shared use path

- Foreshore reserve infrastructure and amenities to the north and south of the life saving club area
- Foreshore and dune vegetation

The workshop participants were divided into four groups that were facilitated by a Council officer or a member of the consultant team. The groups were asked to respond to sixteen questions about the principal issues. A written summary of each discussion was completed by the group facilitators and each group reported back to the larger meeting.

A summary of the workshop discussion is provided in Appendix No. 2.



Beach outfall



Existing car park



Dune/ bathing box

## COMMUNITY WORKSHOP OUTCOMES

The clear areas of broad agreement at the workshop can be summarised as:

- That a new, larger public building to house the life saving club be allowed to replace the existing facility as long as the new building is designed in a way that renders it sympathetic to its environment.
- There was general, though not unanimous, support for limited commercial activity (café/kiosk) in the redevelopment.
- That a two level building is acceptable as long as existing viewlines and the natural setting are considered in its design.
- There was broad support for new public toilets/ changerooms and ancillary items such as beach showers and bicycle racks
- That the car park capacity should not be increased although an improved, more attractive and better landscaped car park is desirable
- That the stormwater capture/ treatment project is supported despite some scepticism about Council's capacity to deliver and maintain such a project
- That additional beach related facilities are desirable, such as changerooms, café or kiosk, greater shade provision, public plaza and seating, beach showers, bike parking, bins, viewing deck, accessible ramp and improved beach transitions
- Majority support for the boardwalk extension of the foreshore promenade and for appropriate tourist/wayfinding signage, although there was some dissent on these proposals
- General support for widening of the shared Bay Trail path on The Esplanade
- That the existing access paths to the beach require upgrading to make them safer and more comfortable connections, including improvements to visibility where they meet The Esplanade
- That the southern toilet block area should be kept and upgraded, with added facilities such as picnic tables, bike racks and improved landscaping/ planting. Similar improvements in the northern zone were regarded as desirable by some groups but not by others

- There was general, though not unanimous, support for additional bathing boxes



Dendy St Entry



Southern Terrace

## COUNCIL WORKSHOP

A similar presentation of the issues was made to Council officers on Thursday September 20, 2012.

Recreation, Events and Social Development, Asset Management, Traffic Engineering and Transport Planning, Capital Works, Drainage and Infrastructure, Property and Environmental Sustainability and Open Space were again represented at the meeting.

Various views were canvassed in the ensuing discussion and a range of principles reiterated.

Among these were:

- That public open space should not be lost to private development
- That accessibility for all should be maximised
- That wayfinding and orientation signage is important
- That infrastructure should be designed to minimise recurrent and ongoing costs
- That the parking area, including exit and entry points, should be safe and convenient and that provision for a bus drop off within carpark is vital
- That pedestrian and cycling/ vehicle conflict points must be addressed
- That an integrated transport strategy is desirable where various modes of transport are promoted
- That connectivity through and to the site be improved
- That the scale and cost of proposed capital projects should be realistic and deliverable
- That Masterplan consultants should liaise with stormwater/ drainage consultants during the course of the project
- That emergency access to the beach remain a paramount design consideration
- That vehicle access should be moved to the northern side of the building to overcome the awkward siting of the vehicle ramp in relation to the bathing boxes, the foreshore promenade and the life saving club
- That the life saving club building should complement the natural environment
- That there may be property management and leasing merit/benefits in separating the functional activities of the Life saving club and café/public amenities.



## WAYFINDING AND SIGNAGE

### OVERVIEW/ANALYSIS

- The existing locational signage found at Dendy Street Beach occurs at selected locations adjacent to the road along the foreshore reserve. The green painted signs are arguably dated and offer only minimal locational information.
- The site also features a series of interpretative signs at the southern end of the existing carpark at the edges of a beach access path.

### ISSUES CONSIDERED IN THE MASTERPLAN PROCESS

- Dendy Street Beach and its Brighton bathing boxes are widely acknowledged as an important tourist attractions but one that is not well connected to the public transport network or to local activity centres. The lack of directional signage from local centres and train stations is a significant problem, especially for international tourists seeking out the bathing boxes.
- Signage or other interpretation features that illuminate the

history and significance of the bathing boxes and other aspects of the Brighton foreshore should be a feature of any building (and surrounds) development at Dendy Street. Such features should be sited more centrally than then current location.

### THE MASTERPLAN HAS IDENTIFIED THE NEED FOR:

- Wayfinding signage to clearly mark the route to Dendy Street from the Middle Brighton and Brighton Beach railway stations in Church Street and at South Road respectively.
- Orientation signage on the Bay Trail at Brighton Beach and Green Point in the south and at Middle Brighton Baths in the north so that those visiting on foot or bicycle can easily find their way to Dendy Street.
- Distinctive signage on The Esplanade at the entry to the Dendy Street Beach carpark.

### RECOMMENDED ACTIONS

- That Council include wayfinding and locational signage as a priority in any future projects concerned with improving or promoting the Dendy Street Beach area.
- That any signage specifically designed for the Dendy Street Beach area should be distinctive and clearly reference the bathing boxes, but still sympathetic in form, material and colour to the natural setting.
- That interpretation features or facilities be included in the brief for any redevelopment of the public building/s and their surrounds on the site.



Existing locational signage



Existing information signage



Existing interpretive signage

# DENDY STREET BEACH PUBLIC BUILDING/S AND SURROUNDS SCENARIOS

## OVERVIEW/ANALYSIS

- The two buildings that currently house the BLSC and the public toilets and change facilities at Dendy Street Beach are generally considered run down and inadequate. They share a site at the foot of the embankment immediately adjacent to the foreshore promenade that is approximately 1320 square metres in area.
- The BLSC are keen to have a larger building for their use that better fits their contemporary functional requirements while new public amenities at the site are also desirable. Additionally there are other local groups, such as the Swimming Club who conduct beach related activities for whom access to a new building might be desirable.
- There is also a widely acknowledged need for café or kiosk facilities to provide for visitors to the beach and the bathing boxes.
- The proposal is to remove the existing building/s on the site and replace it with a new building to house the BLSC and a range of other possible appropriate uses.

## ISSUES CONSIDERED IN THE MASTERPLAN PROCESS

The Masterplan brief required that a range of issues be considered in developing siting and design guidelines for any new building/s at Dendy Street Beach.

A series of scenarios for the layout, scale and massing of the building were developed and discussed by the consultant team and Council's Urban Place Coordinator and Landscape Architect.

## THREE PRINCIPAL SITE DESIGN VARIABLES WERE EXAMINED IN THESE SCENARIOS:

- The spatial and functional organisation of the building on the site (i.e. the arrangement of the internal and adjoining external uses)
- The siting of pedestrian entry (stairs) from the car park to the building platform, the beach and the bathing box precinct (i.e. whether the main entry is to the south of a new building, closer to the bathing boxes or centrally sited between building volumes)
- The number and arrangement of building volumes (i.e. whether one building included all uses/

functions or whether the building is divided into two distinct volumes with a public space between them)

These scenarios were then assessed against the evaluation criteria by a panel composed of Council's Urban Place Coordinator and Landscape Architect and two members of the consultant team with architectural, landscape architectural and urban design qualifications.

This assessment narrowed the options to two possible building footprints, one a single building with public access stairs to the south and two, a two building arrangement with a central access stair. A building envelope was developed that can accommodate either option, allowing for considerable flexibility for future design of buildings on the site.

## RECOMMENDED ACTIONS

The Masterplan outlines a maximum building footprint of a nominal 1000 sq. metres over two levels which be included as a critical part of the brief for any building development on the site.

Attached are three-dimensional massing diagrams, a nominated building footprint and a set of design guidelines that will govern the design of any building on the site. (Refer Figure 3, 4 and 5).

Additionally the design guidelines discuss public space and access around the site and in particular nominate a minimum size for the public access stairs from the car park and the functional mix for the proposed public space between any new building and the foreshore promenade. These public space and access guidelines must also form part of any such brief.

## DESIGN GUIDELINES: BLSC and Public Amenities Building:

- The building development must be designed to house the required public amenities, the BLSC and possibly other groups that may be deemed appropriate by Council for this site. Accommodation of the needs of these other possible groups or associations must not compromise the area required for either the public amenities or the emergency and training needs of the BLSC.
- The form, materiality and colour of the building/s must be sympathetic to the natural coastal setting.
- The siting, scale and form of the building/s and any associated public space and furnishings must have a considered relationship to the bathing boxes. This relationship must include careful consideration of existing views to the bathing boxes and the city from the beach and Green Point.



- The building development should not physically overwhelm or inhibit views to the bathing boxes. Specifically, any single storey volume sited behind the bathing boxes will have a low profile roof and have glazed, transparent walls on its northern and western elevations.
- The development must sit within the nominated footprint. (Refer to Figure 3a, 3b & 3c for the maximum extents of ground and first floor building volumes).

#### **Ground floor:**

- Activity and uses associated with the BLSC and any other group/user that require vehicle/boat access to the building and foreshore should be concentrated to the north of the site adjoining the proposed vehicle access ramp.
- The development must include accessible public toilets and changerooms sited on the ground floor of the site.
- The public toilets/changerooms must have external doors, accessible and clearly visible

from the public areas. It is preferable that these facilities be located on the side of the site occupied by the café or kiosk facility.

- A commercial café or kiosk facility with a maximum floor area of 90 square metres can be considered as part of the building development. Any such development should positively address the public space between the building and the beach.

#### **First floor:**

- Any first floor component of the building/s shall positively address the carpark, i.e. not be designed as the back of the building. This must include a reasonable degree of transparency (glazing) on the eastern elevation and entry area.
- The first floor where not enclosed may include a public deck or viewing area.
- Design of any first floor component of the building/s shall endeavour to maximise Bay views. It is desirable for a

proportion of the first floor to remain available for public or semi-public access.

- Plant or equipment shall not be located on the roof of the building.

#### **Public space and access:**

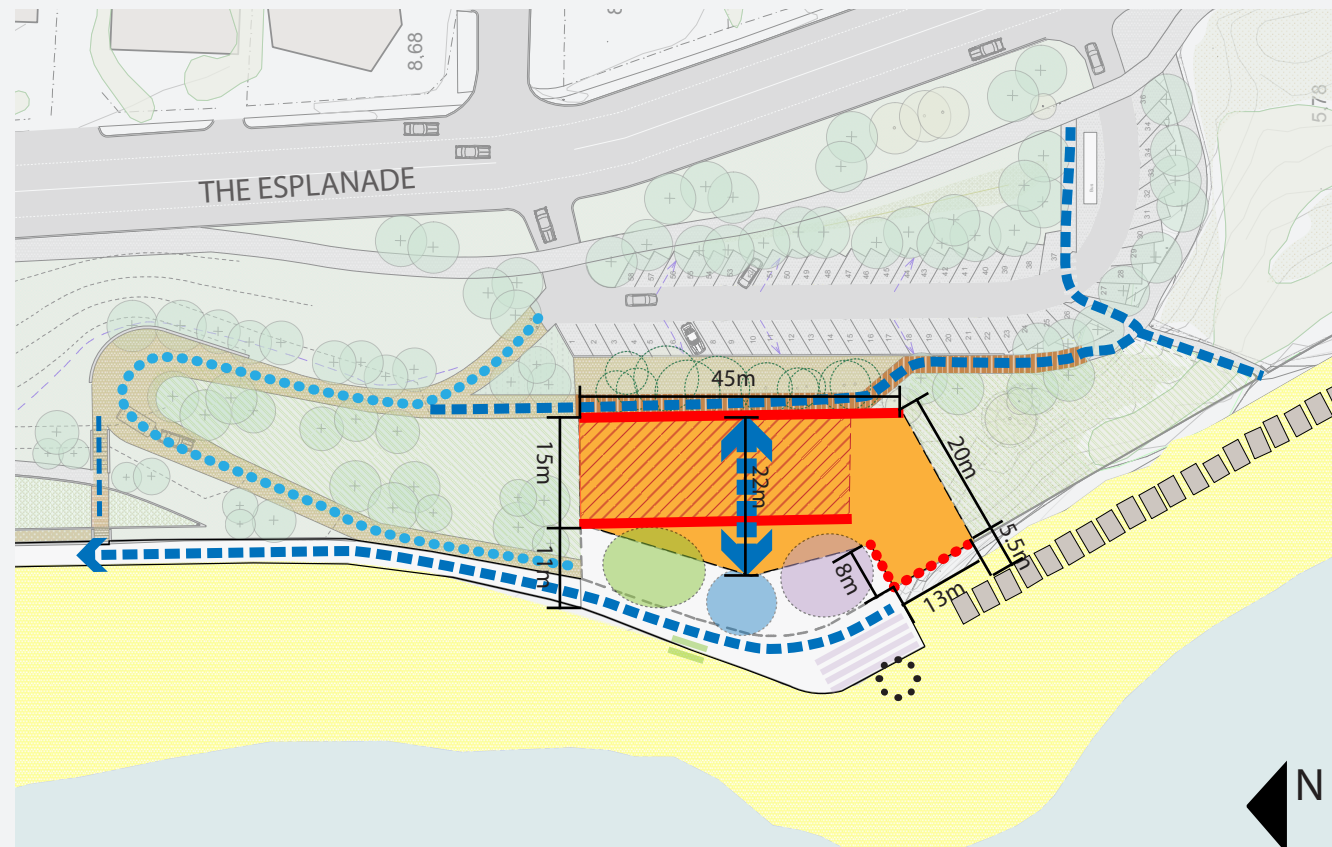
- A minimum 6m width public access stair/terraces shall be included in the building design. This may be sited centrally between two building volumes or to the southern end of the site between the bathing boxes and a single building. The stair shall include generous landings or terraces where the public can take advantage of Bay views.
- The stair shall connect the carpark and its access paths to a public plaza at the front of the building/s and be the principal point of entry to the site.
- The plaza area shall serve as the junction of the existing foreshore promenade, the main entry stairs, the shared pedestrian and vehicle ramp and the proposed boardwalk extension to the south. This

space will also be the main access point to the building/s for beach related activities and to the public amenities.

- The plaza between the building/s and the pedestrian promenade will cater for beach related public uses through the provision of appropriate furniture and a decked transition to the beach adjacent to the bathing boxes. The area will be designed to allow for potential outdoor café/dining and include appropriate landscaping, including some tree planting.
- The plaza will allow for vehicle and boat access, including adequate manoeuvring and setup space on the northern side of the plaza and a boat ramp adjacent to this space.
- The development must include a shared pedestrian and vehicle ramp at a maximum grade of 1:20 to the north of the Brighton Life Saving Club.
- The development shall provide a minimum 8m wide pedestrian threshold space, between the building/s and the carpark. This threshold will allow for the

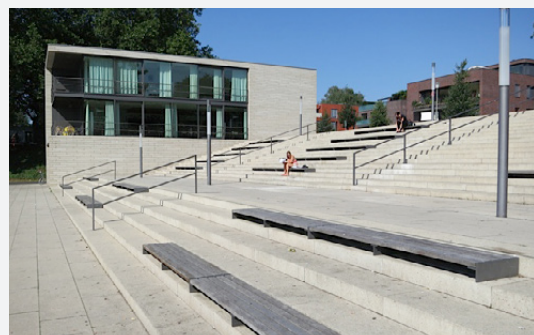
retention and protection of the existing trees and for the creation of a landscaped pathway or boardwalk along the eastern elevation of any building/s. This pathway must connect to the northern access ramp and to the pedestrian paths in the reconfigured carpark.

- Any boardwalk structure proposed as part of the development must be built with materials that are sympathetic to the coastal setting.



- KEY
- Maximum ground floor volume
  - Maximum first floor volume
  - Minimum 6m access stair
  - Minimum 8m pedestrian threshold
  - Potential outdoor cafe dining
  - Potential boat access/ manoeuvring and setup space
  - Decked transition to the beach
  - Relocation of the boat ramp to the northern side of the plaza
  - Potential public gathering / landscaped zone
  - Pedestrian path
  - Shared vehicle/ pedestrian path Max 1:20
  - Undergrounding of power and provisions of low energy LED lighting

Figure 3. Building footprint diagram



Example of generous stair connecting to a public plaza



Example of building materials sympathetic to the coastal setting

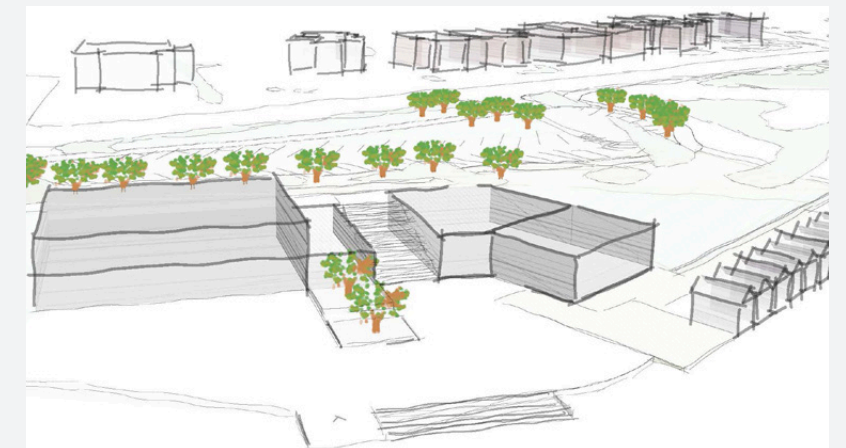


Figure 4. Possible building configuration within the nominated footprint (Scenario One)

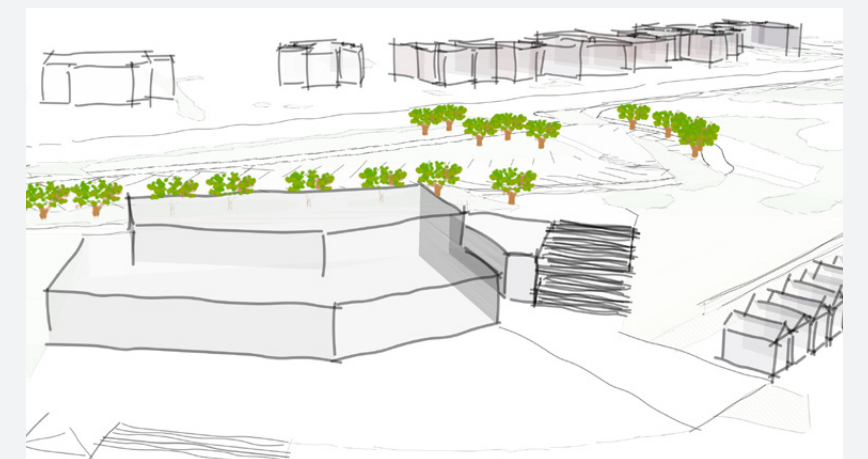


Figure 5. Possible building configuration within the nominated footprint (Scenario Two)



## STORMWATER CAPTURE/TREATMENT PROJECT

### OVERVIEW/ANALYSIS

- The existing stormwater outfall at Dendy Street Beach discharges beneath the seawall directly on to the sand in front of the pedestrian promenade. Water pools semi-permanently on the sand and is perceived as unsightly and unhygienic.
- During 2012, Bayside City Council engaged consultant engineers GHD to investigate alternative stormwater discharge options to improve upon the current beach outfall at the front of the BLSC building.
- Bayside City Council's preferred option is to divert the stormwater main drain to a 600 square metre raingarden in the landscaped area to the north of the BLSC building. A raingarden is a 'natural' treatment and infiltration pond that allows for the partial treatment (filtering) and infiltration of stormwater from rain events.
- The proposed raingarden will have sufficient capacity to prevent up to 60% of rain events from overflowing to the outfall points across the beach. Larger

rainfall events (approximately 40% of events annually) will exceed the raingarden's capacity and will therefore still outfall across the beach).

- The current scheme proposes a more widely disbursed beach outfall well to the north of the current location. This will avoid the beach scouring and associated hygiene and amenity issues that are currently an issue at Dendy Street beach.

### ISSUES CONSIDERED IN THE MASTERPLAN PROCESS

- Technical constraints such as the level (height) at which the raingarden must be constructed in the landscape to allow gravity fed drainage from the existing stormwater drain.
- Various locations for the raingarden have been discussed in the context of the existing uses of the slopes to the north of the carpark, the crossfall or gradient of the grassed slopes and existing landscape character, its features and vegetation.

### RECOMMENDED ACTIONS

- That any raingarden constructed by Council in the foreshore reserve take on a linear form and sit immediately behind the dune/cliff that runs parallel to the foreshore promenade. The planted raingarden can then form part of the wider verge of landscaping/planting along this edge.



Stormwater treatment raingarden



Existing stormwater outfall

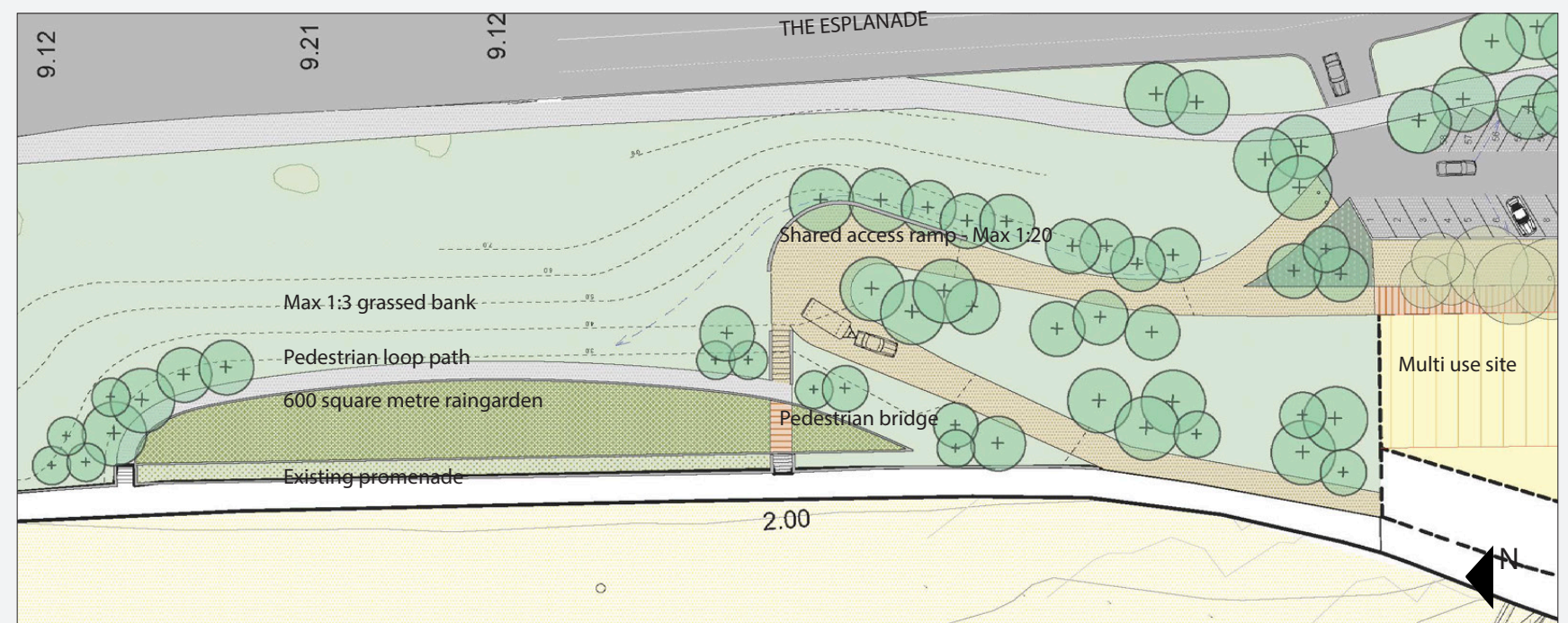


Figure 6. Proposed stormwater treatment project

# CAR PARK

## OVERVIEW/ANALYSIS

- The existing carpark at Dendy Street Beach has 66 line-marked parking bays and one food vendor bay. The carpark is roughly triangular in shape and has an entry point at its northern end opposite Keith Court and an exit point at its southern end, halfway between Keith Court and Dendy Street.
- In its south-western corner the carpark leads to the vehicle ramp that in turn connects to the foreshore promenade.
- The carpark has a relatively steep crossfall down from the road toward the foreshore embankment.
- The existing carpark at the BLSC is an awkward shape, unattractive and inefficient in design.
- The carpark features two carriageways that service only three rows of parking bays. (A carriageway should ideally be 'double loaded', servicing two rows of bays.)
- The carpark forms a wide apron

of asphalt with little in the way of shade provision.

- There is no provision for coach or larger vehicle parking or drop off.
- There is no waiting zone at the entry point to the carpark, i.e. a car length space that allows a vehicle entering the car park to wait and allow a pedestrian or cyclist to pass on the Bay Trail.
- Sight lines toward the Bay Trail (and vice versa) at the carpark entry and exit points are considered inadequate and unsafe.

## ISSUES CONSIDERED IN THE MASTERPLAN PROCESS

A range of car parking layouts have been explored in consultation with Council traffic engineers. Given the preference to maintain the current entry and exit locations and resultant one-way system, the recommended outcome is to narrow and lengthen the car park, using the double loading principle. Although this will result in the loss of a small area of landscaping to

the south the resultant footprint increases the landscape area to the east where the car park is set back further from The Esplanade. This car park arrangement results in a net loss of nine bays but it gains a dedicated space for coach parking. It also allows for greater tree planting and hence shading of the parking areas.

The car park design also allows for a single car waiting zone at the entry and exit which will improve the safety of these turning movements. Similarly the Masterplan proposes modifications to the interface with the shared- use Bay Trail path in this location to improve visibility and slow cyclists.

The carpark changes also allow for a pedestrian crossing point through the carpark from the bus parking bay. This will join to the principal pedestrian pathway on the western side of the carpark, which in turn would meet both the entry stairs and the ramp which will lead down to the foreshore promenade.

## RECOMMENDED ACTIONS

That the Dendy Street Beach carpark be redesigned as an allied project to any redevelopment of the buildings at Dendy Street Beach and that the redesigned carpark, as well as conforming to the prevailing Australian standards, also include:

- A layout that maximises efficiency
- A bus parking bay
- Safe waiting zones for vehicles entering and existing the carpark
- Associated re-routing of the Bay Trail (shared-use path) at the carpark entry and exit points to ensure clear sitelines
- An open landscape on its eastern boundary featuring only clear trunked trees and groundcovers to improve sitelines
- A consistent tree planting along its edges to maximise shade provision
- Clear, safe and well-linked pedestrian paths around the carpark, including a crossing point from one side of the carpark to the other.

- Clear emergency vehicle access route through the carpark to the proposed ramp to the foreshore promenade

## Entry Treatment – Arrival Experience

The carpark is the principal entry point to Dendy Street Beach. The sharply sloping grade of the carpark renders it largely invisible from The Esplanade and the entry points present as unassuming openings at the road edge. The reconfiguration of the carpark presents the opportunity to create a much wider landscaped setting between the road and the carpark. This, coupled with the proposed pedestrian threshold space around the existing trees between the carpark and any new building/s, will allow for complementary tree plantings on either side of the carpark and a pedestrian pathway through the carpark. These landscape opportunities, along with the proposed entry stair to the beachside promenade and plaza, will improve immeasurably



CAR PARK - CONT

the arrival experience at Dendy Street Beach. These changes should be designed to work together in providing an appropriate entry experience to the bathing boxes on the foreshore.



Carpark stormwater treatment example

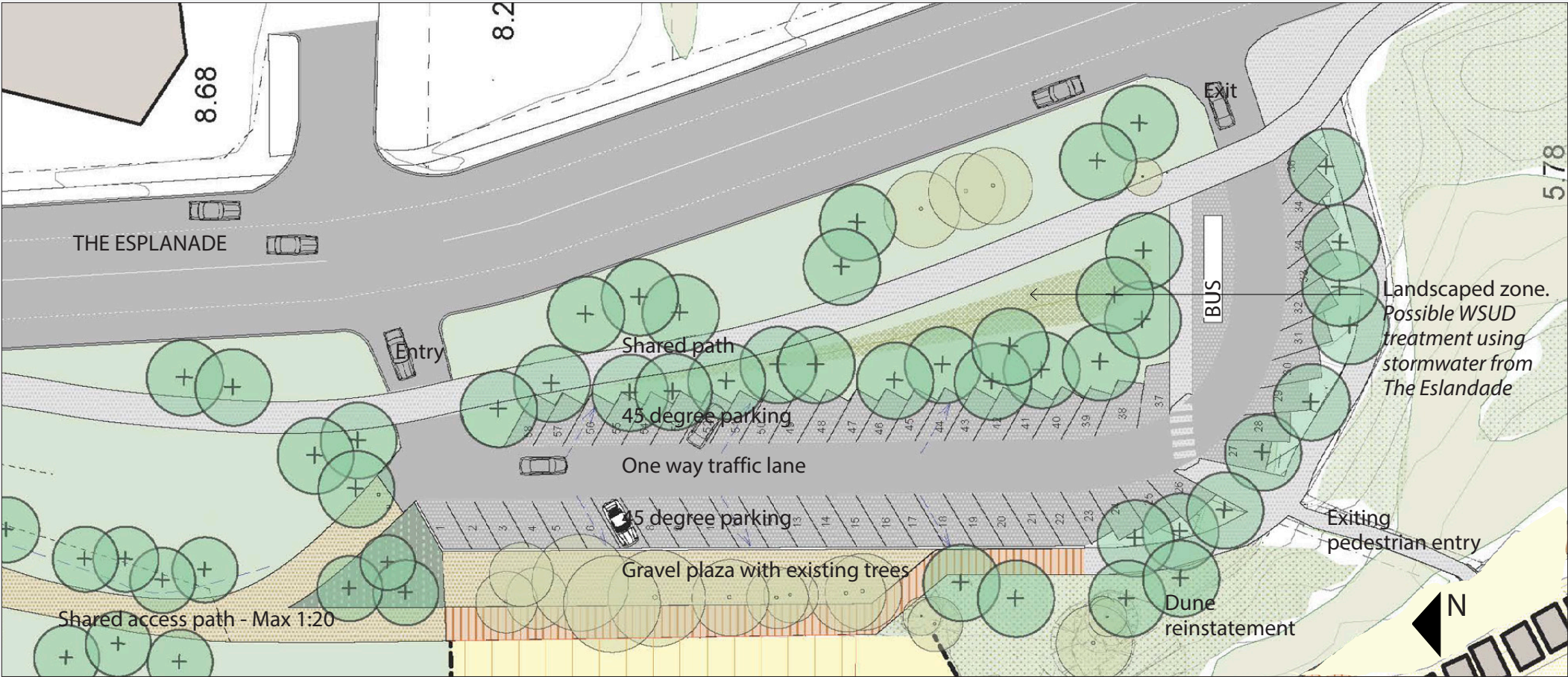


Figure 7. Proposed car park reconfiguration

## BEACH ACCESS PATHS

### OVERVIEW/ANALYSIS

- There are currently eight access points (A – H) to Dendy Street beach between the BLSC building (where the foreshore promenade currently terminates) and Green Point to the south. (The access paths are described and evaluated in Table X in Appendix No. 5)
- The first two of these, the pedestrian and vehicle ramps adjacent to the BLSC building, would in all likelihood be removed in any redevelopment of the building/s.
- None of the existing access paths or ramps comply with accessibility or building code standards.
- A universal access path/ramp is proposed in this Masterplan from the northern end of the carpark to the lower level of the foreshore promenade.
- The remaining access paths also require relatively urgent work to bring them up to an acceptably safe standard.

### ISSUES CONSIDERED IN THE MASTERPLAN PROCESS

Analysis of the condition and suitability for purpose of the various entry points to Dendy Street Beach was undertaken during preparation of the Masterplan. None of the existing paths meet accessibility standards in terms of their slope or gradient. In most instances it is impossible to comply with such standards given the steepness of the foreshore dune/embankment. In light of this discussion and design testing took place in relation to the best location for a fully accessible ramped access to the foreshore promenade.

There is an obvious hierarchy in the nature and importance of the various access paths, where some like the Dendy Street entry are sealed and align with a signalised crossing of The Esplanade, while others are more akin to informal bush tracks. Nevertheless all are used and all currently have issues in relation to either sight lines where they meet the Bay Trail or to the condition of the path or steps themselves.

### RECOMMENDED ACTIONS

The Masterplan recommends the upgrade or closure of some of these access paths (D, E, G & H) as a first order priority and a further upgrade/extension to some of these and others (C, D, F) as part of wider suggested works. In this way, changes to these access points would be integrated with the proposed boardwalk extension to the foreshore promenade, for example.

Specifically, the Masterplan recommends that:

- Sight lines where all entry paths meet the Bay Trail need to be clarified to make these junctions safer.
- A new shared (vehicle and pedestrian), universal access ramp be built at the northern end of the carpark (as part of any building redevelopment on the site) to provide access to the foreshore promenade, the beach and the bathing boxes and the building area to replace Entry A and B.

- Entry C at the southern end of the carpark be reviewed as part of any redesign of the carpark
- Entry D at Dendy Street be upgraded to improve sight lines where it meets the Bay Trail and to improve the transition to the beach, including the clustering of furniture and amenities on a widened deck threshold.
- Whenever maintenance or improvement works are scheduled for Entry E, that the variable heights of the risers of the existing timber sleeper steps be standardised to a maximum nominal height of 170mm.
- The condition and appearance of Entry F be reviewed as part of the design process for the Southern Terrace and Toilet Block area.
- The steep, sandy track at entry G should be closed until such time as reconstruction of the existing flights of stairs can take place. Currently the stairs are too steep with extremely narrow treads and the concrete sleeper risers are in very poor condition.
- The informal access track at Entry H should be partly reconstructed

when funds allow so as to remove the few uneven steps at its entry and reform the path as a stepped ramp. This would help prevent continued scouring of the path surface and generally make the path safer.





Figure 8. Entry location points



A



B



C



D



E



F



G



H

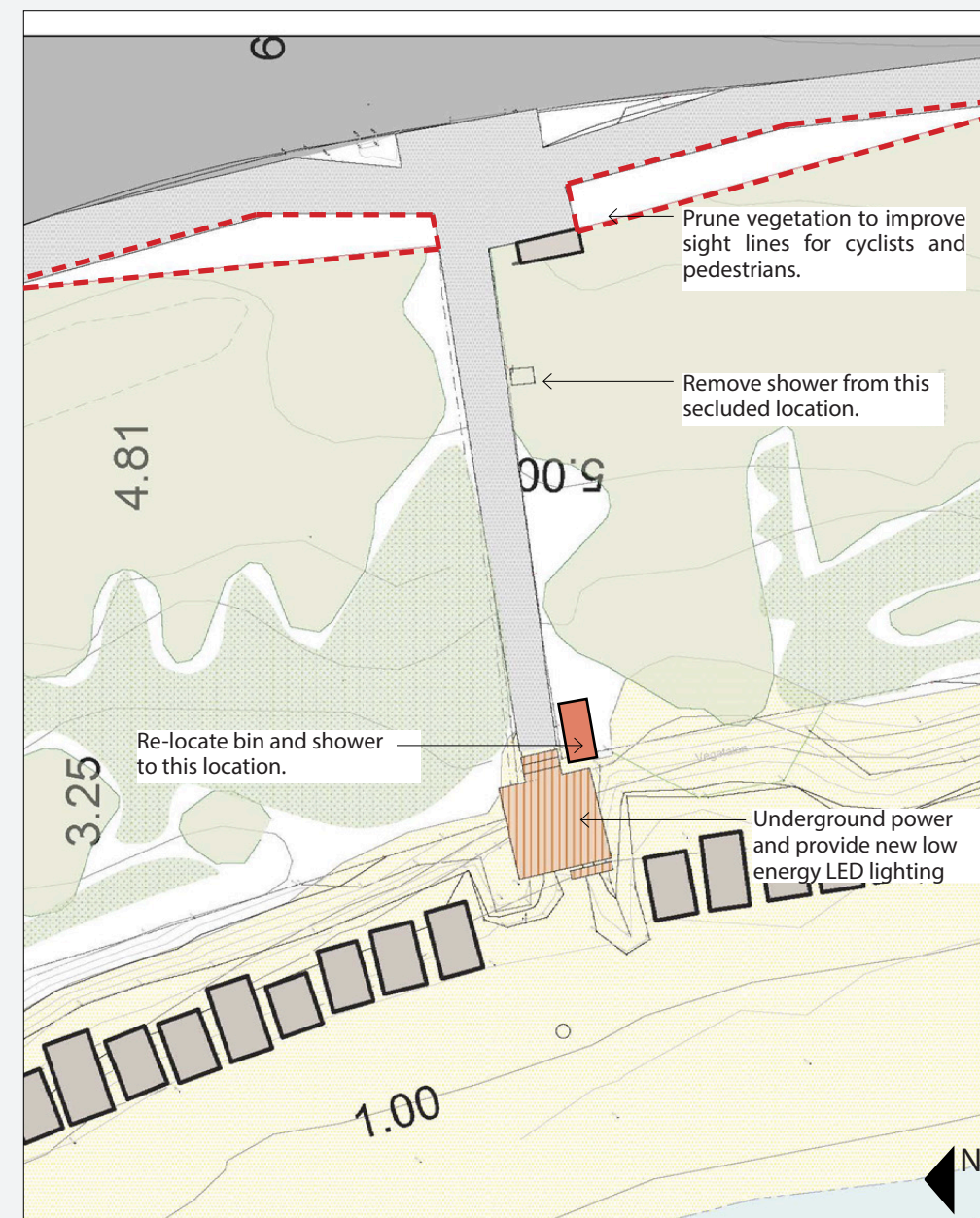
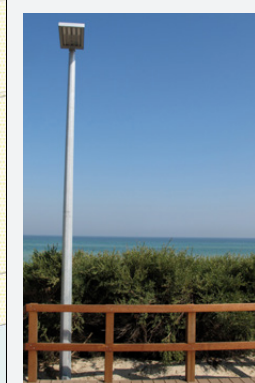


Figure 9. Proposed Dendy st entry



Existing shower, bin and steps at Dendy Street entrance



Example of LED lighting



# SOUTHERN TERRACE

## OVERVIEW/ANALYSIS

- The clearing in the dunes around the southern toilet block forms a slightly elevated grassed terrace immediately behind the beach. The clearing is connected to Entry Path F, an asphalt pathway that is used for maintenance vehicle access to the toilet block and the beach.
- The terrace is currently retained by a roughly formed bluestone and concrete retaining wall which does not appear to be structurally sound.
- The building is highly utilitarian in appearance and bereft of any landscaped setting or other screening.
- There is very little in the way of shade or public furniture at this end of the beach and the existing overhead wiring and street-type lighting is inappropriate for the natural setting.

## ISSUES CONSIDERED IN THE MASTERPLAN PROCESS

- The crude nature of the toilet block and the barrenness of the grassed terrace stood out in all Masterplan discussions as an obvious opportunity to improve the public amenity at this end of Dendy Street Beach.
- The highly modified nature of this area of the dune landscape rendered it a suitable site to add tree planting, park and picnic furniture and other amenities.

## RECOMMENDED ACTIONS

That the southern terrace area be the subject of a considered landscape design that focussed on:

- Public amenity
- Shade and landscape improvements
- Improving the appearance of the toilet block, the access path/road and the terrace area while maintaining vehicle access
- The retaining edge of the terrace
- Upgrading lighting and other infrastructure



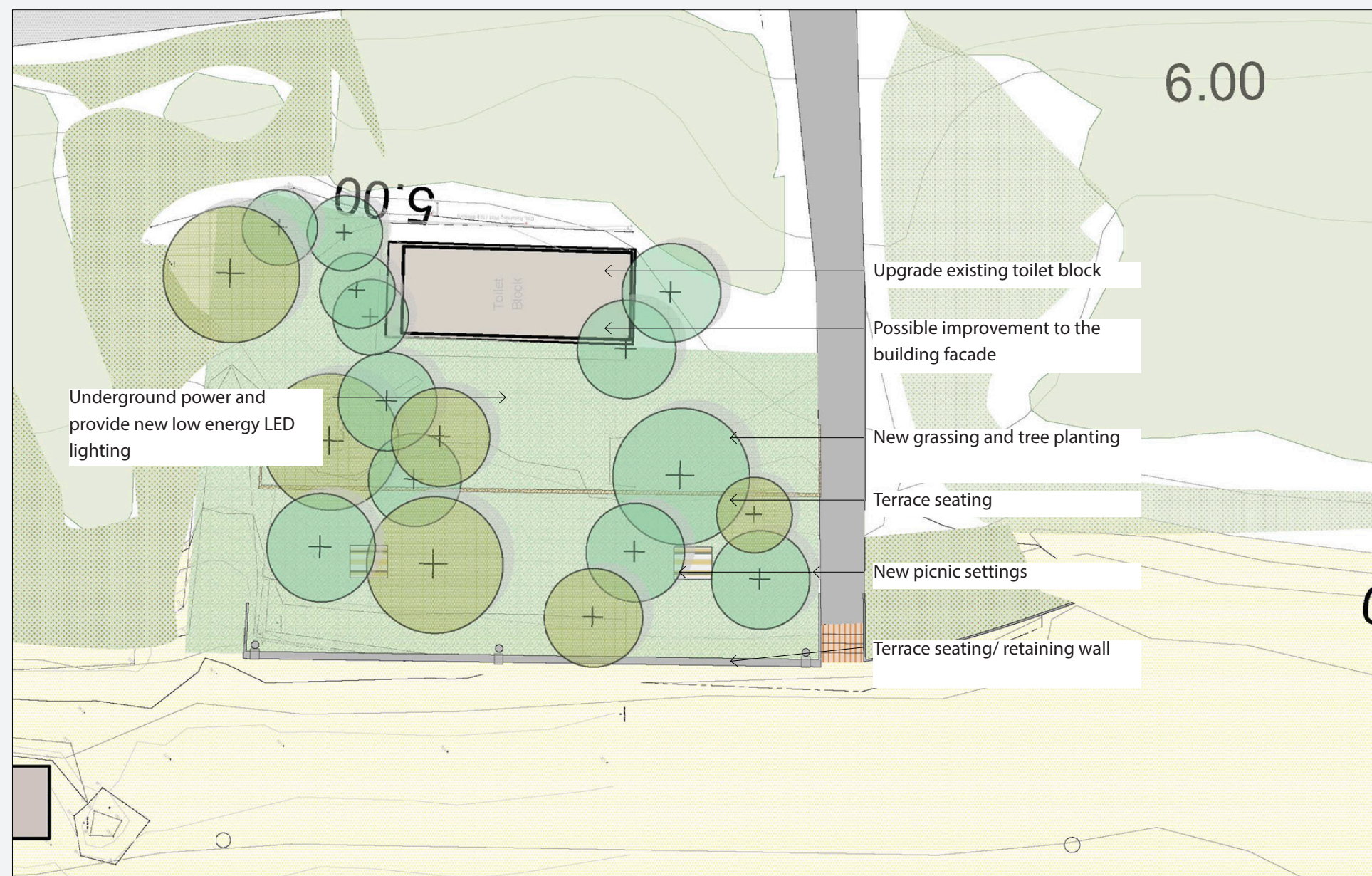


Figure 12. Proposed Southern toilet block entry - plan



Existing site photograph



Example of possible furniture



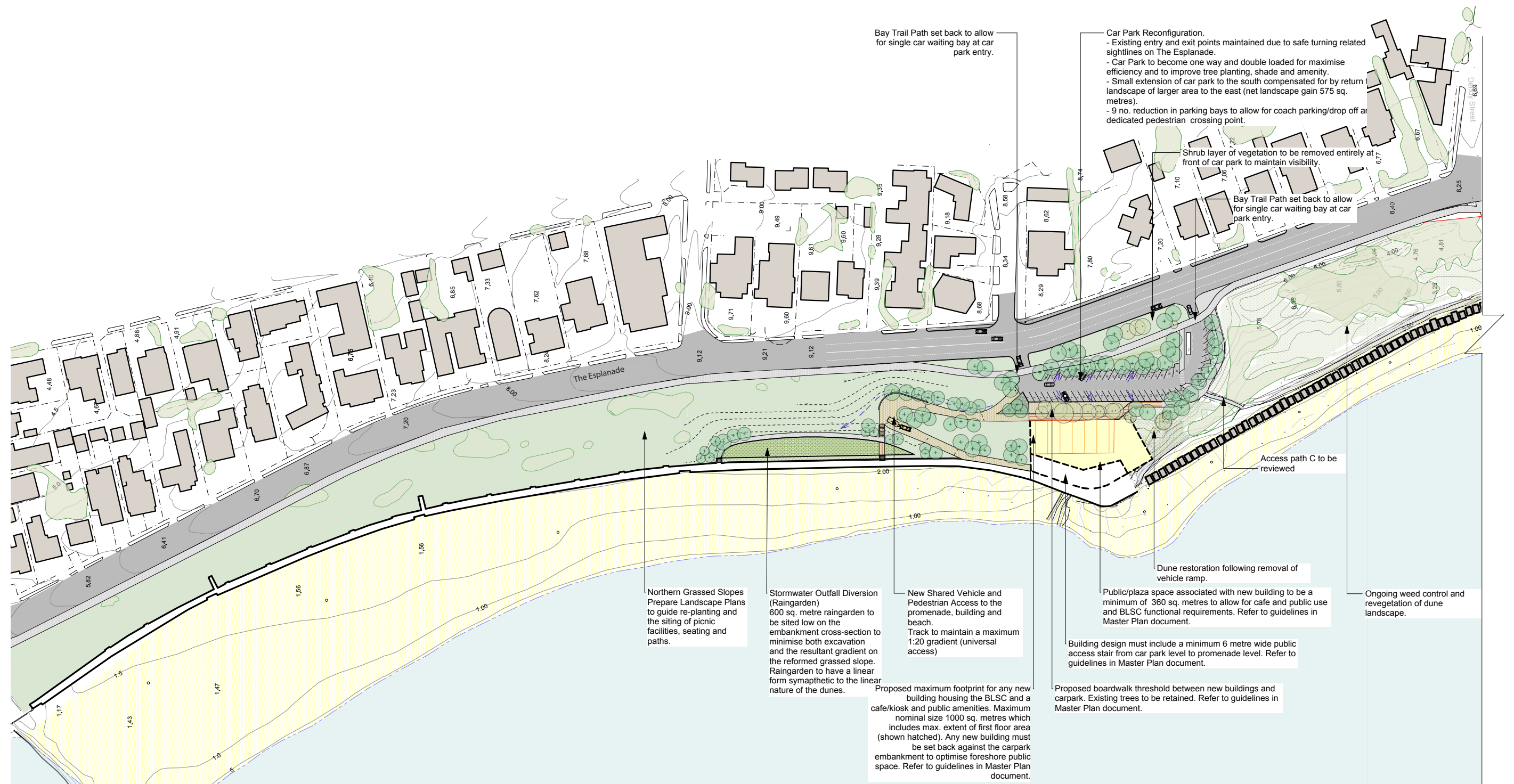
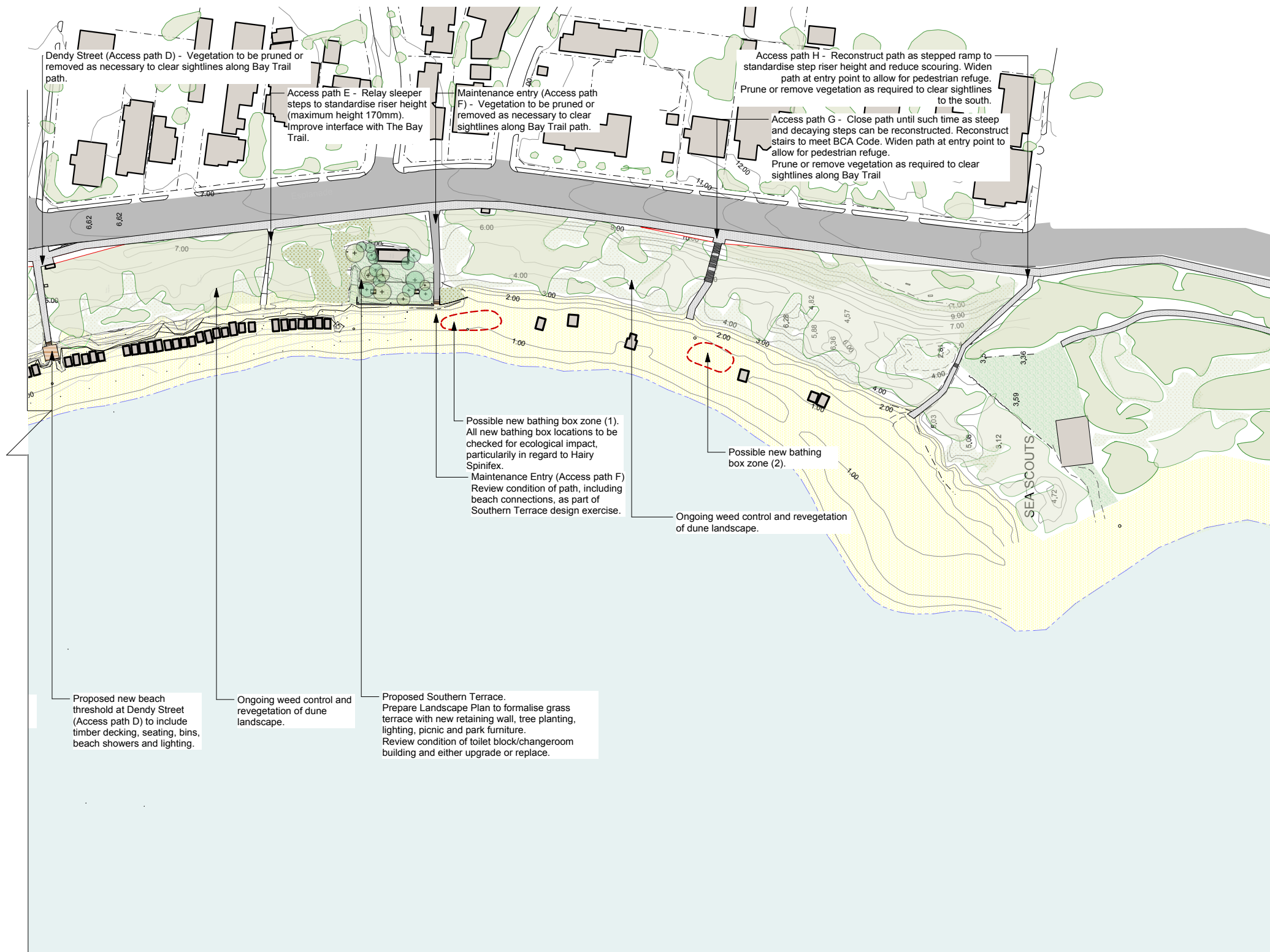


Figure 13. Master Plan





# APPENDIX

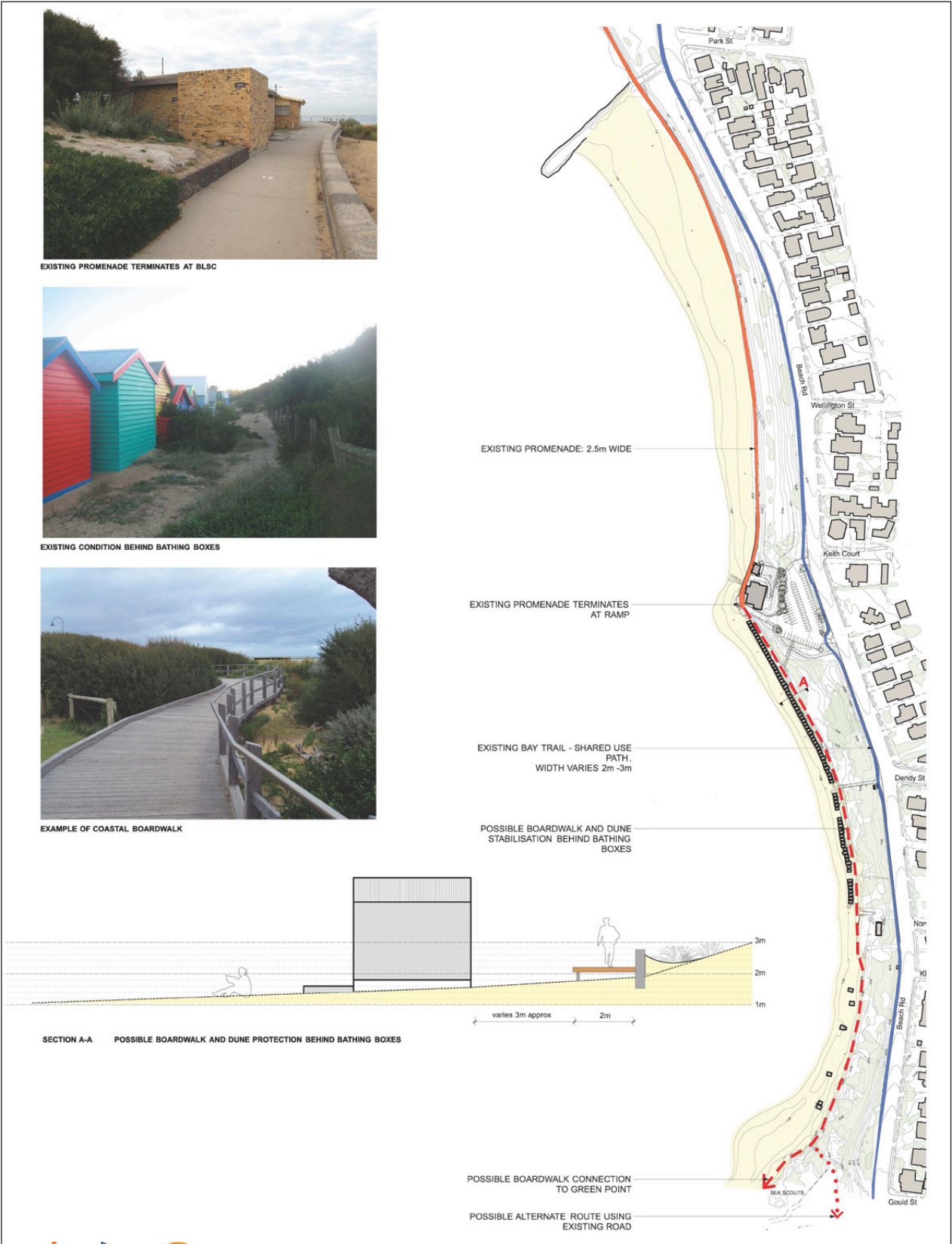
- A1 - Consultation analysis plans and questionnaire
- A2 - Consultation results summary
- A3 - Building development criteria for evaluation of options
- A4 - Final building development scenarios used to develop Multiuse Building Footprint and envelope
- A5 - Trail assessment
- A6 - Project costing/ staging



A1 - Consultation analysis plans and questionnaire

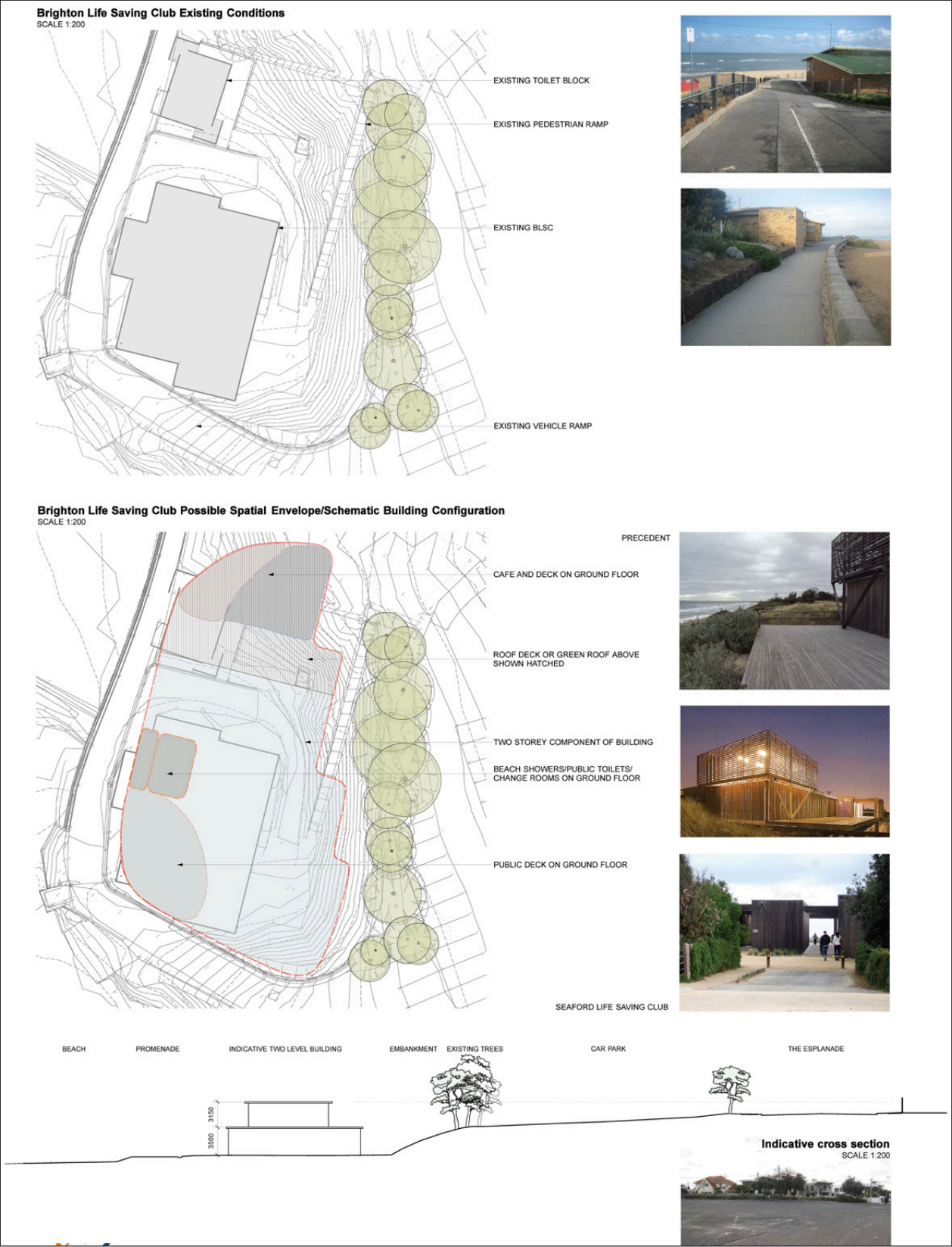


Beach Access Paths

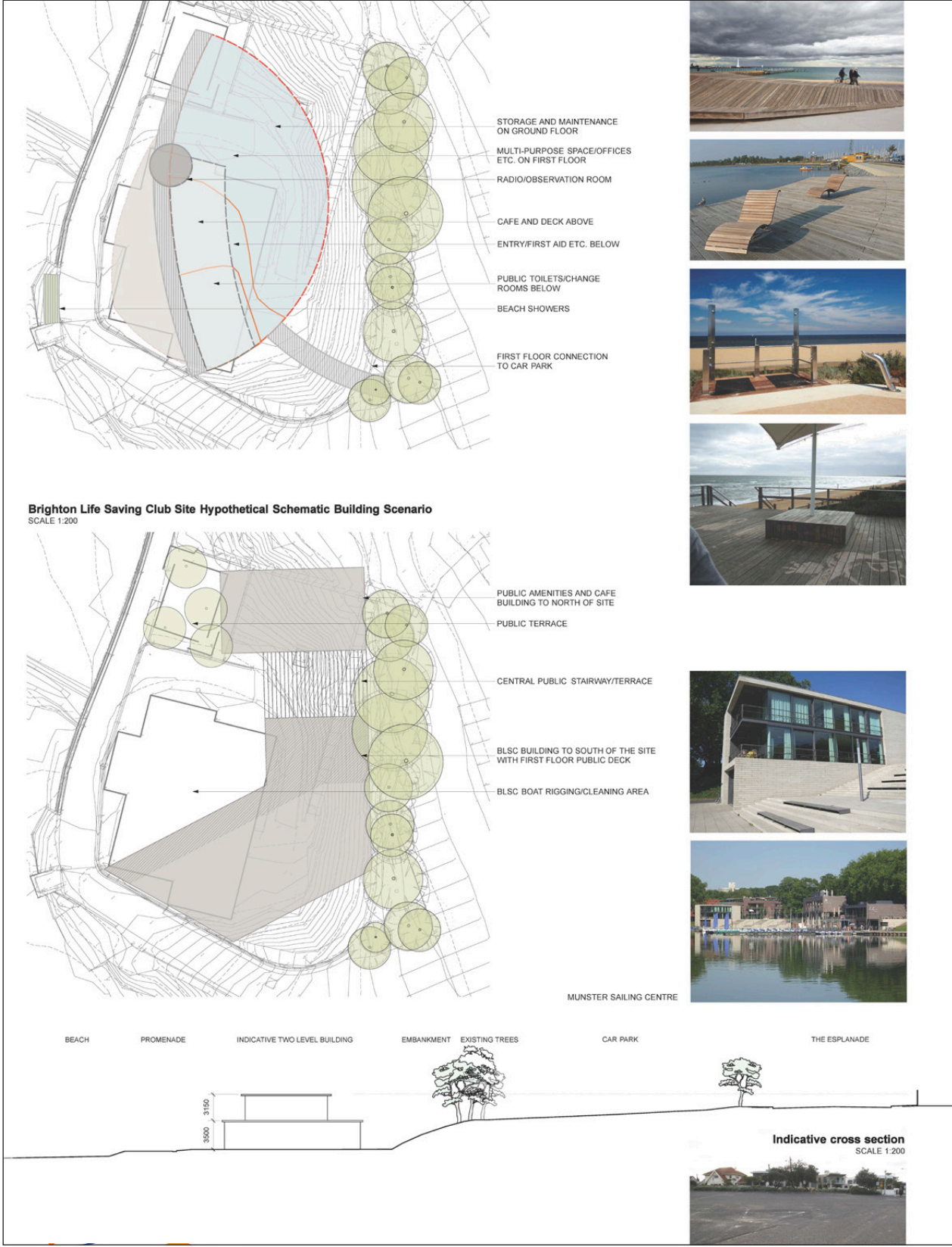


Circulation Paths





BLSC Scenarios 1.



BLSC Scenarios 2.





DDA Compliant Access Options



Rain Garden Scenarios



Do you agree that it is appropriate to replace the existing life saving club building and the public toilets/change rooms with new facilities at Dendy Street Beach?

Do you support some increase in the size of the building to accommodate the aspirations of the BLSC and improved public facilities?

What is your view of the inclusion of these facilities in a redevelopment of the site?

What is your view on the height of the building and the opportunities a second floor might present?

What is your view on BLSC dedicated car parking?

Please discuss the adequacy of these access arrangements and any conflicts that you perceive.

- Public Amenities

- Car Park

- Stormwater Treatment Project

Pedestrians and Cyclists – Access and Circulation

Do you think this section of the Bay Trail should be widened to bring it up to standard?

Do you think upgrading these access ways is a priority?

Please discuss the access question with reference to Sheet C showing the distance different types of access ramps would require.

Southern Beach Area Amenities and Bathing Boxes

What is your view as to the reasonable number and location for any additional future boxes?

Northern Beach Area Amenities

Sense of Place and Arrival

Other issues

Workshop questionnaire

A2 - Consultation results summary

Dendy Street Beach Master Plan

Brighton Life Saving Club

Consultation 5/9/2012

**Group One.**  
***Do you agree that it is appropriate to replace the existing life saving club building and the public toilets/change rooms with new facilities at Dendy Street Beach?***

Public change rooms/ toilet block is supported.

This was a tip site. Asbestos bathing box roof in the fill, amongst other things.

Do you support some increase in the size of the building to accommodate the aspirations of the BLSC and improved public facilities?

Yes the BLSC needs more space. Life Saving activities only.  
Important to consider the view from Beach Road and Green Point.

***What is your view of the inclusion of these facilities in a redevelopment of the site?***

Commercial activity (except small kiosk with redeveloped BLSC) is not supported. Car parking limits commercial activities. Lease for Brighton Baths specify no commercial activities within X meters. Check lease.

What is your view on the height of the building and the opportunities a second floor might present?

Second level is Ok if it doesn't impede on views from Beach Road.

What is your view on BLSC dedicated car parking?

Dedicated car parks seemed OK.  
Some discussion on teenagers accessing the site by bike. Number required may not be 6 – perhaps fewer?

***Please discuss the adequacy of these access arrangements and any conflicts that you perceive.***

Conflicts between boats and swimmers on the beach. Life Savers training in swimming zone and going faster than 5knots. Rock reefs to the north means boats can not train out of swimming zone.

Wellington Street access is best for disabled access use existing ramp and put a new path in from the car park.

## Public Amenities

Change rooms and public toilets at beach level. They should not be for cyclists but for beach goers.

External shower is supported at the BSLC and Southern amenity block but it must be maintained. Issues with sand blocking the drainage in the past.

Drinking fountain at the Dendy St entrance.

Public deck/ café not required.

Kiosk only, no commercial restaurant/ café supported.

Ramped or stepped access. Keep low key – as is.

Viewing deck on the upper level supported. Building should be slide back into the cliff to access from the car park level.

Fully accessible ramp from car park to Wellington St ramp was supported.

## Car Park

Re pave and design as a shared zone – pedestrian priority

Landscape improvements supported.

Conflicts with bikes/ pedestrians

No bus drop off required. Tourists don't spend money in the area anyway.

Lighting should be improved.

Do not increase capacity.

## Stormwater Treatment Project

Water treatment/ swale only length of embankment to groin. Maintenance essential!

Pedestrians and Cyclists – Access and Circulation

Beach Road is the main issue. Parking should be removed from Beach Road and the parking lane should become a dedicated bike lane. The shared path should be returned to pedestrian only.

Green Point car park should be improved and people encouraged to walk on shared path (now ped only) to Dendy St beach.

Possible disabled access at pedestrian crossing or southern toilet block.

Beauty of this beach is that it has no promenade.

Against development of a boardwalk behind the dunes. Discussion about inappropriate activities behind the boxes. Suggestion to bring dune vegetation closer to the boxes with bank stabilisation.

## ***Do you think this section of the Bay Trail should be widened to bring it up to standard?***

Preference for Beach Road solution as noted above. Otherwise some thought it should be widened others were against it due to interference with the dune vegetation.

## ***Do you think upgrading these access ways is a priority?***

Dendy St access should be a priority;

- gate at bottom to stop children running up the hill and onto Beach Road
- drinking fountain should be reinstated
- platform at the bottom to make it easier to access the beach
- handrails and upgrades to surface and steps required for seniors.
- Shower should be located here
- Dendy st crossing is a major conflict for cyclists / pedestrians

***Please discuss the access question with reference to Sheet C showing the distance different types of access ramps would require.***

Support for 1:20 ramp. Do not like steeper ramps with landings- ugly!

## Southern Beach Area Amenities and Bathing Boxes

Kite boarders use this to set up

Keep the toilet block - additional showers

Formalise area but keep open for boarder setup

There has been two infill boxes approved (waiting on environmental assessment)

Council planned boxes in front of the Dendy St access point. This location was considered inappropriate. No consultation was undertaken with the association.

Bins at this location should be relocated away from boxes – they attract rats.

***What is your view as to the reasonable number and location for any additional future boxes?***

No more boxes should be allowed.

Northern Beach Area Amenities

No BBQs seating required. It will only attract visitors.

## Sense of Place and Arrival

Do not encourage groups

Only need safety signage

Make improvements to:

- car park pavement
- steps
- rubbish bins
- reinstate sand, which was cleared where boxes were proposed at Dendy St entry.

## Other issues

Rubbish on the beach is a major issue.

## Group Two

### ***Do you agree that it is appropriate to replace the existing life saving club building and the public toilets/change rooms with new facilities at Dendy Street Beach?***

Any development should be sympathetic to the bathing boxes.

The view from Green Point should be considered.

The sized of the building is limited because of the car parking limitations.

The car park should be signposted for tourists.

Public transport should be encouraged but tourists get lost.

Parking for smaller vans and mini buses is desirable

### ***Do you support some increase in the size of the building to accommodate the aspirations of the BLSC and improved public facilities?***

Yes, though it should be sympathetic to environment and bathing boxes.

### ***What is your view of the inclusion of these facilities in a redevelopment of the site?***

Yes.

Access ramps and stairs should be close to the building.

### ***What is your view on the height of the building and the opportunities a second floor might present?***

Relaxed about the second floor and saw some advantages.

### ***What is your view on BLSC dedicated car parking?***

Some dedicated parking important, similarly space for access and turning circles.

Please discuss the adequacy of these access arrangements and any conflicts that you perceive.

## Public Amenities

### **Car Park**

One group member insisted that:

- Camping in the car park requires regulation.
- Car park design allows for burn outs and hoons.
- Council should regulate and supervise 7 days a week.

The others were positive about redesign even if it meant lengthening the car park north and south to create some more space. Debate about whether 10 additional spaces would make any real difference and suggestion that any extra space should be dedicated to buses and vans for parking/drop off.

Positive about landscaping/shade improvements.

## Stormwater Treatment Project

Group positive about the idea but sceptical about its implementation. Opposed to outfall still happening across the beach. Insisted that the scheme should be proven/guaranteed to work before being built.

## Pedestrians and Cyclists – Access and Circulation

Management issue with tourists/ signage/ trails and facilities. That is, the whole tourism thing is not actively coordinated by Council with transport, signage and facilities being integrated.

Bay Trail: entry and exits, sightlines are an issue.

Boardwalk positive for helping stabilise dunes, make it safer, interpret dunes and great connection to Green Point.

### ***Do you think this section of the Bay Trail should be widened to bring it up to standard?***

Yes definitely (at least 3 metres) but other access points are also important.

### ***Do you think upgrading these access ways is a priority?***

As above.

Please discuss the access question with reference to Sheet C showing the distance different types of access ramps would require.

View was that access should be as close the facilities as possible b/c people will seek the most direct route.

## Southern Beach Area Amenities and Bathing Boxes

Toilet at this location is important. Site is wasted as it is and should provide greater amenity.

Picnic tables and seating etc would be good.

Bathing Box association pays for private security - community asset.

Wilful damage, graffiti etc. , an issue that needs to discussed and better coordinated.

### ***What is your view as to the reasonable number and location for any additional future boxes?***

6 boxes were agreed, 4 were built and 2 stopped.

## Northern Beach Area Amenities

As with south, facilities for picnics, bbqs. etc should be provided.

## Sense of Place and Arrival

## Other issues

### Group Three

***Do you agree that it is appropriate to replace the existing life saving club building and the public toilets/change rooms with new facilities at Dendy Street Beach?***

Redesign is supported. Quality/sensitive upgrade sought.  
Public toilets to be incorporated into the upgrade.

Middens north of the BLSC

***Do you support some increase in the size of the building to accommodate the aspirations of the BLSC and improved public facilities?***

Café requires car parking.  
Yes as long as sensitive to bathing boxes and residents requirements. (views etc)

***What is your view of the inclusion of these facilities in a redevelopment of the site?***

Should include showers and bike racks.  
***What is your view on the height of the building and the opportunities a second floor might present?***

Possibly a green roof.  
Care with views. A bit higher than present building supported as long as views from houses not impacted.

***What is your view on BLSC dedicated car parking?***

Please discuss the adequacy of these access arrangements and any conflicts that you perceive.

Parking area should not expand  
Path from Green Point would mean dispersing people and better gateway to site  
Buses drop off only

#### Public Amenities

##### Car Park

Restrict the area of car parking; if it is made bigger more people will come.  
Better management required for bridal cars.

##### Stormwater Treatment Project

Supportive.

#### Pedestrians and Cyclists – Access and Circulation

Boardwalk supported if unobtrusive and not too urban. Sensitive design  
Improve tourist signage from station(s)  
Poor sightlines on shared path at Dendy Street – speed hump?  
Lamp posts and high poles at Keith St.

***Do you think this section of the Bay Trail should be widened to bring it up to standard?***

Yes

***Do you think upgrading these access ways is a priority?***

Please discuss the access question with reference to Sheet C showing the distance different types of access ramps would require.

#### Southern Beach Area Amenities and Bathing Boxes

Dark at night  
Tidy up in front .  
Shower out of order.  
New shower and bike racks.  
Black Swans still near Green Point  
***What is your view as to the reasonable number and location for any additional future boxes?***

The more the merrier.

#### Northern Beach Area Amenities

Playground  
Used for kite surfers, and picnickers balance interest groups.

#### Sense of Place and Arrival

Good idea

#### Other issues

Remove rocks in water in front of the Southern Amenities area – difficult for swimmers at night.  
Drinking troughs for dogs.  
Bins are inappropriately located consider removal away from boxes.  
Rats on the beach.  
Koori culture is important. Interpretation?  
Historic items.  
The area has a small beach atmosphere

**Group Four**

***Do you agree that it is appropriate to replace the existing life saving club building and the public toilets/change rooms with new facilities at Dendy Street Beach?***

Redesign is supported.

***Do you support some increase in the size of the building to accommodate the aspirations of the BLSC and improved public facilities?***

Increase in size is supported.

***What is your view of the inclusion of these facilities in a redevelopment of the site?***

Group was supportive of the facilities.

***What is your view on the height of the building and the opportunities a second floor might present?***

There was support for a second floor, but it would need careful consideration. Any increase in height should not obscure existing views and would need to fit in with the character of the area.

***What is your view on BLSC dedicated car parking?***

Dedicated parking was considered reasonable.

Please discuss the adequacy of these access arrangements and any conflicts that you perceive.

**Public Amenities**

Group agreed with the amenities listed. There was a request for more bins, perhaps in the car park, and for the bins to be emptied more regularly especially during the summer. People often leave their rubbish on the beach.

**Car Park**

Concern that an increase in space for bus drop off and parking would increase the number of tour buses stopping to see the bathing boxes. Group did not want a bus terminus.

**Stormwater Treatment Project**

Supportive – needs to be addressed.

**Pedestrians and Cyclists – Access and Circulation**

Improve tourist signage from station(s)

***Do you think this section of the Bay Trail should be widened to bring it up to standard?***

Support for widening of the Bay Trail, but also concern relating to the high speed of cyclists who currently use the trail.

***Do you think upgrading these access ways is a priority?***

Group considered this a very high priority

Please discuss the access question with reference to Sheet C showing the distance different types of access ramps would require.

Please discuss the idea with reference to sheet F – Site plan and the cross section

The group was divided on the boardwalk proposal. It would depend how close the boardwalk was to the bathing boxes.

**Southern Beach Area Amenities and Bathing Boxes**

Toilet and beach shower an eyesore.  
Increase vegetation.

***What is your view as to the reasonable number and location for any additional future boxes?***

Provide as many as possible

**Northern Beach Area Amenities**

Group did not want BBQ facilities provided – would lead to an increase in rubbish.  
More seating is required

**Sense of Place and Arrival**

More signage is required to identify the location

**Other issues**

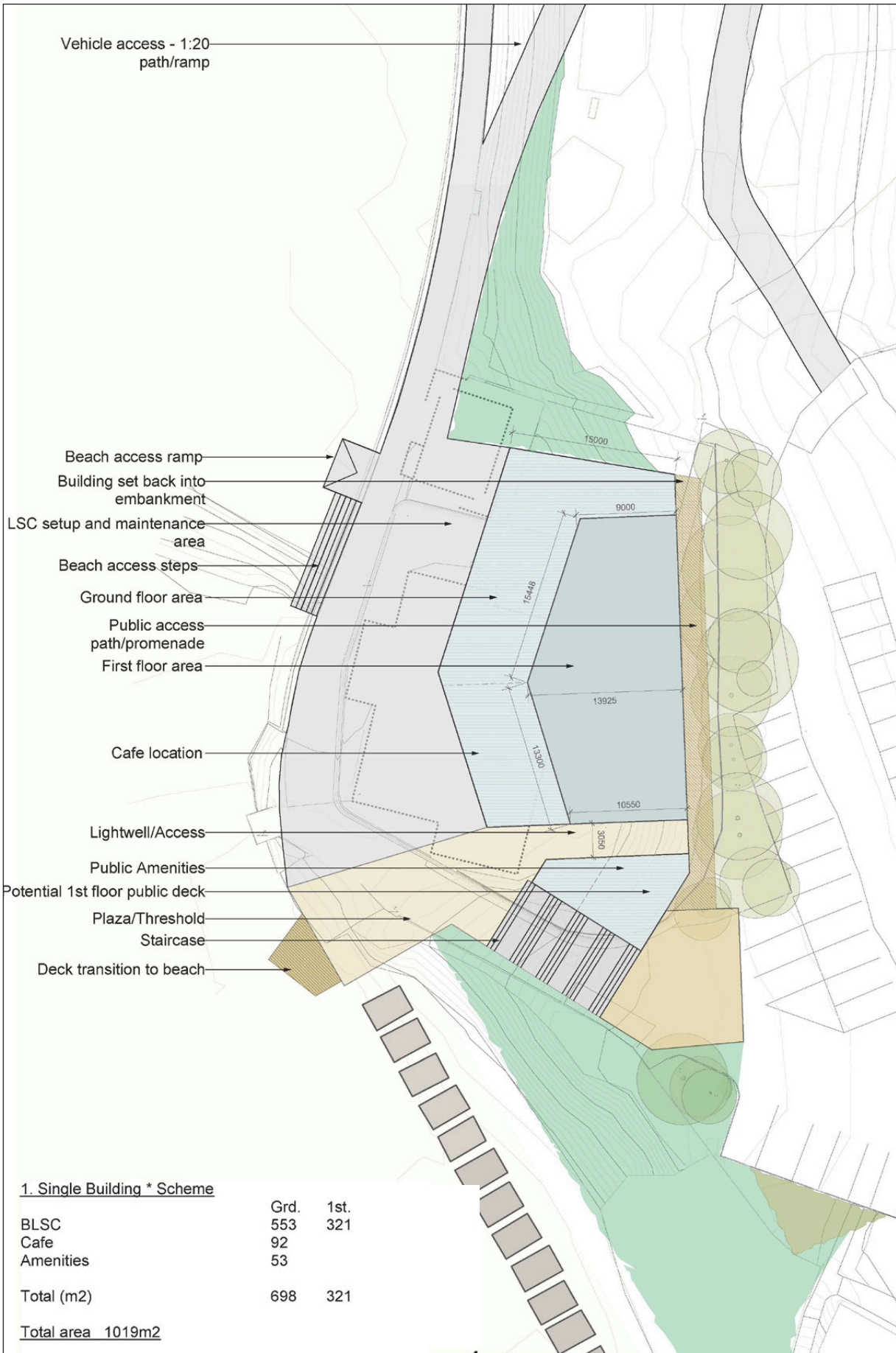
Bins are inappropriately located consider removal away from boxes.  
Rats on the beach.



## A3 - Building development criteria for evaluation of options

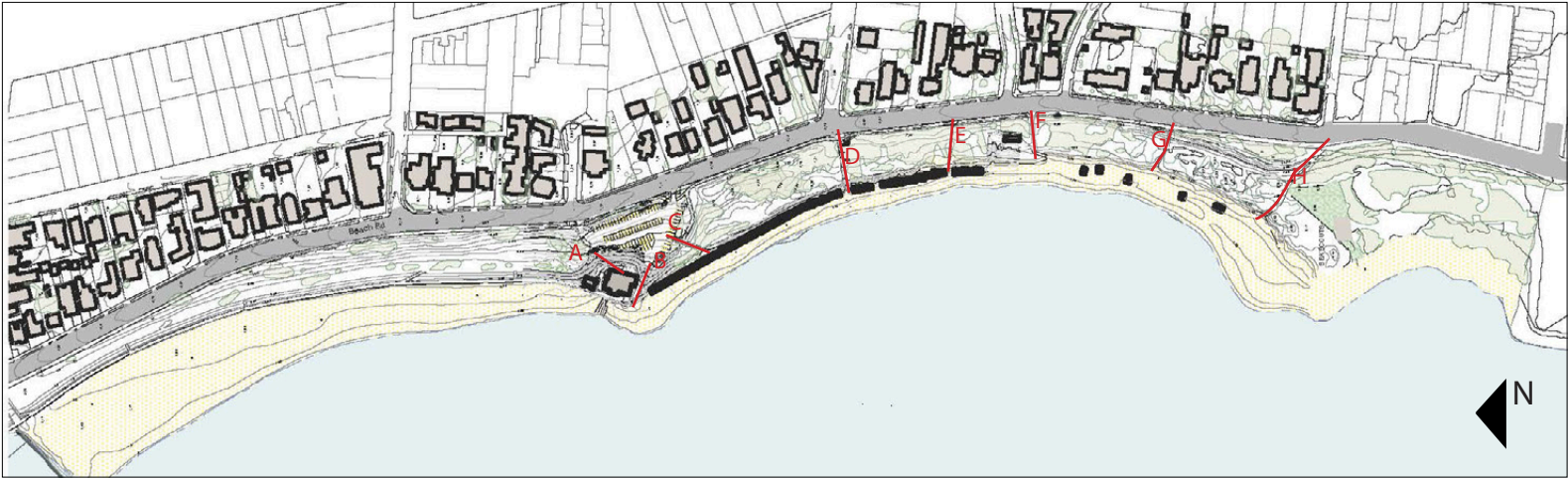
- Does the scheme meet the BLSC Internal requirements?
- Does the scheme meet the BLSC External requirements?
- Sense of Arrival & Place: Transition from car park to building and surrounds?
- Threshold transition to beach and bathing boxes?
- Views from buildings and from access stairs, paths and platforms (to city, beach, bathing boxes etc.)?
- Building orientation for views, solar aspect and natural light?
- Connections and circulation from carpark to foreshore, including ramps and steps etc.?
- Effect of scheme on existing vegetation?
- Efficiency of scheme in terms of use of available space (existing envelope, slope of embankment etc.)?
- Public space and amenity: promenade, plaza, beach transitions?
- Logic of the layout of facilities given what is known about various uses and beach activity?
- Impact of the scheme on views from Green Point?
- Scale and massing of building/s in relation to the cliffs and the existing vegetation?
- Vehicle access and circulation to LSC and beach level?
- Relationship/ connection to the existing promenade?
- Implications of scheme for the stormwater harvesting project?
- Scale and complexity of scheme and hence its relative cost?

A4 - Final building development scenarios used to develop Multiuse Building Footprint and envelope





A5 - Trail assessment



Entry	Location	Description	Width	Grade & Length	Facilities/Amenities	Accessibility Issues	Condition	Sightlines
A	Pedestrian ramp from car park to rear of BLSC building	Concrete ramp with timber and mesh fence to western side	Approximately 1.5 metres wide	1:8 26.7 metres	Connects to BLSC and toilet block	Ramp too steep to comply with standard and does not have handrails or TGSIs.	Fair although the ramp connects to uneven ground behind BLSC.	Ramp location not obvious from carpark
Recommendation	Review as part of LSC building and access arrangement.							
B	Carpark vehicle/pedestrian ramp to the immediate south of BLSC building	Asphalt road pavement with stainless steel handrail to south side and timber and mesh fences to both sides	Approximately 5.5 metres wide at top narrowing to 4.5 metres at promenade level	1:12 31 metres	Connects to BLSC and foreshore promenade	Ramp grade too steep to comply with Accessibility standard.	Fair	Okay
Recommendation	Review as part of LSC building and access arrangement.					Review as part of LSC building and access arrangement.		
C	Shared-use path (SUP) from The Esplanade and pedestrian path/ramp to bathing boxes at the southern end of carpark	Concrete SUP with timber and mesh fences to both sides and asphalt path/ramp	SUP approximately 2 metres, asphalt path/ramp 1.2 - 1.4 metres	SUP flat 41 metres ramp 1:5 16 metres	Connects to rear of bathing boxes, features interpretation panels	Ramp grade too steep to comply with Accessibility standard	SUP Good, asphalt path fair.	Visibility to the south impeded by SUP alignment and vegetation.
Recommendation	Review as part of carpark redesign.				Review interpretation material as part of LSC redevelopment.	Review as part of carpark and LSC redesign.		Review as part of carpark redesign.
D	Dendy Street intersection pedestrian entry	Concrete threshold at street edge and asphalt path to beach, 5 no. bluestone and asphalt steps to beach with stainless steel handrail to south side of steps	2.4 metres	1:11 29.5 metres	Beach shower 10 metres in from The Esplanade, bin station on beach.	Path grade too steep to comply with Accessibility standard	Good	Poor in both directions: Alignment of SUP and vegetation obscures sightlines from Dendy Street entry.
Recommendation	Review as part of access and beach amenities assessment.				Given the importance of this entry an improved beach threshold should be developed. Review in relation to boardwalk promenade proposal. Refer sketch plan L.....	???		Given the popularity of this entry (adjacent to pedestrian lights), removal and trimming of higher growing vegetation that obscures views of the road and SUP and its replacement with low growing plants should be undertaken. Clear sightlines 30 metres in both directions.
E	Informal pedestrian entry track, approximately 105 metres south of Dendy Street	Sandy track with timber sleeper steps	1.1 - widening to 1.7 metres at beach	1:7 32.5 metres 13no. Sleeper steps of varying height between 150 and 200mm.	Bin station on beach.	Uneven steps and sandy surface limit accessibility.	Fair	Okay
Recommendation				Step heights should ideally be standardised to a maximum height of 170mm.	Informal access requirings no further amenities.			
F	Service vehicle entry to the southern toilet block and beach, approximately 75 metres south of Entry E. Connects to steep pedestrian path and steps to the beach.	Asphalt road pavement with grassed verge and timber and mesh fences to both sides. Path turns into north grassed area and to south where it narrows to a steep pedestrian path that terminates in four bluestone steps to the beach.	3.4 metres - narrowing to 2.5 metres and the 2 metre pedestrian path	1:7 32.5 metres	Southern toilet block, bin station on beach, overhead wiring and street style lighting.	Path grade too steep to comply with Accessibility standard	Poor	Fair
Recommendation					Given the availability of space and the existing grassed terrace and toilet facilities an improved beach threshold with a range of facilities should be developed. Review in relation to boardwalk promenade proposal. Refer sketch plan L.....	Use beach terrace and boardwalk concept to improve beach access.		Prune or remove vegetation as required to clear sightlines 30 metres in both directions.
G	Pedestrian entry, approximately 125 metres south of Entry F	Sandy track with two flights of steep concrete sleeper steps. Timber and mesh fence to both sides.	Approximately 2.4 metres	Stairs have very narrow treads (160mm)	Bin station on beach, overhead wiring and crude spotlighting.	Steepness of steps and their narrowness and poor condition of renders this entry dangerous.	Stair treads in very poor condition: concrete rotting and steel aggregate exposed.	Fair
Recommendation						Steps require reconstruction to make safe if access is to be maintained.	Higher ground to either side of steps allows for relatively easy reconstruction that would increase tread width.	Prune or remove vegetation as required to clear sightlines 30 metres in both directions.
H	Informal access track, approximately 135 metres south of Entry G and 300 metres north of Green Point entry.	Steep, sandy track with 3 no. timber sleeper steps 250mm high.	Approximately 1.5 metres	250mm high steps at the beginning and then a steep sandy track.	Bin station on beach.	Steepness of initial stairs a problem.	Poor. Path is scoured by rain due in part to its steepness.	Visibility poor to the south.
						Replacing stairs and track with a stepped ramp (steps with longer, ramped tread sections) would improve access and reduce scouring.	Replacing stairs and track with a stepped ramp (steps with longer, ramped tread sections) would improve access and reduce scouring.	Prune or remove vegetation as required to clear sightlines 30 metres to the south.



PROJECTS

STAGE 1		STAGE 2		Vegetation/Landscape	Access
Car Park		BLSC, amenities, cafe and Surrounds		Southern Dune Area	Beach Access Paths
Feasibility Study Design & Approvals Construction		Feasibility & Site Design Design, Approvals Construction		Vegetation Management Approvals and Studies	Feasibility & Site Design Design
Responsible Department ESOS		Responsible Department LR		Responsible Department ESOS	Responsible Department ESOS
Indicative Cost    \$360,000		Indicative Cost \$4,930,000		Indicative Cost \$ 110,000	Indicative Cost    \$590,000
Shared Beach Access Path		Stormwater Capture Project		Northern Slopes	
Feasibility Study Design Construction		Feasibility & Site Design Design, Approvals & Studies Construction		Vegetation Management Landscape Design Construction	
Responsible Department ESOS		Responsible Department ESOS		Responsible Department ESOS	
Indicative Cost    \$610,000		Indicative Cost    \$NA		Indicative Cost    \$ 240,000	
				Site Works	
				Southern Terrace Works	
				Feasibility & Site Design Construction	
				Responsible Department ESOS	
				Indicative Cost    \$690,000	

Leisure & Recreation  
Asset Management  
Commercial Services  
Environmental Services &  
Open Space  
City Works  
Not Available

LR  
AM  
CS  
ESOS  
  
CW  
NA

Note - Indicative Costs only, further evaluation as projects are developed.