

# PERC WHITE RESERVE

## LANDSCAPE MANAGEMENT PLAN AND MASTER PLAN



## **DISCLAIMER**

The Perc White Reserve Landscape Management Plan and Masterplan was prepared for the City of Port Phillip.

This plan was developed using background material contained in a number of supporting documents. The information contained in this plan is as accurate as the information contained in this background material at the time of writing. The information contained in this plan is presented in good faith to improve the Perc White reserve and surrounds. Due to differences in individual circumstances and the dynamic nature of coastal environments, the people, institutions and organisations involved in the production of this document cannot be held responsible for any loss, damage or injury as a result of the use of information contained in this document.

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## **ACKNOWLEDGMENTS**

This plan has been developed from a draft plan provided by consultants GHD.

The finalised 2010 plan has been compiled by:

David Hehir- Foreshore Coordinator; and

Rob Angel- Landscape Architect,

Parks and Open Space,

City of Port Phillip.

The 2010 plan is based on extensive community consultation and contributions from a community reference group.

A number of activities were undertaken to assist in the development of the plan including: three on-site community consultations during September 2009, on-site signage, three mailouts to nearly 400 residents on each occasion and ongoing responses to community contributions by phone and email.

Council would also like to acknowledge the contributions of the Perc White Community Reference Group who played a key role in guiding the development of the Plan.

The Community Reference Group members were:

Port Phillip Councillor- Judith Klepner

Port of Melbourne Corporation- Jenny Bygrave and Dragi Nasteovski (jointly)

Friends of Port Melbourne's Foreshore- Nick Aagren

Life Saving Victoria- Maree Morarty

Sandridge Life Saving Club- Malcolm Freake

Local community members (3 representatives)- Ian Goodfellow, Ian Gould and Margaret Armstrong

Parks Victoria- Tim Carver and James Brincat (jointly)

Victoria Police- Sergeant Scott Davis, Sergeant John Burgess and Senior Constable Gabrielle Tyacke (jointly)

City of Port Phillip staff- David Hehir- Foreshore Coordinator, Rob Angel- Landscape Architect and Michelle Ritchie- Parks Technical Officer.

**Printed & published by the City of Port Phillip, May 2010.**

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## 1.0 INTRODUCTION

### 1.1 About This Document

The City of Port Phillip engaged a landscape architect to prepare a management strategy and master plan for the Perc White Reserve at Sandridge, Port Melbourne.

The reserve consists of a four hectare nature reserve located on the periphery of the City of Port Phillip (CoPP) and is located at the southwest end of Sandridge Beach. It has been identified as having significant local and regional conservation status.

“The reserve has conservation value because of remnant and regenerated vegetative ecosystems, makes a substantial contribution to biodiversity in both CoPP and the Gippsland Plain Bioregion and provides a unique example of a maturing revegetation as a project commenced by the Port of Melbourne Authority in 1985.” (TNLA 2007).

This landscape management plan and master plan provides a holistic landscape design for the entire area, a clear action plan and an implementation strategy to enable effective future management of the site and surrounding areas.

This plan provides background to the site, the issues identified during the consultation process and an implementation strategy to ensure that the reserve is managed for the benefit of the community and the environment.

The key requirements of the brief were to prepare a draft detailed design package based on community feedback, site specifics and existing policy. The work involved updating the existing management plan to include:

- Updated vegetative mapping;
- Updated works/maintenance action plan;
- Updated site character assessment; and
- Management of Council, residents, major stakeholders needs and the natural landscape in an integrated, practical and high quality design.

## 2.0 BACKGROUND REVIEW

### 2.1 General

Perc White Reserve is located on freehold land owned by the Port of Melbourne Corporation (PoMC) and maintained by City of Port Phillip (CoPP). The community volunteer group Friends of Port Melbourne's Foreshore is also actively involved in maintaining and upgrading the highly valued community reserve.

Perc White Reserve is a natural coastal reserve and serves as a wilder transition point between the city and the port. The reserve forms a physical buffer between the port and nearby residential land and has been identified as an area of high natural and cultural value. CoPP manages the reserve as part of a maintenance agreement between PoMC and CoPP. It provides an important habitat for native wildlife, in particular the Superb Fairy-Wren and New Holland Honey Eater, and is an important recreational connection between Port Phillip foreshore and Webb Dock Trail.

To guide the development of this updated landscape management plan, Council established a Community Reference Group. The aim was to ensure that the views of relevant and valued community groups and government agencies were expressed and taken into account.

A copy of the Terms of Reference for this project are included in Appendix 1 herewith.

### 2.2 Council Policies

Various Port Phillip Council policies have been considered in this management plan including:

- Council Plan 2009-2013, July 2009;
- Open Space Strategy, August 2009;
- Climate Change in the City of Port Phillip - An Initial Perspective, 2007;
- Foreshore Management Plan, September 2004;
- Stormwater Management Plan, March 1999.

#### 2.2.1 The Council Plan

The Council Plan 2009-2013 outlines some key strategies for open space and dealing with climate change. Those which relate to Perc White Reserve include the following strategies:

- Ensure that open spaces support active communities through integrated planning and sustainable management (Plan Ref. 4.1.3);

- Develop a strong sense of public safety (Plan Ref. 4.1.6);
- Further develop the quality and safety of the city's walking and cycling opportunities (Plan Ref. 4.2.2);
- Ensure integrated planning and management of our foreshore (Plan Ref. 4.3.1);
- Protect, preserve and reinstate local natural environments and open spaces within the city (Plan Ref. 4.3.2);
- Strive to ensure that major projects enhance liveability (Plan Ref. 4.4.1).

The strategies above highlight the need for strong council and community engagement in any redevelopment of the Port Melbourne waterfront to secure a sustainable future for the precinct.

#### 2.2.2 Open Space Strategy

As outlined in the Open Space Strategy, the City of Port Phillip's vision for Public Open Space is:

'A city where public open spaces define the city's character and respond to its people's need for places to rest, recreate and be inspired.'

City of Port Phillip Open Space Principles are:

- Optimum provision of open space;
- Commercial events in public open space;
- New residential development and public open space;
- Safe Access to Public Open Space;
- Access for all;
- Streetscapes as public open space;
- Availability of Public Open Space managed by others;
- Supply of Public Open Space; and
- Sustainable open spaces (recently adopted).

A shift in public thinking was also identified within the Open Space Strategy, stating that 'since the last revision, momentum has been gathering around the need to address issues that relate to open space provision, such as how to protect the local environment, how to improve sustainability and what to do about declining levels of physical activity across the population.'

In the Open Space Strategy the City of Port Phillip have identified that the

high quality of native landscape within Perc White Reserve should continue to be protected and enhanced.

Coastal vegetation at Perc White Reserve offers areas of regional conservation significance. Mature plantings provide habitat for a variety of bird species. These sites also provide an opportunity for areas that reference and showcase original coastal landscapes.

#### 2.2.3 Climate Change & Greenhouse Impacts

The Port Phillip LGA illustrated on the following page, has the fifth highest level of risk and has been the focus of a recent study of the potential impacts of climate change.

Mapping of storm surge and sea-level rise projections in the City of Port Phillip identified the St Kilda foreshore and the area immediately surrounding the Elwood Canal as being particularly vulnerable to inundation. The study also noted the compounding effects of stormwater flooding during a severe storm. The study identified sea-level rise to be the most significant climate change issue for the City of Port Phillip, due to the associated impacts of coastal erosion and storm surge.

The Federal Government's recent report on climate change entitled, "Climate Change Risk to Australia's Coast" refers to the City of Port Phillip study. The modelling therein doesn't extend as far north as the Perc White Reserve, however the general comments on the potential impacts of sea level rise can be applied to the reserve.

Indications are that forecast sea level rise will inundate the reserve within 90 years where abatement measures are absent.

A federal government report identified key impacts relevant to the reserve and surrounding areas. These include:

- Under a high-emissions scenario, a sea level rise of up to a metre or more by the end of the century is possible;
- Between 27,600 and 44,600 residential buildings in Victoria may be at risk of inundation from a sea level rise of 1.1 metres and storm tide associated with a 1-in-100 year storm;
- Local government areas (LGA) of Kingston, Hobsons Bay, Greater Geelong, Wellington and Port Phillip collectively represent close to 70 per cent of the residential buildings at risk in Victoria;

The current average level of Perc White Reserve are between 1.0 and 2.0 metres above sea level with a high tide mark between 1.4 and 1.5m (average height datum). Given the scenario of a change in sea level rise of 1.1

metres within 90 years, it is expected that the Reserve will be subject to 'Potential Storm Surge' as per the adjacent model because of its typically coastal levels and landform.

## 2.2.4 Foreshore Management Plan

In accordance with the 2004 Foreshore Management Plan this report has reviewed the 2007 Perc White Reserve Landscape Management Plan and provides updated recommendations for the management of Perc White Reserve in Chapter 5.

## 2.2.5 Stormwater Management Plan

This reports has regard to the City of Port Phillip document "Stormwater Management Plan 1999".

The primary goal for stormwater management in the city is to develop and maintain ecologically sustainable waterways; specifically to improve the health of Port Phillip Bay.

Specific objectives include:

- To minimise adverse flooding;
- To protect and improve water quality by managing point source and non-point source pollutant loadings;
- Improving resident, business and community awareness of values of the stormwater system and potential impact of their activities and participation in, the management of stormwater.

## 2.3 Other Policies

Other significant policies that have been referenced include:

- Port of Melbourne Planning Scheme;
- Port of Melbourne Corporation, "Port Development Strategy 2035 Vision, August" 2009; and
- CPTED Crime Prevention Through Environmental Design (discussed in "Design Principles" as part of Section 5 herein).

### 2.3.1 Port of Melbourne Planning Scheme

Under the State Government of Victoria's 'Port of Melbourne Planning Scheme', both Perc White Reserve and Webb Dock Trail are classified as a 'Special Use Zone Schedule 1' (SUZ1).



Storm Surge Inundation model.

Taken from "Climate Change in the City of Port Phillip - An Initial Perspective" 2007.

It is acknowledged that the extent of this model does not extend to Perc White Reserve however it is reasonable to presume that under a 1.25-2.31m sea level rise, the site will be subject to inundation similar to the other low-lying foreshore areas shown in the model.

The purpose of the SUZ1 is to provide for the ongoing operation and development of the Port of Melbourne as a key area for the State of Victoria for interchange, storage and distribution of goods. Provision is also made for land uses which derive direct benefit from co-establishing with a port.

A further purpose of the Port of Melbourne Planning Scheme is to facilitate the implementation of the Local Planning Policy Framework and operation of the Municipal Strategic Statement and local planning policies. Additional information may be obtained from The Department of Planning and Community Development [www.dpcd.vic.gov.au](http://www.dpcd.vic.gov.au)

Under the “Local Planning Policy Framework” Clause 21, (as part of the “Port Strategic Statement”) Perc White Reserve and the Webb Dock Trail are identified as being retained for “landscaping/open space” and as a buffer between sensitive land uses and the operational Port. Clause 21 cites that “PoMC is committed to retaining these areas and where it is consistent with Port planning, providing new opportunities for open space along the foreshore and river”. Under clause 21 it is also stated one of the “implementation measures” for “open space and recreation” is to “Liaise with the City of Port Phillip in reviewing Perc White Reserve to determine the most suitable zone or overlay to protect its environmental values.”

### 2.3.2 Port of Melbourne Development Strategy 2035 Vision

Perc White Reserve is situated on Port of Melbourne land in the Webb Dock precinct. “In developing the port, PoMC has adopted a management framework that incorporates:

- Community engagement through direct engagement and consultative forums;
- Development of a shared vision with local councils regarding port growth and development;
- The ongoing development of a vibrant education programme;
- Support for community activities;
- Managing the port’s impact on the environment and amenity, facilitated by the *Port Safety and Environmental Management Plan* and the *Port Environs Framework*; and
- An appreciation of the port’s landscapes, facilitated by the port amenity enhancement program.”

The Port of Melbourne Corporation plan is to develop Webb Dock as an international container terminal by 2035. By this time it will have a capacity

to handle a similar number of containers to Swanson Dock. According to the “short to medium term” outcomes, Webb Dock East would be developed for “international containers”, “coastal” including “Bass Straight” and “value added logistics” and “interim use” along the northern boundary of the Reserve and Todd Road. In the “longer term” the entire area adjoining Webb Dock Trail, the Reserve and Todd Road will be used for international containers.

According to the PoMC 2035 Vision, there are no plans to address the dual-gauge rail corridor in the “short term”. In the “longer term” the State Government will need to provide direction.

Both the “Short to Medium term vision concept plan” and the “Long term vision” identify Perc White Reserve remaining as a buffer zone.

### 2.4 Historical Context

In addition to the environmental significance of the area, it has a rich cultural heritage. A number of historical references could be used as a basis for enhancing a sense of identity for the area. Proposed educational and/or interpretive signage should be a feature for the reserve and trail.

The earliest inhabitants of the area now covered by the City of Port Phillip were the Yalukit-willam, one of the five clans of the Bunurong, known as the coastal tribe, and who were members of the Kulin nation. They roamed the swampy areas below Emerald Hill and the sandy-ridged tea-tree covered coastline, which extended from St Kilda to Fishermans Bend. The aboriginal inhabitants knew the St Kilda area as “Euro-Yroke” a name that was used by them to describe the red-brown sandstone found along the beach.

“There is also the first European LIARDET, WILBRAHAM FREDERICK EVELYN (1799-1878), who was a hotel-keeper and water-colourist, born on 17 July 1799 at Chelsea, London. By 1839 he and his wife had eleven children of whom five sons and four daughters survived infancy. In July of that year the family sailed for Sydney in the William Metcalfe.

The ship spent some three weeks in Hobson’s Bay and Liardet decided to settle there. He settled by the water at what became Port Melbourne. In October 1840 he opened the Brighton Pier Hotel and soon had a passenger coach service to Melbourne. The hotel was extended and attracted pleasure seekers from town for whom Liardet organized horse races, regattas and archery”(Australian Dictionary of Biography Online), which it is understood occurred in the area of the reserve. He prepared numerous water -colour sketches of the area, which are stored at Latrobe Library.

More recently the reserve has been dedicated to Perc White who was three times Mayor of Port Melbourne in the early 1980’s. During this time a plan was conceived to put rail lines along the foreshore at Sandridge for the movement of freight to and from Webb Dock. That plan was resisted and remnant rail lines that remained from the second World War, were removed and indigenous vegetation was established along the foreshore.

Perc became the Municipal Association of Victoria’s (MAV) representative on the Board of the Port of Melbourne Authority (PMA).

In 1989 the City of Port Melbourne received a letter from the PMA suggesting that in recognition of Perc’s contribution to the Board, an area of land, that we now know as Perc White Reserve be designated as a Reserve and take his name.

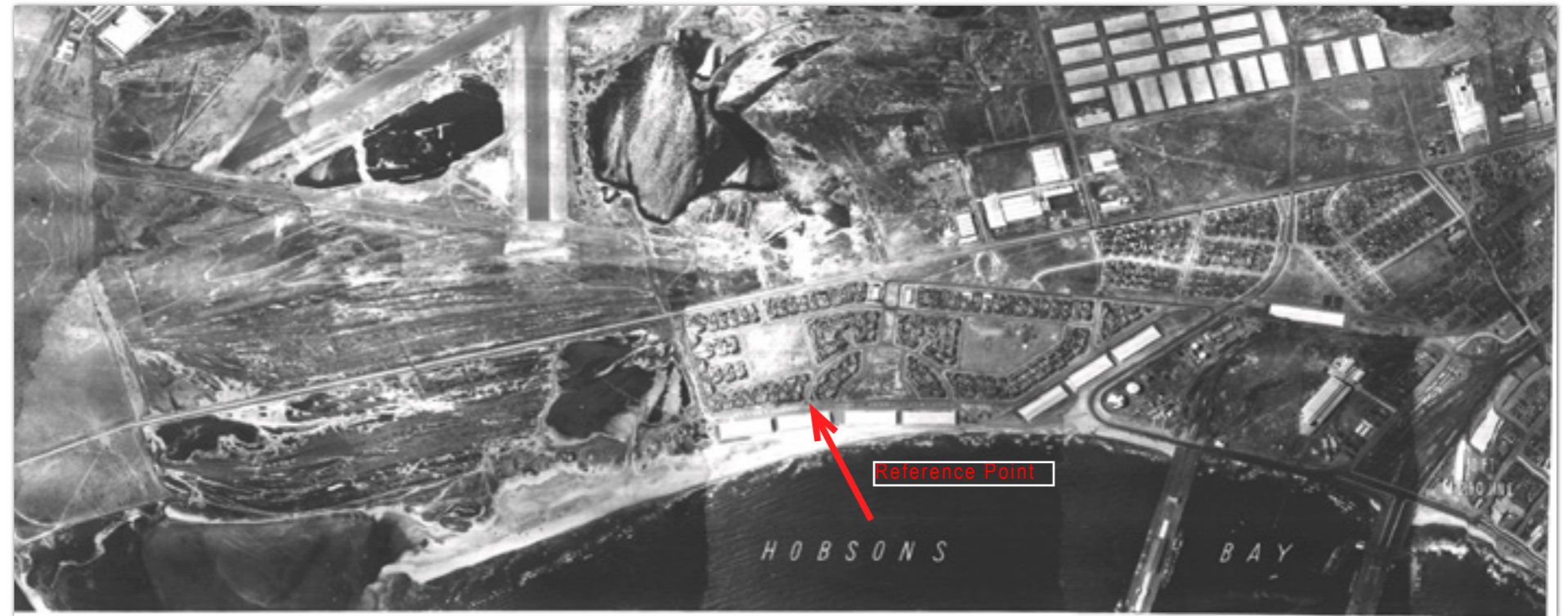


## 2.5 Environmental Context

Perc White Reserve is the only site of remnant dune vegetation in deep silica sand that pre-dates white settlement in Port Phillip Bay. It is home to three grasses that are a unique vegetation type in the CoPP. (Refer to Section 4.4 and 4.5). The inter-tidal zone consists of silty sands that demonstrate significant original features and integrity.

Within the reserve there are seven regionally significant naturally occurring plant species as well four to six locally significant naturally occurring species. The reserve and Webb Dock Trail presently provides habitat for two notable bird species; the Superb Fairy-Wren (*Malurus cyaneus*) and New Holland Honeyeater (*Phylidonyris novaehollandiae*).

Although not presently observed in the reserve, the nationally threatened Swift Parrot (*Lathamus discolor*) is known to pass through Melbourne on route from Tasmania to Northern Victoria.

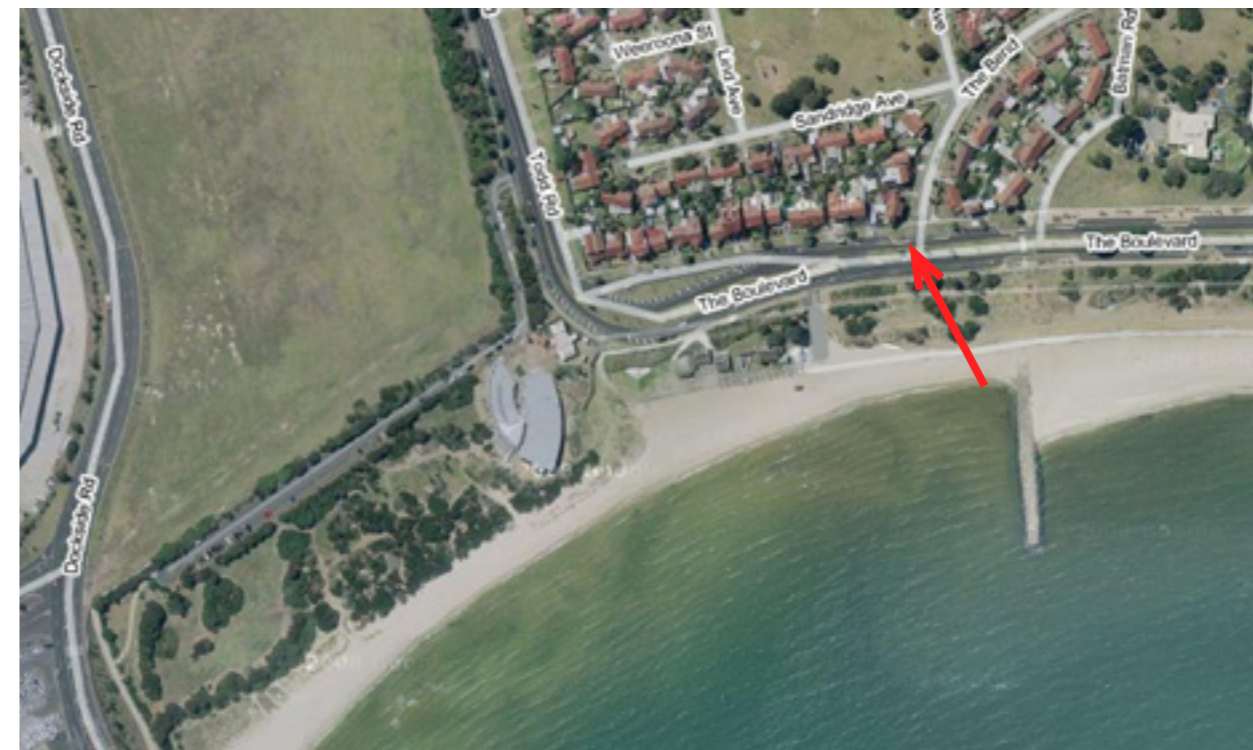


Aerial photo of site 1945

Imaged Sourced: University of Melbourne.



Aerial photo of site 2000 -Imaged Sourced: Google Earth Professional.



Aerial photo of site 2008 -Imaged Sourced: Google Earth Professional.



### 3.0 CONSULTATION

#### 3.1 Community Consultation

This section outlines the process and relationship of the consultation undertaken and the design response that have been incorporated into the management strategy.

Community consultation and feedback on the Perc White Reserve and surrounds was open for a period of over 5 months from August 24, 2009 until February 1, 2010. A number of activities were undertaken to assist in the development of the updated Plan. These included:

- Three on-site community consultations during September 2009;
- On-site signage panels on the corner of Todd Road and The Boulevard where additional information was progressively added to illustrate the plans development in response to community feedback;
- Placement of A3 laminated signs throughout the reserve and surrounds to also advertise the consultation opportunities and the plans development in response to community feedback.
- Three mail-outs to nearly 400 residents on each occasion; and
- Ongoing responses to community member contributions by phone and email.

The consultation process purposely sought the community’s input without any pre-determined concept plans. At the on-site consultations members of the public were invited to draw on copies of aerial photos to directly identify any improvements to the area.

Participants were also invited to improve or add to, the reserve existing values and principles.

The community consultation process had a high level of engagement from the local community. Positive feedback was also received from residents and reserve users in relation to the plans development and consultation process adopted.

**Values**

- Valued as a coastal nature reserve; and
- Place for passive recreation and respite.

**Principles**

- Protection of important native plants and animals;
- Enhancement of the rare coastal ecosystem;
- Access to and through the reserve; and
- Safety & accessibility for all.

**Summary of community feedback received:**

- Rationalise the paths network, formalising primary paths with clear views for more direct and safer access;
- Upgrade fencing & planting to protect and enhance habitat for native animals;
- New directional signage to and through the reserve and beach – including improved walking and cycling links to the Webb Dock trail;

- Additional seating and bins for walkers and anglers along trail; and
- Consider a feature to encourage more visitors to access the Webb Dock trail.

Consequently a number of key issues and considerations were responded to the master plan and management strategy for the Reserve and surrounds. Please refer to the table on the next page identifying the key issues and related design responses.

In addition to the public consultation process, Council established a community Reference Group to provide advice and feedback to council in the plans development. The Reference Groups responsibilities included consideration of desired outcomes and any limitations (including budgeting) and relevant strategies and policies. Three Perc White Reference Group meetings were held which included two on-site visits.

The stakeholders represented on the Reference Group included:

- Port of Melbourne Corporation;
- Friends of Port Melbourne’s Foreshore;
- Life Saving Victoria;
- Sandridge Life Saving Club;
- Three local community member representatives;
- Parks Victoria;
- Victoria Police;
- One Port Phillip Councillor, nominated by council; and
- Two City of Port Phillip Staff appointed by the CEO.

Other considerations to the identified values and principles in the development of the update management plan and master plan included:

- Be fit-for-purpose design, addressing relevant stakeholder issues, including community and user involvement;
- Improve the interface with cycling networks, improve local amenity and visual legibility;
- Ensure a high level of public safety incorporating CPTED design principles;
- The use of durable materials and finishes that are vandal resistant;
- Comply with all relevant Legislative Requirements and Standards including DDA, to consider cost effectiveness and minimization of constructability complexity.



Diagram - Public Consultation and the Design Process.

### 3.2 Summary of Community Consultation

Summary of Public Consultation & Possible Design Responses		
Issues Identified	Key Considerations	Design Response
<b>Environmental Management</b>	<p>Protect &amp; enhance existing ecology plant and animal species</p> <p>Erosion control along Webb Dock</p> <p>Protective fencing to limit uncontrolled pedestrian access</p> <p>Pest Management incl. rabbits</p> <p>Waste Management - more bins</p>	<p>Bush regeneration, selective planting and weed control works to enhance habitat values</p> <p>Landscape upgrading where required</p> <p>Replace &amp; upgrade with a more robust fencing</p> <p>Integrate feral pest control with neighbouring land owners/managers</p> <p>Redistribute bins to match demand and path entrances including 'Tangler bins' along the Webb Dock Trail for use by fishermen</p>
<b>Safety</b>	<p>Perception that there are unsafe areas in the reserve</p> <p>Car park feels unsafe</p> <p>Bicycle safety &amp; pedestrian conflicts</p>	<p>Open up spaces so that 'destination points' are visible &amp; improve wayfinding</p> <p>Lighting to be brought up to Australian Standard 1158 series: Lighting for Roads and Public Spaces and the Austroads Guide to Traffic Engineering Practice Part 12: Roadway Lighting</p> <p>Upgrade bike paths to reduce traffic conflicts and meet Austroads Standards Part 6A &amp; 14</p>
<b>Wayfinding &amp; Access</b>	<p>Additional wayfinding signage to improve access</p> <p>Clear directional signage is not present</p> <p>Better defined exit &amp; entry markers</p>	<p>Install clear, concise signage</p> <p>Improve sight lines along with installation of directional signage</p> <p>Define entry &amp; egress points &amp; rationalise circulation through dunes</p>
<b>Parking</b>	<p>Car parking demand is high, particularly in summer</p>	<p>Improved car parking regulatory signs and promote existing public transport (bus &amp; light rail)</p>
<b>Infrastructure</b>	<p>Lighting maintenance &amp; standards</p> <p>Existing toilets, serviceability</p> <p>Seating to enjoy Melbourne city views</p> <p>Bike path management &amp; maintenance</p> <p>Emergency &amp; maintenance vehicle access management</p> <p>More BBQs and open space facilities</p>	<p>Renew foreshore lighting to Australian Standard 1158</p> <p>Promote repair service guarantees to improve facilities management</p> <p>Assess seating needs along Webb Dock Trail &amp; reserve</p> <p>Implement bike path improvements to national standards</p> <p>Review access requirements &amp; bollard / barrier design</p> <p>Provide open area for passive recreation and different cultural groups</p>
<b>Miscellaneous</b>	<p>Requests for more and less dog access to beach</p> <p>Shade protection in front of Life Saving Victoria building</p> <p>Car break-ins (mobiles &amp; GPS units being targeted)</p> <p>Public Transport links are poor</p> <p>Lifesaving signage to identify swimming safety hazards</p> <p>Better access &amp; usability for all members of the community</p> <p>Interpretive &amp; historical signage</p>	<p>Dog off-leash zoning under review by Council</p> <p>Provide shade structures to key areas</p> <p>Improved signage such as 'Lock Your Car &amp; Remove Valuables</p> <p>Promote light rail &amp; bus routes</p> <p>Beach safety audit &amp; signage treatment plan is currently underway</p> <p>Work towards delivering safer, more functional public spaces</p> <p>Design &amp; install creative &amp; informative signage to benefit users &amp; visitors</p>



View looking North East to The Boulevard - Open space with no structure.



View looking South along Webb Dock Trail.



View looking North along Todd Road.



View looking West along bike path-Sandridge Life Saving Club.

## 4.0 SITE ANALYSIS AND BACKGROUND REVIEW

### 4.1 Existing Conditions

The site is comprised of two distinct zones, a naturally vegetated coastal dune environment and separate informal park land. The first of these covers the majority of the reserve's area which is naturally vegetated. A wide variety of vegetation communities exists as outlined in Section 4.3.

The key design elements that need to be incorporated into this area are:

- A safer more organised path network;
- Interpretative and directional signage;
- Revegetation to reinforce the wildlife habitat values;
- Improved lighting to meet Australian Standards for public spaces; and
- A review of car parking.

The second area is the open space in front of the Life Saving Victoria building. This space is the main focus of beach visitors in summer. It has a number of roles which need to be incorporated into the master plan:

- Develop a concept plan to unite the two spaces;
- Improved lighting to Australian Standards;
- Improved circulation to minimise the risk of accidents between cyclists and pedestrians;
- Improved linkages to Todd Road and the Webb Dock Trail; and
- Interpretative and directional signage.

Other surrounding sites to be considered under this management plan are the Webb Dock Trail itself, the Todd Road buffer to PoMC land and the carpark area and landscaping around the Sandridge Life Saving Club.

These sites need to be upgraded to:

- Cater for anglers and pedestrians along the Webb Dock Trail;
- Assess the footpath needs, vegetation buffer and parking requirements along Todd Road, and;
- A review of vegetation and surf boat trailer parking around the Sandridge Life Saving Club.

These are discussed further in Section 5.

### 4.2 Context and Photo Survey

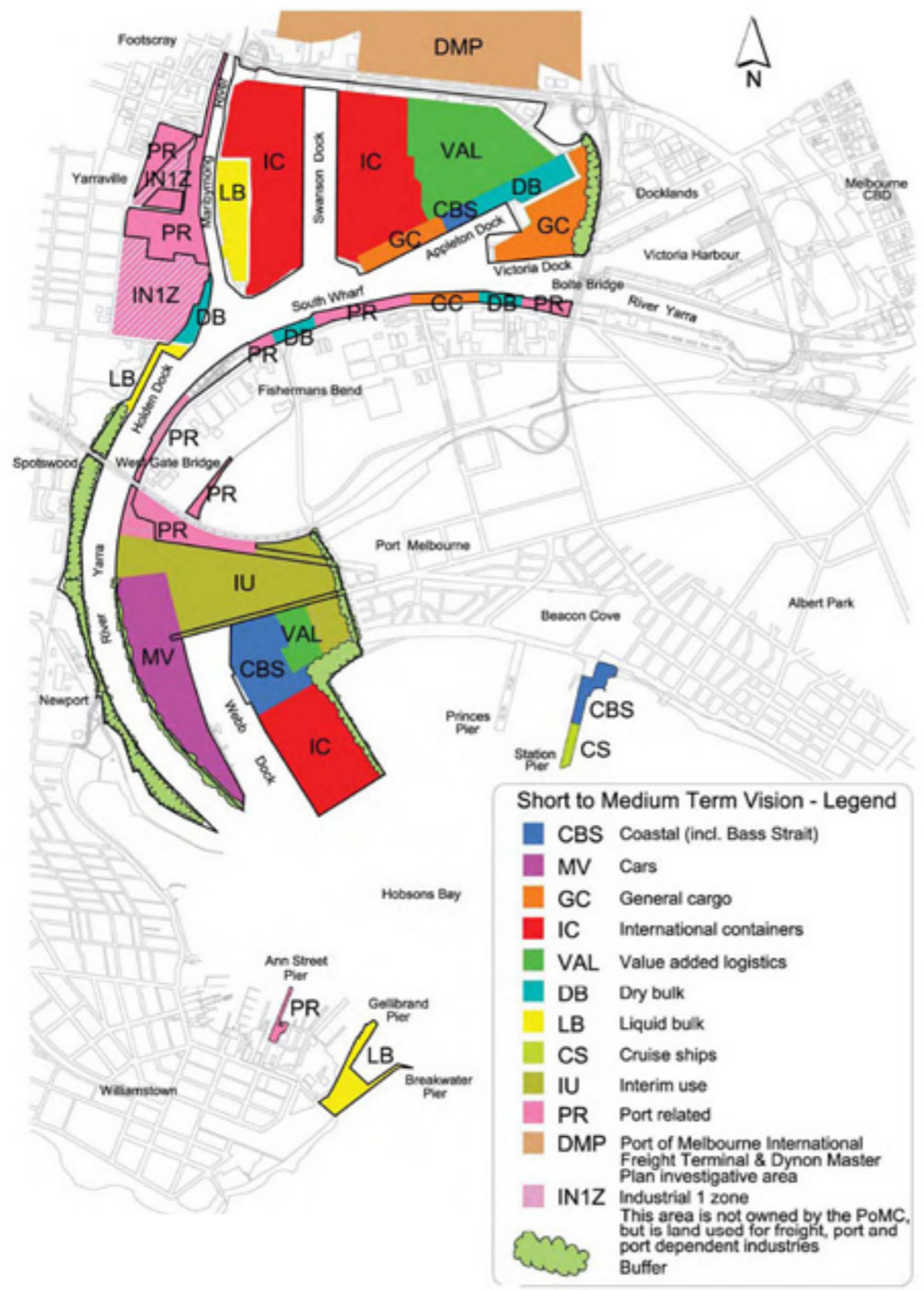
Perc White Reserve is a four-hectare coastal reserve located between the Port of Melbourne and residential housing. As illustrated in the map on the following page, to the west of the site there is an active port and to the north there is a large tract of vacant land that is owned by the Port of Melbourne Corporation for future port-related development. The southern edge of the site is bounded by Sandridge Beach and to the northeast a medium density residential housing precinct. Perc White Reserve is a continuation of, and is adjacent to, the Sandridge Beach Reserve.

Extending south of the reserve is the Webb Dock Trail which exists as a coastal walk around the edge of the port. It has stunning views back to the reserve and along the coast with a backdrop of Melbourne city. The trail has many places for visitors to fish and is well visited for this purpose.

The Life Saving Victoria building was recently built between Perc White Reserve and Sandridge foreshore. The building has in some ways interrupted a former connection to Port Phillip foreshore from Perc White Reserve. Perc White Reserve is a unique part of the Sandridge foreshore and connections should be enhanced where possible.



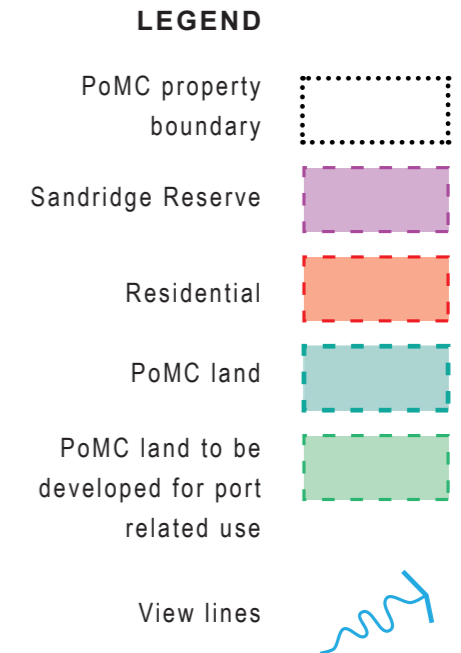
View looking West from Sandridge Life Saving Club.



(Above) Is an extract from the Port of Melbourne Corporation's "Port Development Strategy" 2009, Short to Medium Term Vision.



Site Context - Land Use.



From within Perc White Reserve there is a range of exceptional environmental, industrial and urban views. Directly south and southeast is the view out into Hobson and Port Phillip Bays. West of the site is the industrial architecture of Webb Dock. In the northwest the West Gate Bridge arcs towards and then away from the site, and in the northeast the city skyline increases in presence with every new tower.

East of the site the skyline of Port Melbourne continues to develop at the base of the dual protruding fingers of Station and Princes Piers. These views are more than the sum of their parts, offering an exaggerated sense of time and scale and offer a reprieve from the everyday urban scene.



1  
Vehicle entrance to the reserve from Todd Road - Depicting the entrance's multiple signage and a general lack of a sense of arrival.



2  
Sandridge Beach - Looking southwest towards the LSV building and Perc White Reserve with the Port in the background. Photo demonstrates the strong presence of the LSV building between Perc White Reserve and the Sandridge Foreshore.



3  
Current reserve entrance (west of LSV building) - Typical fence and path. Through the middle of the photo there are areas lacking vegetation cover. Fences require repair and paths require upgrading/renewal.



4  
Reserve foredune - Depicting a patch of ground devoid of successful vegetation due to plant decline. Often species such as Acacia are short-lived (10-20 years), requiring regeneration and/or replanting to accord with their life-cycle.



5  
Ornamental Open Grass Area - Depicting recent revegetation following the 2007 master plan.



6  
The reserve looking southeast - Also depicting the view from the foredune where a dense vegetated strip is present. Enhancing and further creating defined breaks in the vegetation would enable views to the beach and bay along with safer and more direct access through the reserve.



Internal East to West Minor Path – The direction of the paths is often variable and unclear. This can cause visitors to feel enclosed, uncomfortable and disorientated without clear sight lines. This should be addressed.



Beach Dunal Grasses (looking southwest) - Depicting emergent grasses and minor erosion before the view of the Port and its existing vegetated buffer along the Webb Dock Trail is visible.



North to South track from the beach to the reserve - Depicting the need for upgraded fencing. This is one of numerous informal tracks through the site, requiring clearer lines of sight to be established.



Webb Dock Trail - Looking Southeast out to Port Phillip Bay, showing a fishing jetty in the foreground.



Current pedestrian entrance to the reserve, west of the LSV building - Depicting various signage. Here, regulatory signage and Friends Group information board exist. Re-siting signage should be considered to improve visibility, achieve a sense of arrival and properly express community 'ownership' of the reserve.



Beach Dunal Grasses (looking northeast) - Depicting emergent grasses and foredune fencing before the quite remarkable views of the city skyline.



The western edge of the reserve (looking south) - Illustrating part of the Webb Dock Trail which divides Perc White Reserve from the Port facilities. The mixed-height port-side vegetation buffer is depicted.



This aerial plan overlay contains a key depicting the position and direction from which the photographs on the preceding pages were taken.

The photo study was conducted to further understand the existing conditions on the site. The photos in this document have been selected to demonstrate character, features and uniqueness of Perc White Reserve.

Aerial plan overlay identifying photo location and direction.

### 4.3 Landscape Character and Uses

The vegetation and ecology of Perc White Reserve is unique and regionally significant. Vegetation is an integral part of the reserve's character and value. Within the reserve is a combination of patches of tall shrubs, trees, open grass, dunal and low grasses and shrubs.

As illustrated in plans and photographs on the following pages, there are two quite distinct parts of the reserve. The southern end comprises dunal grasses and shrubs and the northern part features open ornamental grass with stands of tall trees and shrubs.

This section contains an assessment of the spatial and other current qualities of the existing conditions including plants. A copy of the intensive study of the vegetation communities was conducted for the 2007 Management Plan which is cited in Section 4.4.

It is evident that existing vegetation within the reserve, while unique, is not an entirely healthy ecosystem, with many of the Acacia species becoming senescent and recently removed from the site. Within the reserve there are many patches devoid of vegetation due to clearing as part of routine management or because of damage to plants due to inadequate fencing. As a result, juvenile and small plants being damaged or destroyed before they mature has led to a decline in ecology.

It is recommended that elements such as defined pathways, interpretative signage and robust fencing be implemented to control pedestrian movement and enhance the ecological benefits from the vegetation communities. This will allow the vegetation to begin to naturally regenerate, improve the quality of the ecology and increase the community and visitor's appreciation of the vegetation. Also, by clearly defining the path system and installing new fencing there will be an overall net gain in the areas of vegetation within the reserve.

The southern boundary on the far side of the Webb Dock path is a long band of buffer planting. This is moderately dense and tall and provides adequate screening at present and provide highly valued Superb Fairy-Wren habitat. However, there have been a number of occasions where this has been burned and presents a potential fire hazard. PoMC have requested a 2.0m wide fire-break against their fence line.

In order to discourage anglers from using vegetation as firewood, the species planted in this area should reduce the availability of timber with more low-growing species. However, there will still need to be denser planting to screen the dock area along the length of the Webb Dock Trail and to maintain the existing Superb Fairy-Wren habitat.

The photo below depicts the sensitive re-establishing dunes along the foreshore. The dunes at the south-western end of the beach are covered in thriving *Carex pumila* whereas the dunes at the northern end of the beach are simply a sparse patch of Carex but with a covering of *Spinifex sericea*.

Depicted in the diagram on page 14 is the western lawn. The space is primarily ornamental grass with areas of tall shrubs and trees. Whilst the area is valued for shade and protection during high winds there is the potential to better integrate the area with groundcovers to the bordering native shrubs.

It is important that this section of the reserve is linked to the circulation routes of the site as a whole and complements the agreed values and principles for the reserve.

This area has recently been planted with predominantly low growing native species in accordance with the 2007 master plan.

Vegetation along Todd Road is of variable height and maturity. It comprises a mix of low to medium height shrubs along with over-storey trees. Species include Acacia, Eucalyptus and Casuarina. Opportunities exist to incrementally remove and replace shrubs and trees to improve both the visual appearance of the planting and its effectiveness as a screen to the adjacent Port of Melbourne land.

The vegetation east of Life Saving Victoria (surrounding the existing BBQ and along to Sandridge Lifesaving Club car park) consists of ornamental grasses and sedges. Only minor additional and renewal planting is required because planting is generally good quality and has well established since installation in 2004.



Photo of existing *Carex pumila* at the western end of the foredune.





**LEGEND**

-  Trees greater than 3m in height
-  Salt-affected grassland
-  Low trees and tall shrubs (E.G. Superb Fairy-Wren habitat)
-  Foredune and dunal grasses
-  Recently installed garden beds containing low planting
-  Ornamental grass lawn
-  Prevailing winds from Sth and SW
-  Sun tracking

Note: For full details on the vegetation and fauna species refer to TNLA 2007 Management Plan.

Aerial photo-plan overlay depicting broad \*vegetation types.

## 4.4 Vegetation Survey (2007)

A requirement in preparing this document was to review and where necessary update the 2007 management plan. An extensive study of the existing vegetation was undertaken as part of this plan authored by TNLA. There have been various changes in the intervening period. Changes and consistencies observed in 2009/10 are discussed hereafter.

### 4.4.1 Vegetation Communities

The Perc White Reserve comprises nine notional vegetation community types as identified in the Perc White Reserve and Sandridge Beach Landscape Management Plan (1996). Some vegetation present in the reserve is thought to be remnant although the highly disturbed site was the subject of extensive planting from 1986 onward. It should be noted that large areas of planting such as those adjacent to the carpark are largely monocultures of *Myoporum insulare* and/or *Melaleuca lanceolata* and therefore have to be classified into the additional category of Buffer Planting.

The ten 'notional' vegetation community types. These are:

- Foredunes
- Backdunes
- Acacia sophorae Shrubland
- Salt-affected Grassland
- Buffer Zone
- Buffer Screen
- Western Lawn
- Melaleuca lanceolata Scrub
- Banksia integrifolia Woodland
- Wetter Depression (Sink)

Note - Buffer Plantings is an amalgam of the above vegetation communities according to the location within the site.

### 4.4.2 Significant Species

In 2002 the City of Port Phillip commissioned Biosis Pty Ltd to conduct an assessment of natural heritage sites across the city. This survey identified no less than seven regionally significant species that are thought to be naturally occurring in Perc White Reserve.

These species are:

- Coast Saltbush (*Atriplex cinerea*);
- Strand Sedge (*Carex pumila*)
- Australian Salt Grass (*Distichlis distichophylla*)
- Common Boobialla (*Myoporum insulare*)
- Hairy Spinifex (*Spinifex sericeus*)
- Salt Couch (*Sporobulus virginicus*)
- Prickly Couch (*Zoysia macrantha*)

### 4.4.3 Existing Vegetation Assessment

#### Foredune Areas

These are locations where dune vegetation either already exists or should be established. This includes the area of the western sink. The foredunes are low and sculpted by the wind with intermittent plantings of *Carex pumila* and the more prevalent *Spinifex sericeus*. These species along with *Carpobrotus rossii* are spreading where temporary fencing has protected the dunes from beach raking. These species are not present however in the currently unfenced Foredune area. *Atriplex cinerea* occurs in the rear of the foredune and there are occasional clumps of *Ficinia nodosa* in the moister depressions within the dune. At the very rear of the foredunes *Acacia sophorae* requires control in order to prevent its colonisation of the back of the foredune.

#### Backdunes and *Acacia sophorae* Shrubland

These sand dune areas are immediately behind the foredunes along the eastern and the central zones of the site. They are virtually *Acacia sophorae* monocultures. Since the previous studies have been completed, this area has had a significant of *Acacia* removed as it has become senescent.

#### Salt Affected Grassland

This area includes the eastern sink and the backdune grassland areas which run through the middle of the site from east to west. Large parts of these grassland areas have recently been fenced to define and protect them in the longer term, however the type of fence has proved to be inadequate. Clearance and pruning of coastal wattle has left open ground where weed control prior to replanting is an immediate priority. Fencing of the eastern sink area and weed control in this location are also important priorities. Particular attention should be paid to the immediate removal of *Juncus acutus* in this area.

Protection of newer areas of salt grass growth adjacent to paths is also important and may require vegetation control and fencing.

#### Buffer Zone (Interdune, south of the ornamental lawn)

This successful band of shrubby vegetation separates the beach/dune area from the open lawn at the western end of the site. It comprises plantings of predominantly *Acacia*, *Allocasuarina*, *Atriplex* and *Myoporum* genus. Specifically, attention is to be paid to pruning of overgrown *Myoporum insulare*, removal of black matting and introducing a wider range of coastal species that will tolerate the soil type.

#### Buffer Screen Planting (Immediately south of the car park footpath)

The existing band of *Myoporum insulare* dominated planting that separates the car park from the Salt-affected Grasslands. Incremental pruning/thinning and renewal of the *Myoporum* along the carpark edge should be scheduled.

#### The western Lawn and *Melaleuca lanceolata* Scrub

This area includes flanking trees where a number of trees together with low shrubs were thinned and up-lifted to improve sight lines. An opportunity remains to further improve sight lines and access from the car park down to the open grass area and beyond.

#### *Banksia Integrifolia* Woodland

This is a small area towards the eastern end of the site between the carpark and the Salt affected Grassland. Replanting of *Banksia* should be limited to higher topographic areas where they are not prone to seasonal inundation and subsequent drowning.

#### Wetter Depression

Regionally significant remnant vegetation is found in this area. Species include *Cotula australis*, *Crassula siebieana*, *Ficinia nodosa*, and *Pseudonaphthium luteo-album*. This should be protected and enhanced.

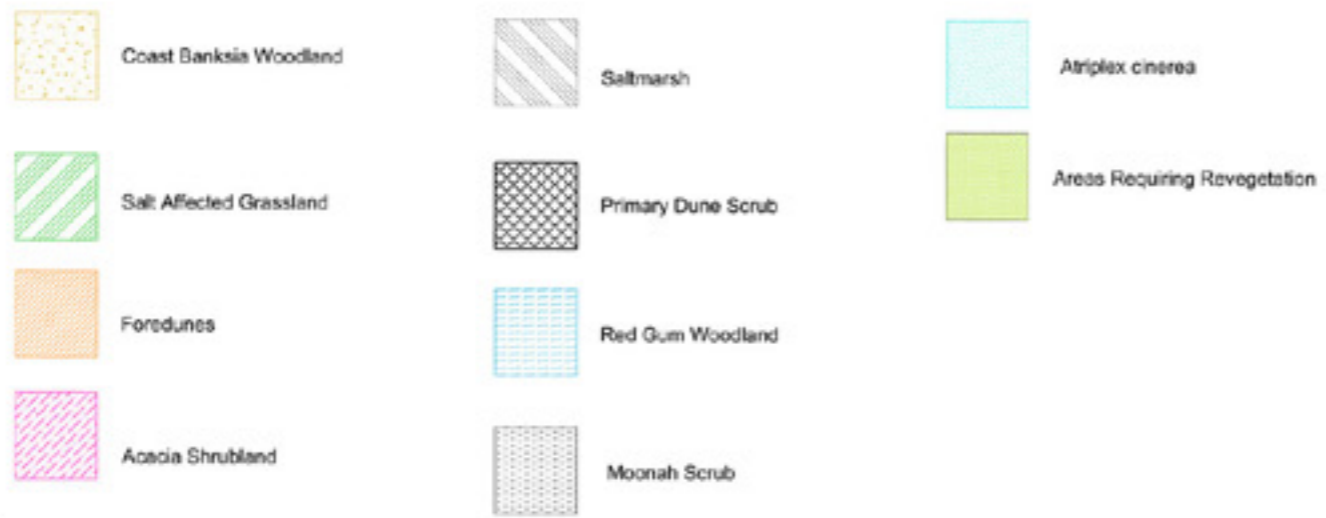
Vegetation communities denoted herein should inform species selection to be used in revegetation of the reserve. The aim should be to increase the site's biodiversity whilst giving due regard to regionally significant plant species and fauna.

## 4.5 Vegetation Survey (2009)

As shown in the diagram on the following three pages, a large proportion of the 2007 management plan has been implemented including clearance of old, senescent *Acacia*. There are substantial areas that require revegetation.



Existing Vegetation Communities from TNLA 2007 Management Plan.



AERIAL PHOTOGRAPH  
BASED ON DATE FOR 13  
NOVEMBER 2009

**PRELIMINARY**

rev	description	app'd	date
A	INITIAL ISSUE		

City of Port Phillip  
Perc White Reserve  
**MANAGEMENT PLAN**  
Existing Vegetation



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date | Nov 2009 | rev no. | A

approved ..... **VEG**



Updated Vegetation Survey of the reserve.



Based on the Department of Sustainability and Environment, Ecological Vegetation Class (EVC) the site is classified as Gippsland Plain and under the 1750 classification (pre European settlement) and as 677 Inland Salt marsh and 921 Coast Banksia Woodland/ Coastal Dune Scrub Mosaic. These classes of vegetation also provide a guide for species selection in the revegetation process.

These classifications and species are comparable to those used in the 2007 survey.

A further site assessment of vegetation condition and rehabilitation activities at the Perc White Nature Reserve was undertaken on 23 December 2009. The site visit confirmed that some changes have occurred in vegetation extent since the previous assessment undertaken by 'TNLA' during 2007.

Overall, the condition of the native vegetation is good but several issues of concern require immediate attention. These are related to dune stabilisation and vegetation establishment. Some vegetation has recently been removed from several sections along the fore-dune system and within the adjacent area because of decline. While there has been no immediate effect from the removal of vegetation (i.e. dune destabilisation), there is evidence that a dune 'blow-out' will potentially develop in the absence of stabilisation activities/works.

If dune 'blow-out' was to occur it would deposit large volumes of wind blown sand deposits extending inland from the dune system. This could potentially modify conditions and exclude or limit the potential for native vegetation to successfully establish.

There is evidence of grazing by rabbits across the site. More coordinated pest control will provide immediate benefits to maximise natural regeneration and survival of new plantings.

Several weed species have established within the boundary of the reserve. Most of these are restricted to the maintained 'open spaces' and along recently disturbed areas (i.e. informal access tracks) within the reserve. These are not presenting an immediate threat to the establishment of native vegetation but should continue to be monitored and control measures implemented if necessary.

#### 4.6 Webb Dock Trail and Reserve Fauna

The Perc White Reserve and adjoining Webb Dock trail is highly valued for its vegetation and habitat for native fauna. The considerable size of the 7 hectares of urban coastal reserve and trail makes the area extremely unique. The area is also the largest area of native habitat within the City of Port Phillip and just a few kilometres from Melbourne's CBD. Several fauna species have been identified on the site or are known to be in the area.

In a June 2003 report the natural and cultural heritage consultants, Biosis Research, recorded eight native fauna species. These were the Superb Fairy-Wren, New Holland Honeyeater, White-plummed Honeyeater and Red Wattlebird within the scrub. Silver Gull and Pacific Gull were sited on the beach. Masked Lapwing heard in pasture to the north and Rainbow Lorikeet flew overhead.

Introduced species recorded included Spotted Turtle-Dove, Common Starling, Common Blackbird and European Rabbit. "An unidentified rodent was heard and seen darting through the dense vegetation" and "likely to be an introduced rat as the native Swamp Rat or Bush rat are unlikely to persist in suburban Melbourne."

According to the 2003 report the reserve and trail also provides habitat for a number of species known to occur in the City of Port Phillip. "These include scrub and woodland fauna such as thornbills, scrub-wrens, honeyeaters, lorikeets, butcherbirds" and "coastal birds such as gulls and cormorants may fly over or visit the adjacent beach." "Small reptiles such as Garden Skinks are likely to live within the reserve." The Reserve may also "provide an occasional foraging resources for the nationally threatened Swift Parrot as it moves from Tasmania through Melbourne to northern Victoria."

The area is highly valued for its existing populations of Superb Fairy-Wren and New Holland Honeyeater within the Reserve and along the Webb Dock Trail.

#### Superb Fairy-Wren

The Superb Fairy-wren is notable for several peculiar behavioral characteristics. The birds are socially monogamous and sexually promiscuous, meaning that although they form pairs between one male and one female, each partner will mate with other individuals and even assist in raising the young from such pairings. Male wrens pluck yellow petals and display them to females as part of a courtship display.

The Superb Fairy-wren can be found in almost any area that has at least a little dense undergrowth for shelter, including grasslands with scattered shrubs. Superb Fairy-wrens feed on insects, other small arthropods and supplements its diet with seeds. These are caught mostly on the ground, but may also be taken from low bushes. Feeding takes place in small social groups.

The Wren's nest is a dome-shaped structure of grasses and other fine material. It is usually placed in a low bush and is constructed by the female. The female incubates the eggs alone, but both sexes feed the young. Other members of the group will also help with the feeding of the young.



### New Holland Honeyeater

The New Holland Honeyeater is common where grevilleas and banksias are found and also mixes with other types of honeyeaters. It is inquisitive and approaches humans.

The Honeyeater mostly eats the nectar of flowers, and busily dart from flower to flower in search of this high-energy food. Other food items include fruit, insects and spiders. The birds may feed alone, but normally gather in quite large groups. Most feeding takes place in lower areas of bushes and thickets.

The New Holland Honeyeater's cup-shaped nest is made of bark and grasses, bound together with spider web. It is lined with soft material and is placed in a bush or tree, anywhere from ground level up to 6m. Both sexes feed the chicks. A pair of adults may raise two or three broods in a year.

Consultation with Mr. Andrew McCutcheon (Earthcare) has identified that flowering plant species that attract insects and provide dense cover are required to attract Superb Fairy-Wren and Honeyeater birds. They also like to feed in open, grass areas adjacent to safe fortress of thick-growing shrubs.

In general their needs are:

- Protection from predators – thickets of shrubs, with prickly branches or leaves can provide the perfect place to retreat from danger;
- Safe nesting sites – they typically like to build a nest among tightly packed shrubs;
- Open areas of lawn or leaf litter, where insects live and breed, providing a ready food supply to fairy-wrens.

The recent clearing of senescent vegetation may have reduced the available habitat. It is recommended the vegetation management plan includes: *Atriplex cinerea*, *Correa alba*, *Lepidosperma gladiatum*, *Olearia axillaris*, *Olearia ramulosa*, *Spinifex sericeus*. Also, *Rhagodia candolleana* which should be to be cultivated in small clumps do avoid this plant out competing companion species.



### 4.7 Access and Circulation

Perc White Reserve provides access to and from Webb Dock Trail, Sandridge Beach, LSV building and from the carpark. The reserve is also a space for people to enjoy the unique vegetation and wildlife. The site needs to be logical, legible and permeable for the safety and enjoyment of all users.

As demonstrated on the following page, there is an overly complex network of formal and informal paths that have developed over time. Many are little more than desire lines, comprising indirect, narrow, enclosed routes that offer limited sea views. This pedestrian network is neither legible nor logical and can cause users to feel disorientated, unsafe or uncomfortable. Both from the carpark and areas within the reserve, it is unclear where the beach is, or that nearby beach exists. The current layout also disconnects the carpark, reserve, beach and Webb Dock Trail.

The road into the site that leads to the long narrow carpark is direct and located at the back of the site but it currently offers no real sense of arrival. A sense of arrival is important to the cohesion of the reserve and will improve user's experiences. Photo #1 on page 10 illustrates the existing conditions.




Along The Boulevard, there is an on-road cycleway that continues on Todd Road leading to the reserve. There is an obvious opportunity to extend the on-road cycleway through the main car park and on to the Webb Dock Trail. A further opportunity to link the off-road, shared cyclist and pedestrian path to the Life Saving Victoria car park and the Webb Dock Trail. Separating these paths into two in front of the LSV building would enable reduction of access conflicts and improve safety in the area and enhance amenity for people to consider using the cafe or continue their journey on to the trail.

The path network within the site should be rationalised and simplified to become more logical, offer sea views from within the reserve and views back to the carpark. This will increase passive surveillance and perceptions of security for users, leading to an improved experience of the site as a whole.

A sense of arrival or 'address point' needs to be created with clearly defined entrances for both vehicle users and pedestrians. Better defined 'entrances' to the site will have an immediate positive effect and serve to encourage new users to the spaces and better serve existing users. This is particularly important for the area leading to the existing car park from LSV which presently feels overgrown and somewhat enclosed. For pedestrians heading towards the western end of the car park, there should be a new layout (integrated with existing conditions) which encourages safe movement to the car park but also encourages access through the reserve and south to the beach front.



**LEGEND**

-  Path Termination Point
-  Pedestrian Site Access
-  Conflict Point
-  Pedestrian Path
-  Cycleway
-  Vehicle Route

Existing paths and tracks throughout the reserve.

## 4.8 Climatic Conditions

The success of a coastal public reserve can be heavily dependent on the environmental conditions. Climate and seasonal temperature change have an obvious influence. Similarly, micro-climate factors such as wind, shade and sunlight affect the user's experience of public space.

Melbourne's seasonal climate dictates that the site needs protection from south, south-west and northerly prevailing winds as well as from the very high summer temperatures.

Perc White Reserve and surrounds are highly exposed to the prevailing winds, rain and all day sun. As a result, the existing vegetation canopy cover provides limited protection to beach and reserve users.

There is scope to provide an improved micro-climate for users by limiting effects of high winds and by providing additional shade. This can be achieved through protecting the existing foredune vegetation and supplementary plantings – especially trees such as Acacia and Allocasuarina.

## 4.9 Public Amenity

Public amenity within Perc White Reserve and surrounds must be a careful balance between catering for site users while not being detrimental to the environment.

The facilities currently provided for users are a carpark, rubbish bins, seats, fishing platforms and a few large grass spaces.

The community have requested additional BBQs. Locations east of the LSV building and within the vicinity of the existing BBQs have been identified as suitable locations (please refer to the master plan in Appendix 2).

It is recommended that no new toilet blocks are installed within the Perc White Reserve or Webb Dock Trail. Adequate facilities are located approximately 100 metres east of the site at the Sandridge Beach Pavilion. In addition to the existing facilities, new toilets are proposed for the Sandridge Beach Reserve.

A sense of environmental protection for the reserve and surrounds can be further developed with the incorporation of recycling bins and a litter educational programme.

## 4.10 Design and Conservation Opportunities

A number of opportunities and constraints have been identified below and are illustrated in the diagram on the following page.

### 4.10.1 Social See purple shading on the adjacent plan.

**Area 1. Civic Space** Entrance to LSV building and through to carpark and reserve.

**Opportunity:** Signage and entrance treatment at pedestrian scale.

**Area 2. Termination Node** Open space in front of the LSV building is a node that terminates the main foreshore shared path system. It has no activities to attract people (except the beach in summer) and there are no signs to provide directions to the bicycle path, along Todd Road or to the Webb Dock Trail.

**Opportunity:** Create a more interesting and usable public space in front of the LSV building and provide clear directional signs. Install shade trees, BBQ facilities to create a more dynamic space with grass and walkable surfaces.

**Area 3. Northern Boundary** Woody and dense vegetation bordering the carpark

**Opportunity:** Upgrade plantings to include more flowering low shrubs and tall trees with a foliage canopy to screen the northern fence line and site beyond.

**Area 4. Carpark** (Southern Edge) Woody, semi-dense vegetation bordering the carpark footpath.

**Opportunity:** Further uplifting of the existing trees to ensure a clear-stem and clear sight lines will improve passive surveillance and safety. Beneath trees, planting should be limited to low-growing flowering ground cover and mulch.

**Area 5. Western Lawn** Open grass zone with pockets of dense vegetation and two recently planted ornamental garden beds.

**Opportunity:** Open up area for passive surveillance by providing a gap in tree planting at the western end. Also, renew the garden beds to be consistent with the neighbouring foredune and salt affected vegetation.

**Area 6. Webb Dock Trail**

Currently use is limited to those already aware of the route, such as anglers and local residents.

**Opportunity:** Strengthen the connection to the trail with new way-finding signage, more seating, and "Tangler Bins" for anglers. Another suggested addition is to develop a Webb Dock trail marker or totem. A concept design is illustrated in Section 5.

**Area 7. Buffer Planting Adjoining the Port**

The Port plans to increase port-related activities within its land north and

southwest of Perc White Reserve.

**Opportunity:** The existing vegetation buffer, although adequate at present, could be improved by preemptive planting prior to changes in activity.

**Area 8. Access to the beach**

**Opportunity:** Re-establish and/or strengthen connections through the reserve with clear sight lines and walking paths.

### 4.10.2 Environmental See green shading on the adjacent plan.

**Area 9. Sensitive and unique ecosystem** South-western beach foredune and salt-affected grassland west of LSV building containing regionally significant plant species. Currently these two areas lack vitality and are not in optimum health.

**Opportunity:** Increased vegetation cover and biodiversity will increase habitat value to further support the populations of Superb Fairy-Wren and New Holland Honeyeater bird species.

This can be achieved via a number of actions. These could include renewed fencing, defined walking paths and limited boardwalks, bush regeneration and revegetation works.

**Area 10. Sensitive Dunes** The dunes to the south-west end of the beach adjacent to the Webb Dock Trail. This area has emergent and semi-established dunal grasses requiring immediate protection.

**Opportunity:** Fence to encourage plant growth and protect nesting and ground-foraging birds. Signage may also be needed to inform visitors not to access this sensitive dunal habitat.





**Area 11. Recovering Dunes** These dunes south of LSV contain minimal dunal grass cover due to the absence of protective fencing.

**Opportunity:** Establish new dunal grasses within new and upgraded fencing to prohibit access. As above, signage could be used to inform visitors about the restoration and conservation works being undertaken.





LEGEND




-  Social / community opportunity
-  Environmental opportunity
-  Circulation desire lines
-  Entry & exit points

Opportunities & constraints



Map of Design Principles

1. Revegetation of foredune and backdune together with a rationalised paths network
2. Continue revegetation to build on works achieved via previous management plans
3. Main activity location
4. Improved seating and revegetation along Webb Dock Trail
5. Potential for historical/trail marker or signage.

- Key
-  Potential improved pathways and circulation
  -  Define entry and exit points / Way finding signage
  -  Resolve movement conflict

## 5.0 MASTER PLAN DESIGN PRINCIPLES & CONSIDERATIONS

### 5.1 Principles

The key values and principles in this master plan for the upgrading of the reserve are defined as:

#### Values

- Valued as a coastal nature reserve; and
- Place for passive recreation and respite.

#### Principles

- Protection of important native plants and animals;
- Enhancement of the rare coastal ecosystem;
- Access to and through the reserve; and
- Safety & accessibility for all.

Discussion and review of these values and principles are detailed in the following sections.

#### Utilise Crime Prevention Through Environmental Design (CPTED) Measures

The Victoria Police provided a summary of CPTED when designing and managing public spaces. It involves an approach to crime prevention that takes into account the relationship between the physical environment and the users of that environment.

We all recognise when the space we are in sends us a message about safety, "this is a safe place" or danger, "this is an unsafe place". The theory behind CPTED is that the design of a physical environment can produce behavioral effects that will reduce both the incidence and fear of crime. These behavioral effects can be accomplished by reducing the susceptibility of the environment to support criminal behavior.

There are four basic principles in CPTED:

- Natural access control;
- Passive surveillance;
- Activity support; and
- Territorial reinforcement.

### Natural access control

The design concept of access control is directed primarily at decreasing criminal accessibility. Natural access control restricts criminal intrusion, in particular into areas where they will not be easily observed, by:

- Limiting access; and
- Increasing natural surveillance.

Gates, fences, walls, footpaths, landscaping and lighting can be used to clearly guide the public to and from specific entrances and exits. Similarly, they also prevent or discourage public access to or from dark or unmonitored areas and enable intruders to be more easily recognised.

### Passive surveillance

Natural surveillance is a design concept that aims to keep potential offenders and intruders under observation through the creation of environments where there is sufficient opportunity for people engaged in their normal behaviour to observe the space around them. Areas can be designed so they are more easily observed through:

- Placement of persons or activities to maximize surveillance possibilities; and
- Maintaining minimum lighting standards to provide for night-time illumination of parking lots, walkways, entrances, exits and related areas.

### Activity support

Activity support refers to safety measures that use a specific activity planned for a specific space. It involves locating an activity so individuals engaged in that activity become part of the natural surveillance system. The following examples demonstrate how activity support can operate to increase safety.

Placing safe activities in places that will discourage would-be offenders can often increase the Perception of safety for general users of a space and can and increase risks to those seeking to offend. Both circulation and gathering areas should be located so as to provide natural surveillance.

### Territorial reinforcement

This is a design concept that clearly delineates private space from semi-public and public spaces and also creates a sense of ownership.

Other principles that have been adopted in the design (and are compatible with CPTED) of the reserve include improved lighting and rationalised circulation routes.

Proper maintenance of infrastructure such as lighting will amplify CPTED gains.

## 5.2 Design Considerations

- Recreation- Provide a safe and comfortable series of spaces for users and improve the amenity and facilities of the main public open space areas;
- Ecological - Continue to build on the previous master plan and enhance the vegetation communities and habitat on the site;
- Wayfinding - Clarify circulation to provide safe and access and incorporate directional and interpretative signage;
- Access for all people and cultures. Clear entry/exit points, DDA compliance to ensure open space areas are accessible.

Each of the concepts and measures listed above were considered and incorporated into the master plan on the following page. Further details depicting the master's proposed phasing are given Appendix 3.

## 6.0 MASTER PLAN ELEMENTS

The master plan has been developed to meet the agreed vision and principles for the reserve as defined by the community.

The key elements to be implemented are:

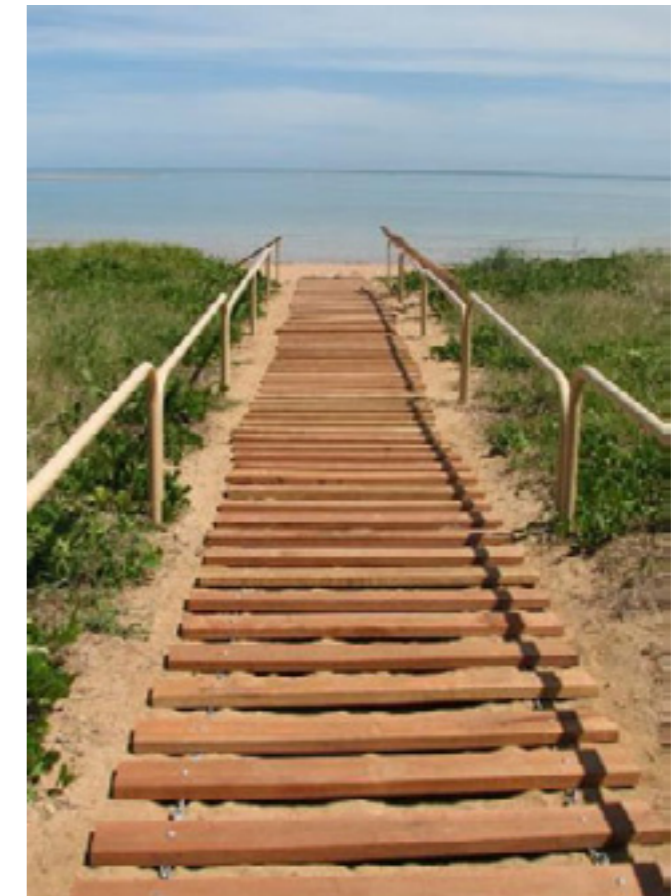
- A new path network;
- New public lighting;
- Additional cycleway lane marking;
- New and upgraded fencing;
- Modified public space, east of the LSV building;
- The continuation of vegetation rehabilitation and new plantings to enhance habitat;
- New seating, bins and other furniture; and
- New interpretative and way finding signage.

## 6.1 Pathways

A new path network is to be installed with:

- Three main north-south paths (part chain link boardwalk, part sand); and a new formal connection from the western end of the car park to the beach front;
- A minor east west connection; and
- Minor realignments to existing paths.

Examples of path types are given on the following pages and Appendix 4.

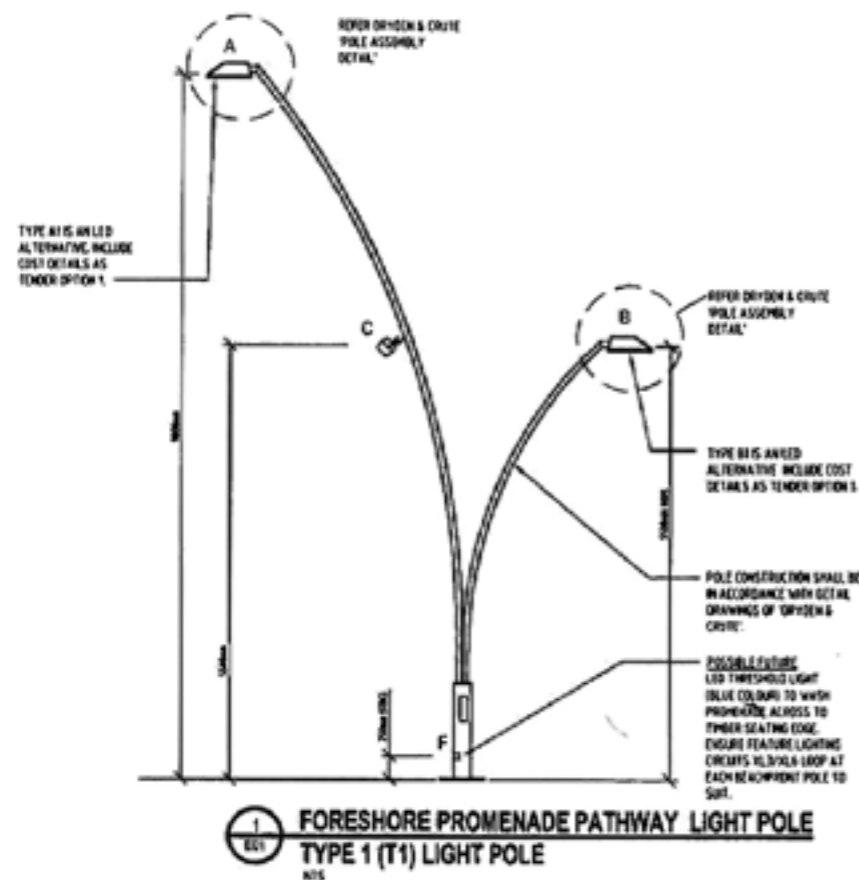


Example of a chainlink boardwalk. This system can be easily lifted and adjusted to accommodate shifting sand profiles.



## 6.2 New Public Lighting

In order to improve safety and sustainability, it is proposed to provide additional lighting to the main car park area and to the upgraded public space. Two types of lighting are proposed. The first is for the main car park area using a standard CoPP street light compatible with those used in the city. The second is the CoPP foreshore light as illustrated below for the main open space in front of the Life Saving Victoria building.



CoPP foreshore light for public space in front of Life Saving building

## 6.3 Cycleway Lane Marking

Improved line marking will produce benefits in two different ways. Firstly it will reduce cycle / pedestrian movement conflicts east of the LSV building. Secondly, cyclists will have a clearly delineated new path from The Boulevard to the Webb Dock Trail.

A new, dedicated path will be installed immediately adjacent to the small LSV car park and link to an 'on-road' cycleway lane. The section of 'on-road' cycleway will run the length of the larger reserve car park; positioned to avoid losing any car parking spaces.

## 6.4 New and Upgraded Fencing

Earlier installed fencing consisted of stainless steel cable and was intended to be a design feature of the site. Unfortunately, much of the stainless steel cable was illegally removed from the site therefore limiting its effectiveness in controlling access and protecting vegetation. It is recommended that the remaining stainless steel fencing be removed and replaced with a more suitable type - similar to that pictured below.

New and renewed fencing is needed to keep people to prescribed paths and to safeguard the fragile coastal vegetation. Coastal fencing is proposed to be ringlock with plain wire and cured pine post fence as shown in the image below. There are to be two fence heights adopted for the site. The first is a 1.2 metre high fence protecting vegetation within the centre of reserve. The second is to be a 1.5m high fence located around the foredunes, beach and flanking each chain-link boardwalk. The additional height will better accommodate changes in ground levels with dunal sand movement.



Example of coastal 'ring-lock and timber post' type fencing.

## 6.5 Modified Public Space East of the LSV Building

As shown in the plans in Appendix 2, it is recommended that a number of elements be introduced to improve the aesthetics and functionality of the space. These include:

- Linking the space with the current BBQ area and Sandridge Beach precinct. This is to be done using a timber wall as a unifying element. It is proposed that the radius and curvature of the existing timber wall be continued into the space in front of the LSV building
- Create two new BBQ points to cater for the influx of people during summer. Timber batten-clad walls on a gentle slope will form a pleasant back-drop for the BBQ locations.

- Planting of semi-mature trees behind the timber walls as a feature that will increase shade protection over time;
- New signage and defined paths linking the Sandridge beach precinct with the Webb Dock Trail. This will allow people to move easily through the reserve and onto the Webb Dock Trail;
- Feature lighting in the BBQ areas will be installed to improve the safety and functionality of the space. The standard CoPP foreshore light should be installed to complement the contemporary nature of this new area; and
- Chainlink boardwalks are to be installed to minimise damage to the foredune when people are accessing the beach.



Curved, sloping timber wall will be used to unite Sandridge Pavillion (above) with the upgraded LSV frontage (Refer Appendix 2)

## 6.6 Vegetation

The main areas of planting to be undertaken are associated with (1) the upgrade of the frontage and western side of the LSV building and (2) infill planting to revegetate the remnant vegetative areas deep within the reserve. Currently, a myriad of old pathways weave their way through the site; particularly across the foredune. Selective infill plantings will enable a more consistent plant cover, habitat for birds and other fauna and contribute to a more cohesive landscape structure. Suitable plant species would include but not be limited to:

<i>Atriplex cinerea</i> Coast	Saltbush
<i>Austrodanthonia caespitosa</i>	Common Wallaby-grass
<i>Austrostipa stipoides</i>	Prickly Spear-grass
<i>Banksia integrifolia</i> ssp.	Coast Banksia

<i>Carex pumila</i>	Strand Sedge
<i>Chrysocephalum apiculatum</i>	Common Everlasting
<i>Correa alba</i>	White Correa
<i>Correa reflexa</i>	Common Correa
<i>Dianella brevicaulis</i>	Small flower Flax-lily
<i>Dianella longifolia</i>	Pale Flax-lily
<i>Dichelachne crinita</i>	Long-hair Plume-grass
<i>Disphyma crassifolium</i>	Rounded Noon-flower
<i>Ficinia nodosa</i>	Knobby Club-sedge
<i>Goodenia ovata</i>	Hop Goodenia
<i>Lepidosperma gladiatum</i>	Coast Sword-sedge
<i>Leucophyta brownii</i>	Cushion Bush
<i>Lomandra longifolia</i>	Spiny-headed Mat-rush
<i>Pelargonium australe</i>	Austral Stork's-bill
<i>Poa labillardierei</i>	Common Tussock-grass
<i>Poa poiformis</i>	Blue Tussock-gras

### 6.7 New Furniture Seating, BBQs, Bins and other items

Key furniture elements to be installed include:

- Two new BBQ's;
- Tangler bins;
- New seating along the Webb Dock Trail; and
- New bins in the reserve and along Webb Dock.

Examples of proposed items appear on the right of this page.



Two examples of solid and rustic timber seating to tolerate the coastal conditions.



DA Christies BBQ



Tangler Bins for collecting fishing line and associated equipment.



CoPP standard bin enclosure

### 6.8 New and Upgraded Signage Interpretive and Way Finding

There are four signage types as part of the master plan, including:

- Entry signage - in accordance with the CoPP Park signage strategy;
- Interpretive Signage;
- Totem trail marking for the Webb Dock Trail; and
- Swimming safety warning signs.

All signage will be co-branded to recognise the Port of Melbourne Corporation as the land owner and City of Port Phillip as the current land manager. Concepts for signage appear on the following page. Proposed locations for signage are identified in the master plan in Appendix 2 and 3.



An illustrative example of co-branded 'Main Entry' signage that would be located near Todd Road.



Illustrative examples of co-branded 'Place Name' and 'Regulatory' signage for siting around the reserve.

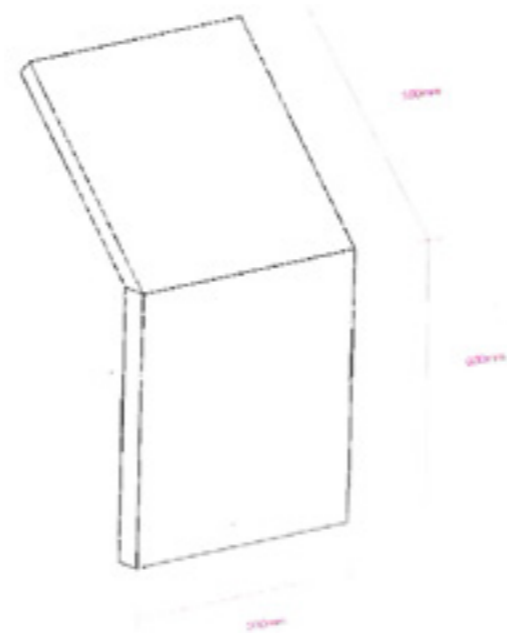
## Interpretive and Way Finding Signage

Themes for interpretation signage will be developed and could include:

- Aboriginal occupation and heritage;
- Europeans settlement;
- Port development and Perc White;
- Ecological values such as the regionally significant vegetation species not found anywhere else around Port Phillip Bay;
- Superb Fairy-Wren and New Holland Honeyeater found in the reserve and Webb Dock Trail;
- Naurally fine silca sands of the area and diversity of sea shells found;
- Role and diversity of the dunal grasses and other vegetation in erosion control, buffering climate change and provision of bird nesting habitat.



Example of presenting ecological and indigenous heritage



CoPP Draft Park Signage - Interpretation Panel



Example of Swimming Safety Signage

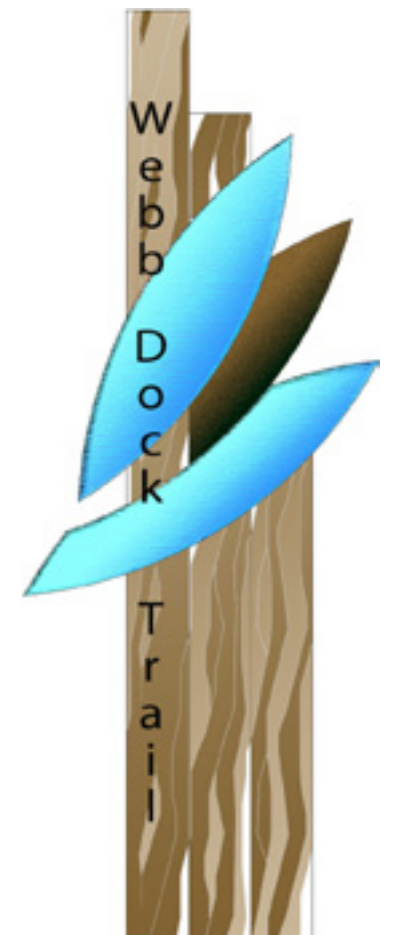
## Totem Trail Marking and Signage as Public Art

As noted earlier there needs to be an iconic trail marker for the Webb Dock Trail. An appropriate design theme for this marker needs to be identifiable and unique to the reserve. The Superb-Wren could be the basis for the trail marker.

An example of a marker is illustrated on this page. It based on tall timber poles with metallic colored panels to reflect the bright colours of the Superb Fairy-Wren.



Indicative trail marker based on the



## 6.9 Master Plan Staging

The master plan will remain current for 4-5 years before being reviewed. Plans herein depict infrastructure works that require delivery over a minimum 1-4 year period. The plans are organised in a hierarchy of priorities from 1 to 4.

City of Port Phillip Council has valued the Priority 1 works at approximately \$150,000. Council's 5 Year Capital Works Programme 2009/10 - 2012/13 has \$150,000 allocated for Perc White Reserve in 2010/11.

Council will consider this expenditure in its 2010-11 budget deliberations however, all works are subject to final negotiations and the expectation of Port of Melbourne Corporation investment as landowner.

Implementation of Priority 2 to 4 works are subject to investment from Port of Melbourne Corporation and are currently valued at around \$200,000

An indicative schedule of works appears over this and the following page. The scope of work to be undertaken will be confirmed after final consultation input has been considered and following budget decisions.

MASTER PLAN STAGING / SCHEDULE OF WORKS				
Management Issue	Plan reference	Action to be taken	Responsibility	Completed Task Indicator
<b>Priority 1</b>				
Fencing	From 2007 plan	Install permanent fencing around the eastern Saltmarsh area, the Salt affected Grassland and Backdune zones as required		New fencing layout shown on plan. To be installed.
	From 2007 plan	Remove existing temporary fencing in all Acacia sophorae zones.		All temporary fencing to be removed as new fencing is installed.
	From 2007 plan	Install improved temporary fencing in cleared Acacia sophorae, Backdune areas and select areas of Primary Dune Scrub and Banksia integrifolia Woodland.		All temporary fencing to be removed as new fencing is installed.
	From 2007 plan	Replace existing temporary fencing along foredunes (FD1, 3, 4) (C).		All temporary fencing to be removed as new fencing is installed.
	From 2007 plan	Fence FD2 where no fence currently exists (C)		To be accommodated with the new fencing plan.
	1	Remove existing stainless steel wire fencing and gates	Council/contractor	Removal of fencing
	2	Install new 1200mm high ringlock fencing as indicated on plans.	Council/contractor	New Ringlock fencing installed
	3	Uplift vegetation along car park	Council staff	Tree removal and uplifting complies with plan
	4	Remove section of trees from western end of reserve	Council staff	Section of trees is removed and canopy is opened up
	5	Revegetate cleared areas in reserve and Webb Dock Trail	Council staff/Friends	Revegetation installed and seen to be growing
Miscellaneous works	From 2007 plan	Design and install interpretation signage, furniture and bins etc to be brought up to the standard of other similar City of Port Phillip (CoPP) sites		Locations for interpretative signage located on plan. Some bins have been installed. Additional bins to be added. Graphic for interpretative signage to be done as part of Council's signage and style once approved
	From 2007 plan	Replace existing bench seating in reserve with CoPP standard suite.		To be incorporated as part of four year plan plus new seats along Trail.
	6	Install new roll over kerb and gate	Council/contractor	Gate and kerb is installed
	7	Install new entry sign	Council/contractor	Sign is installed
	8	Install one Webb Dock Trail marker	Council/contractor	Design of marker is developed, manufactured and installed
	9	Install timber decking in front of LSV poles	Council/contractor	Decking is installed
	10	Install bicycle racks	Council/contractor	Bicycle racks are installed
	From 2007 plan	Clarify internal circulation by widening paths and view corridors		Path plan rationalised and pathway installed as per below
	From 2007 plan	Connect the landscape right through the centre of the reserve, including the grassed western end, with consistent tree planting and path connections		Path plan rationalised and pathway installed as per below
	From 2007 plan	Establish clear pathways and signage to connect to Webb Dock and Sandridge foreshore		Locations for Webb Dock trail located on plan, to be developed as part of details. Graphic for interpretative signage to be done as part of Council's signage and style once approved
Paths	11	Install chain link boardwalks	Council/contractor	Boardwalks are installed
	12	Install concrete path and cycle linework through & near LSV	Council/contractor	New concrete path, line marking and stencils are installed
	13	Splay concrete path to lead into café area	Council/contractor	New section of concrete path is installed
	14	Remove vegetation on corner to improve sight lines	Council/contractor	Vegetation is removed to provide clear sightline for drivers
	15	New paved space adjacent car park near LSV building	Council/contractor	New public space opened up for use
	16	Install new bins for general rubbish and recycling	Council/contractor	Bins installed and cleared

<b>Priority 2</b>				
Management Issue	Reference on plan	Action to be taken	Responsibility	Completed Task Indicator
Vegetation management	5	Revegetate areas as marked	Council staff/Friends	Revegetation installed and seen to be growing
	8	Install one Webb Dock Trail marker	Council/contractor	Design of marker is developed, manufactured and installed
Miscellaneous works	See plan	Install small entry sign on Todd Road (Refer A0 plan)	Council/contractor	Sign installed
	See plan	Modify existing paths at Western end of reserve	Council/contractor	Path alignments changed and installed
	20	Regrade and plant areas on eastern & western side of LSV	Council/contractor	Landscape works installed and growing
	22	Install modular paved area for surf boat parking	Council/contractor	Path alignments changed and installed
	23	Install new bicycle bollards/barrier at bicycle path/The Boulevard intersection	Council/contractor	Path alignments changed and installed
	See plan	Install new bins for general rubbish and recycling	Council/contractor	Bins installed and cleared



## 6.9 Master Plan Staging Continued

Priority 3				
Management Issue	Reference on plan	Action to be taken	Responsibility	Completed Task Indicator
Vegetation management	See plan	Revegetate areas as marked	Council staff/Friends	Revegetation installed and seen to be growing
Miscellaneous works	See plan	Construct 2 BBQ, timber walls, 2 CoPP bins and concrete pads in open space area	Council/contractor	BBQ's, bins and pads installed
	See plan	Remove old lighting in reserve	Contractor	Lighting is safely removed
	See plan	Install new Sylvania pole top light to parking area	Contractor	Lighting layout and installation to meet AS 1158
	See plan	Install 3 interpretation signs	Council/contractor	Design of sign and text to meet CoPP draft standard. Install signs.
	See plan	Regrade and plant areas on eastern & western side of LSV	Council/contractor	Landscape works installed and growing
	See plan	Install seats along Webb Dock Trail (Refer A0 plan)	Council/contractor	New seats installed
	See plan	Install 2 Webb Dock Trail markers poles (Refer A0) plan	Council/contractor	2 New Trail markers installed
	See plan	Install litter traps in stormwater pits	Council/contractor	Litter traps installed and cleaned as part of regular maintenance program
Priority 4				
Management Issue	Reference on plan	Action to be taken	Responsibility	Completed Task Indicator
Vegetation management	15	Planting of new street trees along Todd Road	Council staff/Friends	Trees planted and maintained for 6 months
	See plan	Continue to replant vegetated buffer on western side of Todd Road	Council/contractor	A dense vegetation screen is maintained to mitigate visual impact of Webb Dock area
Miscellaneous works	15	Potential to install new 1200/1800 wide concrete path connect with avenue to be confirmed via local consultation	Council/contractor	Footpath installed
	From 2007 plan	Install interpretative elements and other landscape infrastructure to provide linkage with Sandridge Beach		To be done in accordance with revised signage locations, new Council graphics and themes
	From 2007 plan	Stabilise soil and replant saltmarsh and associated backdunes area		
	From 2007 plan	Selective pruning and culling of Myoporum's		Review in association with new areas recommended for pruning and removal
	From 2007 plan	Planting of (BW 6 and BZP 4) areas south of car park and west of large Salt affected Grassland area(SAG 6) (A, B).		Review in association with new planting areas
	From 2007 plan	Replant small area on central north/south pathway with prescribed mix of species (SAG 7) (B).		Review in relation to the revised path layouts and planting areas
	From 2007 plan	Replant with prescribed mix of species (PDS 9) (B).		
	From 2007 plan	Include water crystals with all new plantings on dune areas.		To be included with new plantings
	From 2007 plan	In foredune areas, replace temporary fencing with flexible fencing. This should be extended to include the central area		To be done with the implementation of new fencing as part of the fencing plan
	From 2007 plan	Replant Primary Dune Scrubland areas as required (FD 1,2,3 and 4) (B).		To be done as part of new planting plan
From 2007 plan	Design, fabricate and install partnership and directional signage plates as required for installation on timber poles in locations		To be replaced with Webb Trail Marker poles	
From 2007 plan	Mulch new plantings with tree prunings free of any weed species (A). The area should be mulched with tree prunings or		Mulching to be done to new planting areas	
From 2007 plan	Selective pruning and culling to open up core of site to establish an informal central pathway - refer plan L03. It will also enable greater exposure and raise awareness of the Salt affected Grasslands and Wetter Depression areas.		New central path to be installed as part of new circulation strategy	
Routine operations				
Management Issue	Reference on plan	Action to be taken	Responsibility	Completed Task Indicator
Routine Maintenance	N/A	Rubbish collection from Council bins and car parks	Council/contractor	Bins are cleared daily, year round
		General rubbish removal from the reserve	Council/contractor	Council maintenance staff clean site to remove - twice-weekly Oct-March & weekly April - Sept
		Horticultural works incl pruning & up-lifting - monthly	Council/contractor	Clearly visible tree management
		Beach cleaning performed daily	Council/contractor	Beach is kept clean and free of rubbish daily and by machine year-round
Planting		Planting performed - annually	Council/Friends Group	Revegetation installed and seen to be growing
Weed Control		Control Cynodon dactylon (Common couch) with regular selective applications of Roundup - ongoing. Removal of Solanum lanceolatum, Sonchus, Malva, Polygonum, Malva and Anagallis which are scattered throughout site.	Council staff/Friends	Weeds are kept under control to allow for new planting to develop
Pest Control		Monitor and control pest animals in association with Port of Melbourne Corporation/Parks Vic	Council/PMC	Removal of rabbits from site

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## 7.0 References

City of Port Phillip Council Plan 2009-2013  
July 2009, City of Port Phillip.

City of Port Phillip - Foreshore Management Plan.  
September 2004, City of Port Phillip.

City of Port Phillip Open Space Strategy  
August 2009, City of Port Phillip.

Climate Change in the City of Port Phillip - An Initial Perspective.  
2007, City of Port Phillip.

Climate Change Risks to Australia's Coast - A First Pass National Assessment, November 2009.  
Australian Government, Department of Climate Change.

Environmental Audit of Sanded Beaches in the City of Port Phillip, August 2003, Rob Scott Naturelinks Landscape Management.

Guide to Road Design Part 6A, 13 & 14 (Pedestrian and Cyclist Paths)  
2009, Austroads.

Natural Heritage assessment of sites within the City of Port Phillip Final Report, June 2003, Biosis Research Natural and Cultural Heritage Consultants.

Perc White Reserve Landscape Management and Development Plan  
June 2007. (Prepared by TNLA Landscape Architects).

Port Development Strategy 2035 Vision.  
August 2009, Port of Melbourne Corporation.

Port Environs Planning Framework, November 2009  
Port of Melbourne Corporation.

Port of Melbourne Planning Scheme, DSE Victoria.

Stormwater Management Plan for the City of Port Phillip  
March 1999. (Prepared by AWT Victoria and TBA Planners).

## APPENDICES

- APPENDIX 1 - Terms of Reference
- APPENDIX 2 - Master Plan (Priority 1 to 4 works shown)
- APPENDIX 3 - Plans - Staged plans showing Priorities 1 to 4 on separate sheets
- APPENDIX 4 - Indicative fixtures, fittings and elements.

## CITY OF PORT PHILLIP

### TERMS OF REFERENCE FOR PERCE WHITE RESERVE MANAGEMENT PLAN REFERENCE GROUP

#### 1. Purpose

The purpose of the Perce White Reserve Management Plan Reference Group, (“**Committee**”) is to assist Council to get the best outcomes by ensuring that the views of relevant community groups, government agencies and community are expressed and taken into account during the development of the Perce White Reserve Management Plan (“**Project**”).

The committee will provide advice and feedback on:

- The Principles and Values for the Management of Perce White Reserve
- The development of a management /master plan for Perce White Reserve
- The concept plans for future development of Perce White Reserve

#### 2. Objectives

The Committee will provide input and advice for the Project ensuring that:

- Council’s desired outcomes and any limitations, including budget constraints, are ascertained and documented.
- The views of each of the stakeholders are known and given full consideration.
- The project design complies with the desired outcomes and limitations.
- The outcomes consider relevant strategies and policies including but not limited to the Victoria Coastal Strategy, Port Melbourne’s Port Development Plan, Open Space Strategy, Foreshore Management Plan, Victoria’s native vegetation management.

#### 3. Policy Framework

The Committee is an advisory committee of the Council and has no delegated powers. The Committee will have regard to and comply with Council’s policies and decisions. Final designs and recommendations of the Committee will be reported to Council for information or decision as required, by Council officers using established reporting mechanisms.

#### 4. Membership and Responsibilities

The Committee will comprise of:

- Port of Melbourne;
- Friends of Port Melbourne’s Foreshore;
- Life Saving Victoria;
- Sandridge Life Saving Club;
- Community member representatives (3);
- City of Port Phillip staff (2) appointed by CEO;
- Parks Victoria;
- Victoria Police; and
- Port Phillip Councillor nominated by council

The Chairperson will be the Manager Parks and Open Space Services

#### 5. Meetings

The Committee will meet at times to be determined by the Committee, the first meeting to be convened by the Chairperson at the earliest opportunity. Meetings should be scheduled in advance and desirably recorded in a forward meeting program.

The quorum for a meeting will be half the number of members plus one.

#### 6. Resourcing

The Chairperson will have responsibility for preparation of agenda papers for meetings and for distributing those three days prior to the meeting.

The business conducted at each meeting will be recorded in the minutes and copies of the minutes will be distributed to Committee members, Councillors and the Council’s Executive Team as soon as they are prepared.

The committee will be supported by staff from Parks and Open Spaces

Meetings will be run to an agenda, be minuted and take approximately 2 hours

Agendas and supporting material are circulated 3 days prior to meetings and minutes are circulated as soon as prepared after meetings.

#### 7. Reporting

The Chairperson is responsible for reporting to Council, via a formal report (or briefing when appropriate) as key milestones are reached or if a Council decision is required.



**KEY COMPONENTS OF MASTERPLAN**

- 1 Remove existing stainless steel wire fencing and gates
- 2 Install new 1200x1500mm high ringlock fencing
- 3 Uplift vegetation along car park
- 4 Remove section of trees from western end of reserve
- 5 Revegetate cleared areas
- 6 Install new roll over kerbs and gates
- 7 Install new entry sign
- 8 Install Webb Dock Trail markers
- 9 Install timber decking and planting in front of LSV poles
- 10 Install bicycle racks
- 11 Install 4m chain link board walks
- 12 Install 2m new shared paths adjacent Life Saving car park
- 13 Splay concrete path to lead into cafe area
- 14 Remove vegetation on corner to improve sight lines
- 15 Potential to install new 1200x1800 wide concrete path connect with avenue planting of Norfolk Island Pine trees (to be confirmed via local consultation with Council & the local community)
- 16 Install new bins for general rubbish and recycling
- 17 Install other Webb Dock Trail markers
- 18 Install new interpretation / educational signage
- 19 New seats and TANGLER bins along trail
- 20 Regrade and replant landscape strip around LSV building
- 21 Develop new BBQ facilities, CoPP foreshore light, concrete hardstands and semi-mature trees to upgrade public open space area
- 22 Provide formal parking area for surf boats on concrete block paving
- 23 Upgrade bicycle path connection to The Boulevard in accordance with new Road Design Part 6A.



**PLAN**  
Scale 1:750

**ROUTINE MAINTENANCE** In addition to the master plan works described at the top of this sheet, the routine maintenance tasks below will be delivered.

Operations	Reference on plan	Action to be taken	Responsibility	Completed Task Indicator
Routine Maintenance	N/A	Rubbish collection from Council bins and car parks	Council/contractor	Bins are cleaned daily - year round
		General rubbish removal from the reserve	Council/contractor	Council maintenance staff clean site to remove - twice weekly Oct-March & weekly April - Sept
		Horticultural works incl pruning & uplifting - monthly	Council/contractor	Clearly visible tree management
		Beach clearing performed daily	Council/contractor	Beach is kept clean and free of rubbish daily and by machine year-round
Planting		Planting performed - annually	Council/Friends Group	Revegetation installed and seen to be growing
Weed Control		Control Cyanide application (Common couch) with regular selective applications of Roundup - ongoing. Removal of Salicornia, Sarcocornia, Sarcobata, Malva, Polygnum, Malva and Anagallis which are scattered throughout site.	Council staff/Friends	Weeds are kept under control to allow for new planting to develop
Pest Control		Monitor and control pest animals in association with Port of Melbourne Corporation/Parks VU	Council/PuMC	Removal of rabbits from site

**PERC WHITE RESERVE**

NO	INITIAL ISSUE		
NO	DESCRIPTION	NO	NO

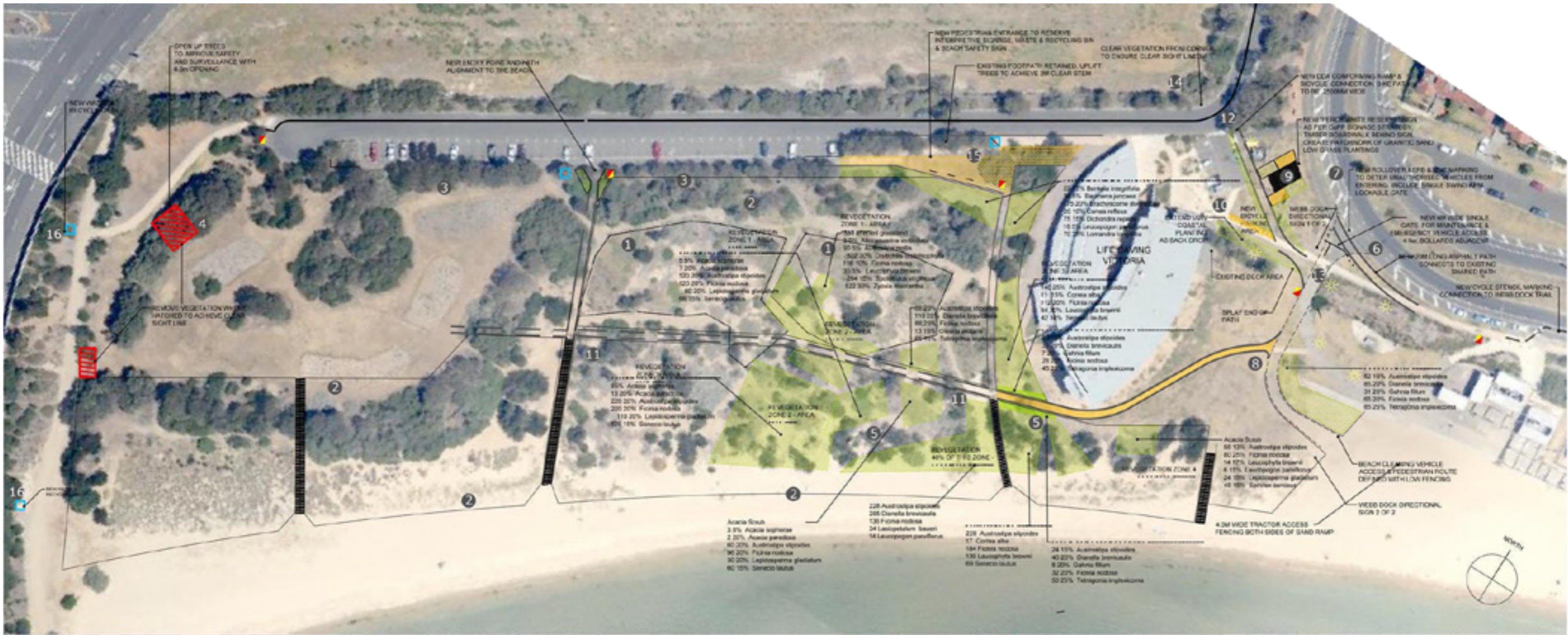
City of Port Phillip  
Perc White Reserve  
**MANAGEMENT PLAN**



Level 6, 100 Corporation Street, Melbourne VIC 3000 Australia  
T 61 3 9592 9300 F 61 3 9592 9311  
E melb@ghd.com.au W www.ghd.com

scale 1:750 for A0 job no. 31-25047  
date Mar 2010 rev no. A

approved **SKMP**



- INDICATIVE LOCATION FOR INTERPRETATIVE SIGN/TRAIL MARKER
- CHAIN LINK BOARDWALK
- TIMBER POST & RINGLOCK COASTAL FENCE
- AREAS OF RECENT REVEGETATION
- EXISTING LIGHT TO REMAIN
- EXISTING LIGHT TO BE REMOVED
- NEW BEACH SAFETY SIGNS (6 NR. TOTAL)
- NEW WASTE & RECYCLING BIN
- REVEGETATION AREA
- GRASS MARGIN ALONG PATHS (2.5M WIDE)
- MINOR PATHWAY
- PROPOSED TREE
- STAINLESS STEEL CABLE FENCE TO BE REMOVED

PLANT SCHEDULE			
Species	Spacing	Nos.	
Acacia paradoxa	0.3m <sup>2</sup>	22	
Acacia sophorae	0.3m <sup>2</sup>	16	
Allocasuarina verticillata	0.2m <sup>2</sup>	3	
Austrostipa erioides	6m <sup>2</sup>	90	
Austrostipa stipoides	4m <sup>2</sup>	1263	
Banksia integrifolia	2m <sup>2</sup>	7	
Baumea juncea	4m <sup>2</sup>	12	
Brachycome diversifolia	6m <sup>2</sup>	18	
Comea reflexa	2m <sup>2</sup>	6	
Comea alba	0.5m <sup>2</sup>	33	
Dianella brevicaulis	4m <sup>2</sup>	540	
Dichondra repens	6m <sup>2</sup>	18	
Distichlis distichophylla	6m <sup>2</sup>	553	
Ficinia nodosa	4m <sup>2</sup>	1308	
Gahnia filum	2m <sup>2</sup>	26	
Lasiopetalum baueri	1m <sup>2</sup>	34	
Lepidosperma glabratum	2m <sup>2</sup>	224	
Leucophylla brownii	1m <sup>2</sup>	307	
Leucopogon parviflorus	0.5m <sup>2</sup>	24	
Lomandra longifolia	2m <sup>2</sup>	14	
Olearia axillaris	1m <sup>2</sup>	13	
Senecio luteus	3m <sup>2</sup>	384	
Spinifex sericeus	4m <sup>2</sup>	48	
Sporobolus virginicus	6m <sup>2</sup>	284	
Tetragonia implexicoma	5m <sup>2</sup>	225	
Zoysia macrantha	6m <sup>2</sup>	522	

Management Issue	Plan Reference	Action to be taken	Responsibility	Completed Task Indicator
<b>Priority 1</b>				
<b>Fencing</b>	From 2007 plan	Install permanent fencing around the eastern foreshore area for the East Affected Beach and Bathers areas as required	Contractor	New fencing/stock fence installed. To be installed
	From 2007 plan	Remove existing temporary fencing in adjacent vegetation	Contractor	All temporary fencing to be removed as new fencing is installed
	From 2007 plan	Install improved temporary fencing in cleared areas adjacent to the foreshore	Contractor	All temporary fencing to be removed as new fencing is installed
	From 2007 plan	Remove existing temporary fencing along the eastern foreshore	Contractor	All temporary fencing to be removed as new fencing is installed
	From 2007 plan	Remove existing temporary fencing along the eastern foreshore	Contractor	To be implemented with the new fencing plan
	1	Remove existing temporary fencing and gates	Contractor	Removal of fencing
	2	Install new 1200mm high stock fence as indicated on plan	Contractor	New fencing/stock fence installed
	3	Light vegetation along the path	Council staff	This removal and lighting complete with plan
	4	Remove section of fence from western end of reserve	Council staff	Section of fence to be removed and canopy to be replaced
	5	Revegetate cleared area in reserve area (near Dock Trail)	Council staff/contractor	Revegetation installed and work to be ongoing
<b>Infrastructure works</b>	From 2007 plan	Design and install interpretation signage, furniture and bins etc. to be brought up to the standards of other similar City of Port Phillip (CoPP) sites	Contractor	Locations for interpretative signage to be identified on plan. Some items have been installed. Additional items to be added. Details for interpretative signage to be done as part of Council's signage and public art program
	From 2007 plan	Remove existing bench seating in reserve with CoPP standard seats	Contractor	To be incorporated as part of four year plan and new seating plan
	6	Install new 100mm high bench and gate	Contractor	Seats and gates to be installed
	7	Install new entry sign	Contractor	Sign to be installed
	8	Install new Waste Drop Trail marker	Contractor	Design of marker to be developed, manufactured and installed
	9	Install timber decking in front of LRV gates	Contractor	Decking to be installed
	10	Install bicycle racks	Contractor	Bicycle racks to be installed
<b>Paths</b>	From 2007 plan	Clarify internal circulation for walking paths and view corridors	Contractor	Path plan identified and pathways installed as per below
	From 2007 plan	Constructive work to be done through the centre of the reserve, including the ground surface and, with completed tree planting, and path connections	Contractor	Path plan identified and pathways installed as per below
	From 2007 plan	Install clear path and signage to connect to Waste Drop and Bathers Beach	Contractor	Locations for Waste Drop Trail located on plan. To be installed as part of Council's signage and public art program
	11	Install chain link boardwalk	Contractor	Boardwalks to be installed
	12	Install concrete path and cycle track through & near LRV	Contractor	New concrete path, one marking and signs are installed
	13	Install concrete path to beach side area	Contractor	New section of concrete path to be installed
	14	Remove vegetation on corner to improve sightlines	Contractor	Vegetation is removed to provide clear sightlines for drivers
	15	New paved space adjacent to park near LRV building	Contractor	New public space opened up for use
	16	Install new fire suppression cabinet and monitoring	Contractor	Unit installed and checked

### PERC WHITE 1

rev	description	app'd	date
B			

City of Port Phillip  
Perc White Reserve  
MANAGEMENT PLAN  
1

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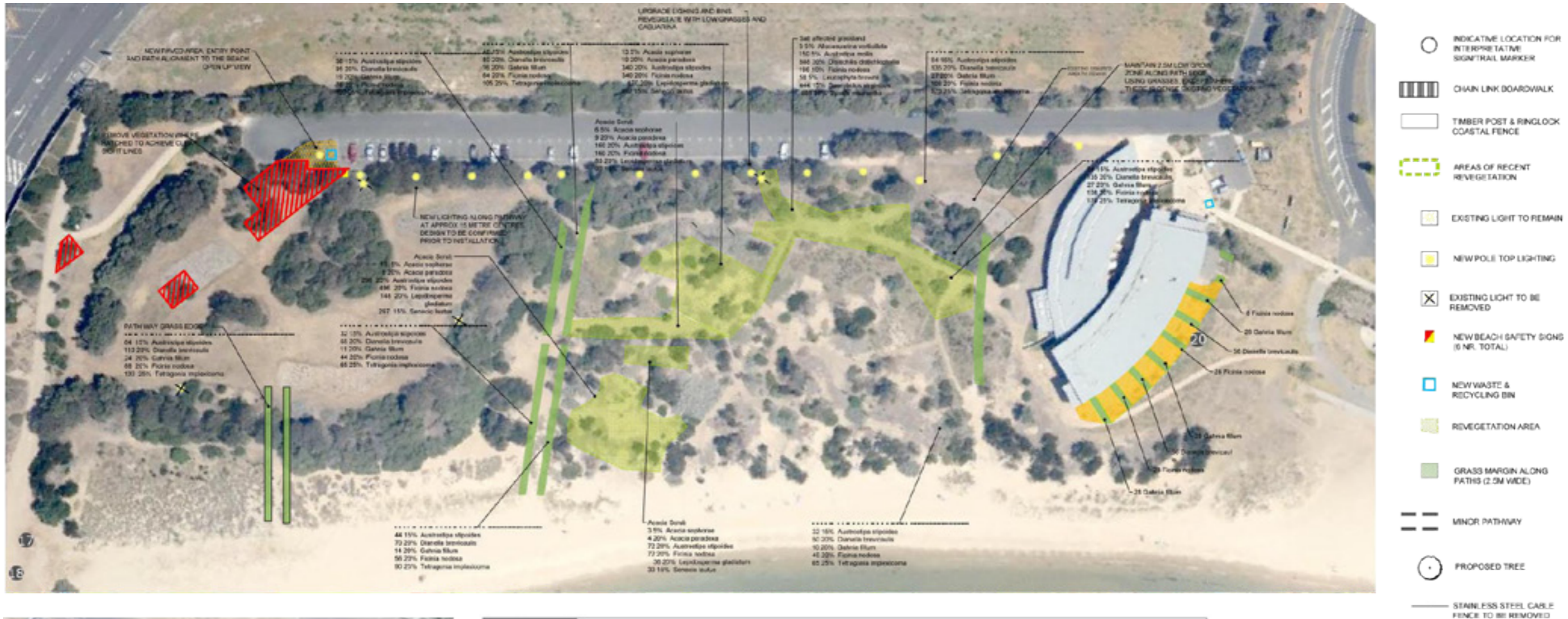


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Management Issue	Reference on plan	Action to be taken	Responsibility	Completed Task Indicator
Vegetation management	5	Revegetate areas as marked	Council staff/lands	Revegetation installed and seen to be growing
	8	Install one Webb Duck Trail marker	Council/contractor	Design of marker is developed, manufactured and installed
Miscellaneous works	See plan	Install small entry sign on Todd Road (Refer A0 plan)	Council/contractor	Sign installed
	See plan	Modify existing paths at Western end of reserve	Council/contractor	Path alignments changed and installed
	20	Regrade and plant areas on eastern & western side of LSV	Council/contractor	Landscape works installed and growing
	22	Install modular paved area for surf boat parking	Council/contractor	Path alignments changed and installed
	23	Install new bicycle bollards/barrier at bicycle path The Boulevard intersector	Council/contractor	Path alignments changed and installed
	See plan	Install new bins for general rubbish and recycling	Council/contractor	Bins installed and cleared

PERC WHITE 2

Rev	Description	App'd	Date
0	INITIAL ISSUE		

City of Port Phillip  
Perc White Reserve  
MANAGEMENT PLAN  
2



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PLANT SCHEDULE

Species	Spacing	No.
Acacia parotaxa	0.3m <sup>2</sup>	30
Acacia sophorae	0.3m <sup>2</sup>	31
Allocasuarina verticillata	0.2m <sup>2</sup>	3
Austroblechnum molle	6m <sup>2</sup>	90
Austroblechnum stipoides	4m <sup>2</sup>	1559
Dianella brevicaulis	4m <sup>2</sup>	852
Distichlis distachyoides	6m <sup>2</sup>	888
Ficinia nodosa	4m <sup>2</sup>	1930
Gahnia filum	2m <sup>2</sup>	222
Lepidosperma glaberrimum	2m <sup>2</sup>	434
Leucophya brownii	1m <sup>2</sup>	50
Senecio laetifolius	3m <sup>2</sup>	618
Sporobolus virginicus	6m <sup>2</sup>	444
Tetragonia implexicoma	5m <sup>2</sup>	925
Zoysia macrantha	6m <sup>2</sup>	880



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PLANT SCHEDULE	Spacing	Nr.	SIZE
Species	LOCATIONS	4	45 Litre
Araucaria heterophylla	AS DESCRIBED	SHOWN	N/a
Under storey plantings			

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Priority 3	Reference on plan	Action to be taken	Responsibility	Completed Task Indicator
<b>Vegetation management</b>	See plan	Revegetate areas as marked	Council staff/Friends	Revegetation installed and seen to be growing
<b>Miscellaneous works</b>	See plan	Construct 2 BBQ, timber walls, 2 CoPP bins and concrete pads in open space area	Council/contractor	BBQ's, bins and pads installed
	See plan	Remove old lighting in reserve	Contractor	Lighting is safely removed
	See plan	Install new Sylvia pole top light to parking area	Contractor	Lighting layout and installation to meet AS 1158
	See plan	Install 3 interpretation signs	Council/contractor	Design of sign and text to meet CoPP draft standard. Install signs.
	See plan	Regrade and plant areas on eastern & western side of LSV	Council/contractor	Landscape works installed and growing
	See plan	Install seats along Webb Dock Trail (Refer A0 plan)	Council/contractor	New seats installed
	See plan	Install 2 Webb Dock Trail markers poles (Refer A0) plan	Council/contractor	2 New Trail markers installed
	See plan	Install litter traps in stormwater pits	Council/contractor	Litter traps installed and cleaned as part of regular maintenance program

### PERC WHITE 3

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B	INITIAL ISSUE		

City of Port Phillip  
Perc White Reserve  
**MANAGEMENT PLAN**  
3



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- SIGNTRAIL MARKER
- CHAIN LINK BOARDWALK
- TIMBER POST & RINGLOCK COASTAL FENCE
- AREAS OF RECENT REVEGETATION
- EXISTING LIGHT TO REMAIN
- NEW POLE TOP LIGHTING
- EXISTING LIGHT TO BE REMOVED
- NEW BEACH SAFETY SIGNS (8 NR. TOTAL)
- NEW WASTE & RECYCLING BIN
- REVEGETATION AREA
- GRASS MARGIN ALONG PATHS (2.5M WIDE)
- MINOR PATHWAY
- PROPOSED TREE

### WEBB DOCK TRAIL 3

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B	INITIAL ISSUE		

City of Port Phillip  
Perc White Reserve  
**MANAGEMENT PLAN**  
**WEBB DOCK TRAIL**



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Management Issue	Reference in plan	Action to be taken	Responsibility	Completed Task Indicator
<b>Vegetative management</b>	15	Planting of new street trees along Todd Road	Council staff/Residents	Trees planted and maintained for 6 months
	See plan	Continue to replant vegetated buffer on western side of Todd Road	Council/contractor	A dense vegetation screen is maintained to mitigate visual impact of Dock area
	See plan	Planters install new 100x100mm wire concrete path corners with avenue in the corridor as per consultation	Council/contractor	Footpath installed
<b>Infrastructure works</b>	15	Install interpretative elements and other landscape structures to provide context with landscape design	Council/contractor	To be done in accordance with related signage locations, see Council graphics and themes
	From 2007 plan	Substitute soil and repair subsoil and associated horticulture area		
	From 2007 plan	Selective pruning and culing of vegetation		Review in association with new areas recommended for pruning and removal
	From 2007 plan	Planting of B&E and B&P in areas south of car park and west of local 5m offset (See related area 15A, B)		Review in association with new planting areas
	From 2007 plan	Replant small area on central north-south pathway with grass/bastard of species (B&G 7, 8)		Review in relation to the related path layout and planting areas
	From 2007 plan	Replant with prescribed mix of species (B&G 10, 11)		
	From 2007 plan	Include water crystals with all new plantings on dock area		To be included with new plantings
	From 2007 plan	In fence area, replace temporary fencing with flexible fencing. This should be extended to include the central and Eastern Primary Care footpath areas as required (D 1, 2, 3 and 4, 5)		To be done with the implementation of new fencing as part of the fencing plan
	From 2007 plan	Design, fabricate and install pathway and directional signage plates as required for installation on timber poles in locations B&A1, new plantings will use prunings from any weed species etc. The site should be mulched with tree stumps or selective pruning and subgrade open up site of site to retained and formal central pathway - refer plan 120. It will also enable greater exposure and view awareness of the full offset (See related and 15B, 15C, 15D, 15E, 15F, 15G, 15H, 15I, 15J, 15K, 15L, 15M, 15N, 15O, 15P, 15Q, 15R, 15S, 15T, 15U, 15V, 15W, 15X, 15Y, 15Z)		To be done as part of new planting plan
	From 2007 plan	Design, fabricate and install pathway and directional signage plates as required for installation on timber poles in locations B&A1, new plantings will use prunings from any weed species etc. The site should be mulched with tree stumps or selective pruning and subgrade open up site of site to retained and formal central pathway - refer plan 120. It will also enable greater exposure and view awareness of the full offset (See related and 15B, 15C, 15D, 15E, 15F, 15G, 15H, 15I, 15J, 15K, 15L, 15M, 15N, 15O, 15P, 15Q, 15R, 15S, 15T, 15U, 15V, 15W, 15X, 15Y, 15Z)		To be replaced with 100mm Timber poles
	From 2007 plan	Design, fabricate and install pathway and directional signage plates as required for installation on timber poles in locations B&A1, new plantings will use prunings from any weed species etc. The site should be mulched with tree stumps or selective pruning and subgrade open up site of site to retained and formal central pathway - refer plan 120. It will also enable greater exposure and view awareness of the full offset (See related and 15B, 15C, 15D, 15E, 15F, 15G, 15H, 15I, 15J, 15K, 15L, 15M, 15N, 15O, 15P, 15Q, 15R, 15S, 15T, 15U, 15V, 15W, 15X, 15Y, 15Z)		Matching to be done to new planting areas
	From 2007 plan	Design, fabricate and install pathway and directional signage plates as required for installation on timber poles in locations B&A1, new plantings will use prunings from any weed species etc. The site should be mulched with tree stumps or selective pruning and subgrade open up site of site to retained and formal central pathway - refer plan 120. It will also enable greater exposure and view awareness of the full offset (See related and 15B, 15C, 15D, 15E, 15F, 15G, 15H, 15I, 15J, 15K, 15L, 15M, 15N, 15O, 15P, 15Q, 15R, 15S, 15T, 15U, 15V, 15W, 15X, 15Y, 15Z)		New central path to be installed as part of new circulation strategy

**PLANT SCHEDULE**

Species	Spacing	Nr	SIZE
<i>Araucaria heterophylla</i>	LOCATIONS	20	45 Litre
Under storey/buffer plantings	AS DESCRIBED	SHOWN	N/a

- INTERPRETATIVE SIGN/TRAIL MARKER
- CHAIN LINK BOARDWALK
- TIMBER POST & RINGLOCK COASTAL FENCE
- AREAS OF RECENT REVEGETATION
- EXISTING LIGHT TO REMAIN
- NEW POLE TOP LIGHTING
- EXISTING LIGHT TO BE REMOVED
- NEW BEACH SAFETY SIGNS (6 NR. TOTAL)
- NEW WASTE & RECYCLING BIN
- REVEGETATION AREA
- GRASS MARGIN ALONG PATHS (2.5M WIDE)
- MINOR PATHWAY
- PROPOSED TREE
- STAINLESS STEEL CABLE FENCE TO BE REMOVED

### PERC WHITE 4

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B	INITIAL ISSUE		

City of Port Phillip  
Perc White Reserve  
**MANAGEMENT PLAN**  
4

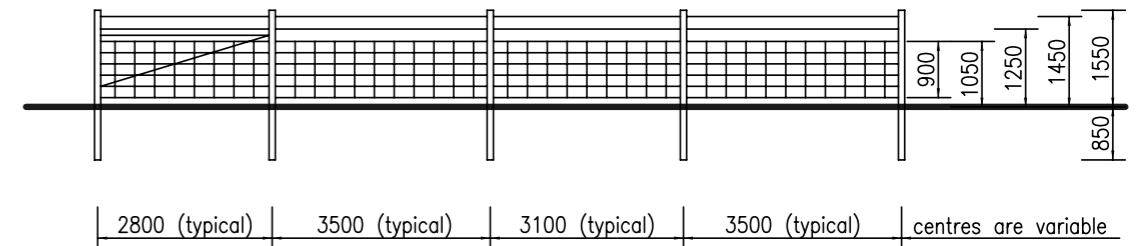
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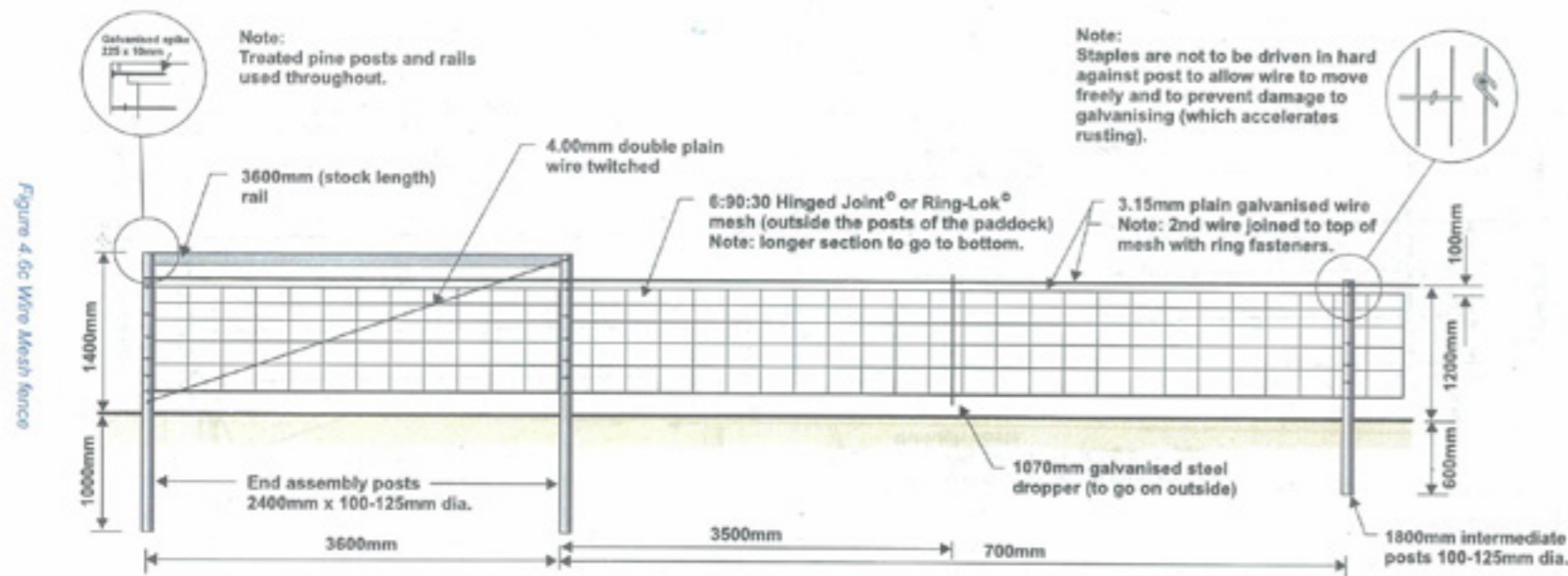
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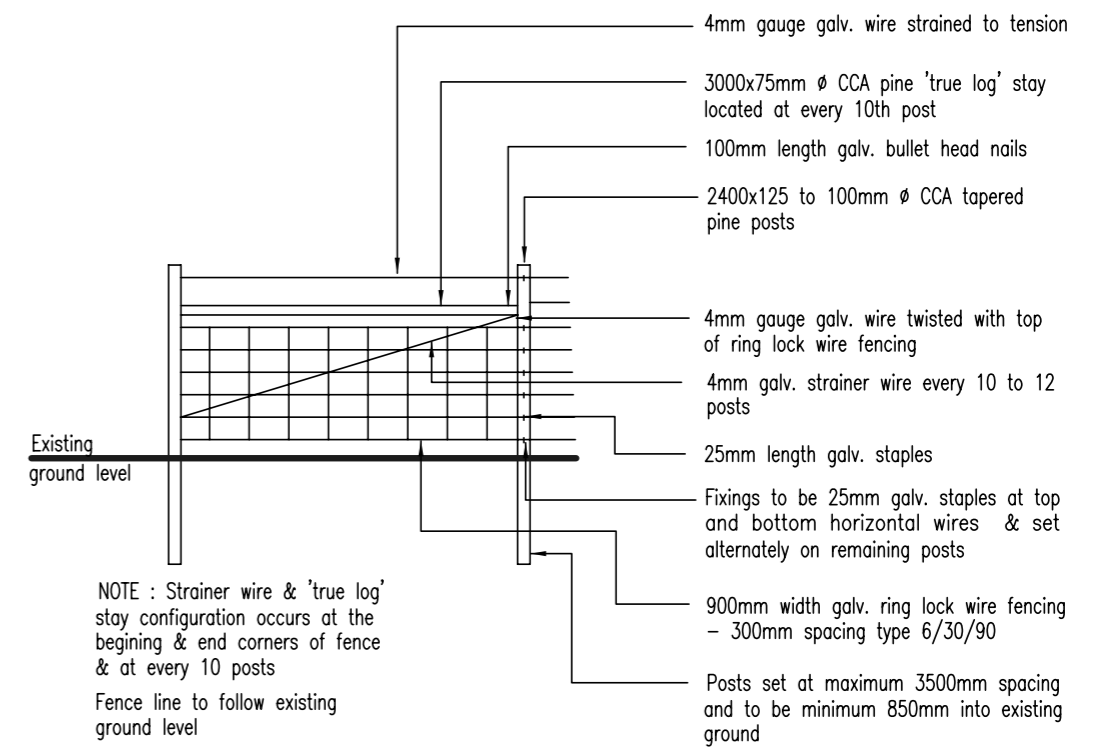


NOTE : Fence panel setout dimensions are typical only

ELEVATION SCALE 1:50



Above and right - Examples of typical coastal fencing.



NOTE : Strainer wire & 'true log' stay configuration occurs at the beginning & end corners of fence & at every 10 posts

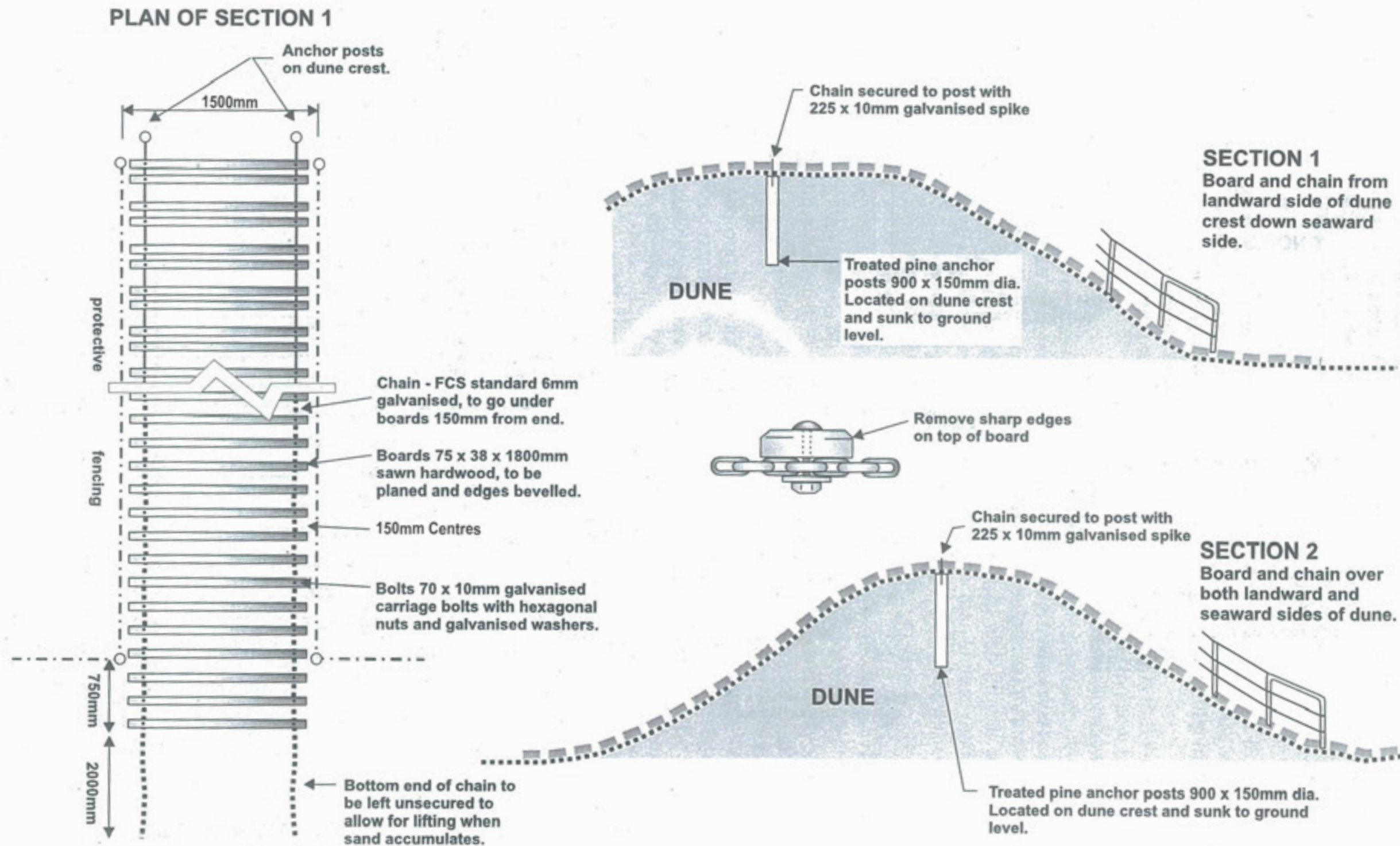
Fence line to follow existing ground level

ELEVATION DETAIL : NOT TO SCALE

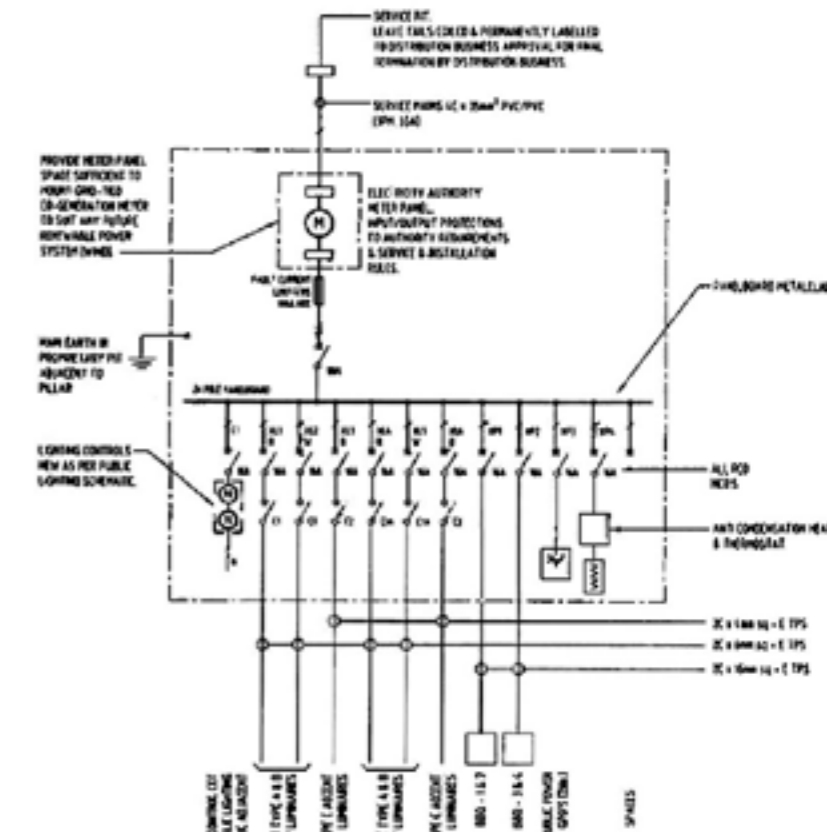
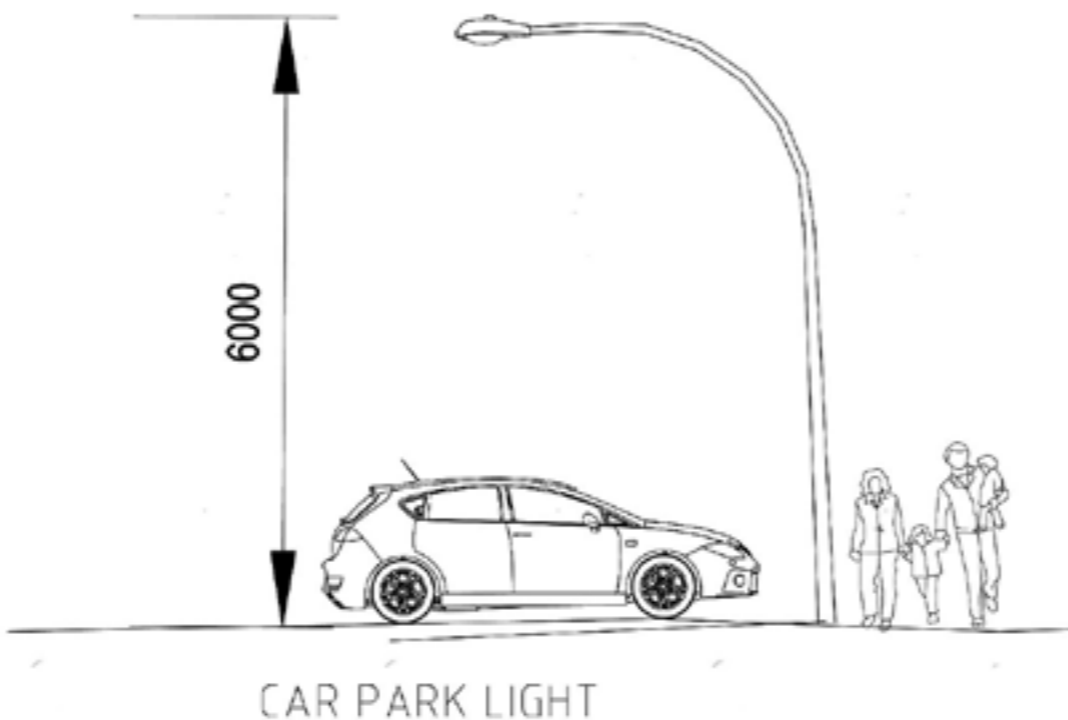
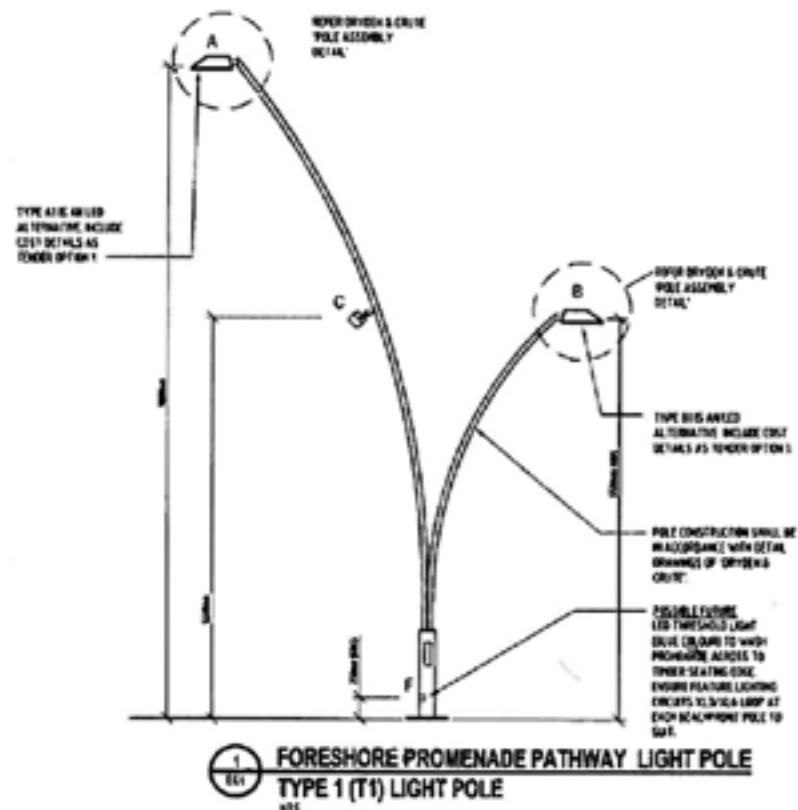
#### 4.6.14 BEACH FENCING

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Figure 4.9a Pedestrian board and chain

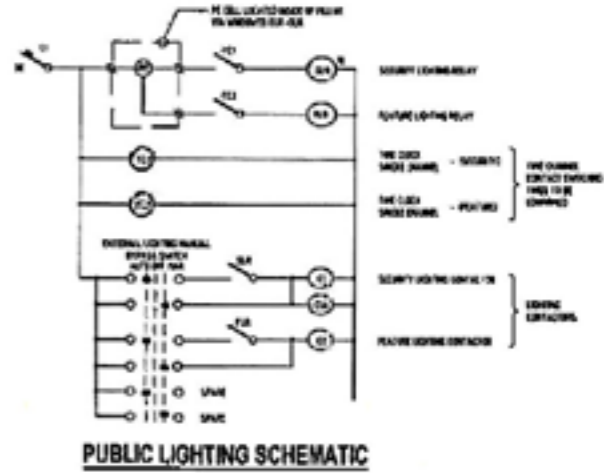
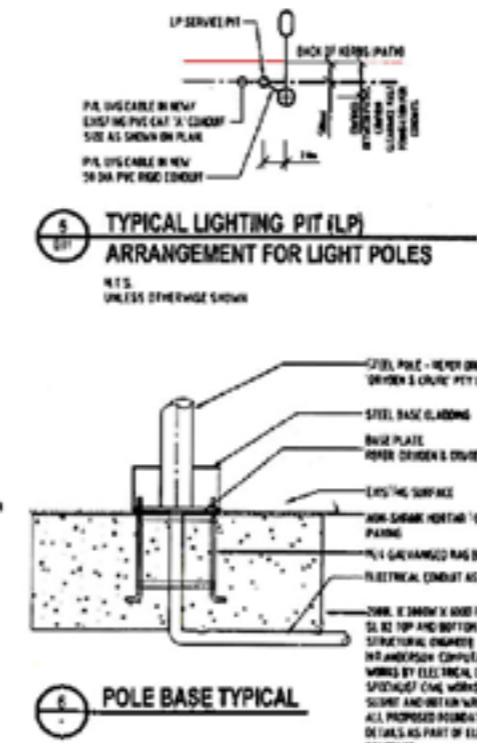
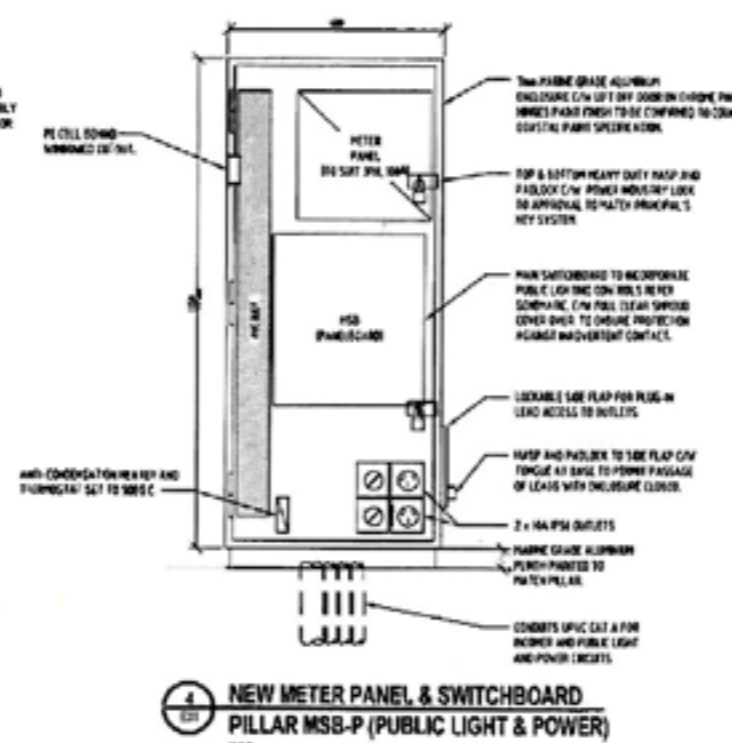


Above - Examples of typical 'Timber Board and Chain link' construction. Image courtesy of NSW Department of Land & Water Conservation.



**GENERAL NOTES**

- G1. REVIEW OF UNDERGROUND SERVICES: THE LOCATION OF UNDERGROUND SERVICES IS APPROPRIATE ONLY. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN. CONSULT THE ONE CALL TO VERIFY EXTENT OF EXISTING SERVICES PRIOR TO COMMENCEMENT OF WORK. EXACT POSITIONS SHALL BE PROVIDED ON SITE.
- G2. NEW EQUIPMENT LOCATIONS ARE APPROXIMATE ONLY. OBTAIN APPROVED SCHEDULES ON SITE FOR LIGHTING AND ELECTRICAL SERVICES EQUIPMENT PRIOR TO INSTALLATION. DO NOT SERVICER OR SCALE PROFESSIONAL SERVICES DRAWINGS.
- G3. NEW EQUIPMENT LOCATIONS ARE APPROXIMATE ONLY. OBTAIN APPROVED SCHEDULES ON SITE FOR LIGHTING AND ELECTRICAL SERVICES EQUIPMENT PRIOR TO INSTALLATION. DO NOT SERVICER OR SCALE PROFESSIONAL SERVICES DRAWINGS.
- G4. RECORD THE EXACT LOCATIONS OF UNDERGROUND SERVICES WITH TRANSMITTED REFERENCE TO PERMANENT SITE FEATURES AND RECORDS ON THE AS-BUILT DRAWINGS. IN THE CASE OF SERVICE AUTHORITY ASSETS COMPLY WITH THE SERVICE RESPONSE REQUIREMENTS OF THE RESPECTIVE AUTHORITY. RECORD SCALING OF OTHER SERVICES, CONDUITS AND STRUCTURES IN THE COURSE OF EXAMINING THE PROPOSED WORKS. PLS TO SUPPLY AUTHORITY DRAWING STANDARDS AVAILABLE FOR REPLY ONLY.
- G5. PROVIDE PERMANENT CABLE SURFACE PROTECTORS, AT EACH CHANGE OF DIRECTION AND ELSEWHERE AT LEAST EVERY 50M OF RUN.
- G6. PROVIDE ALL UNDERGROUND CONDUITS AS CATEGORY 4 (SPCC ORANGE) OR HEAVY DUTY 40 AS 200 C/W BRASS WIRE AND SEALED EACH END AT INSTALLATION COMPLETION. SANDWICH CONSTRUCTION OR CORRUGATED TYPES ARE NOT ACCEPTABLE. PVC CONDUITS MUST BE JOINED WITH PVC SOLIDIFIED JOINT. ALL BENDS TO MINIMUM RADIUS UNLESS OTHERWISE APPROVED.
- G7. SEAL ENDS OF CONDUITS AT WORKS COMPLETION WITH SUITABLE INDICATORS OR PLUGS OF NON-PERMEABLE MATERIALS. SEAL AROUND ALL PVC POLE AND ELECTRICAL ENCLOSURE PENETRATIONS TO EXCLUDE WATER AND VERMIN.
- G8. MINIMUM CONDUIT SIZE IS 32mm. MINIMUM CABLE SIZE AS DOCUMENTED.
- G9. MULTIPLE PULL WORKS TO REROUNDING OR DECAPTION TO EXISTING ELECTRICAL SERVICES OF THE SUPPLY AUTHORITY.
- G10. CONSULT WITH SERVICE AUTHORITIES TO OBTAIN PROTECTION OF EXISTING ASSETS THROUGHOUT THE PROPOSED WORKS AND MAINTAIN CLEARANCE REQUIREMENTS.
- G11. CONSULT WITH THE SERVICE AUTHORITIES TO ENSURE ALL NEW AUTHORITY SERVICES ARE ACCOMMODATED TO SERVICE AUTHORITY APPROVAL, PRIOR TO SITE INSTALLATION.
- G12. ENSURE PROTECTION OF UNDERGROUND CONDUITS AND PIPES FROM BACKFILLING. IN THE CASE OF AUTHORITY SERVICES PROVIDE PROTECTIVE BEDDING TO THE SUPPLY AUTHORITY AT THE AUTHORITY'S PRESCRIBED REGULATION PERIOD AND OBTAIN APPROVAL OF THE SERVICE AUTHORITIES RESPONSIBLE OFFICER PRIOR TO BACKFILLING.
- G13. IF DURING LAYING ANY CONDUIT THAT IS VIOLATED OR PREVENTS FREE PASSAGE OF CABLES THROUGH THEM SHALL BE MADE GOOD TO THE SATISFACTION OF THE RESPONSIBLE OFFICER OF THE SERVICES IN WRITING, AND BEING AWARE THAT THE WORK WILL BE REFINALLY CONSIDERED SATISFACTORY.
- G14. OBTAIN CORRECT CONDUIT PLACEMENT AND PROVISIONING TO BEST SUIT THE ELECTRICAL SERVICES INSTALLATION.
- G15. LAMPFILES SHALL BE SUBMITTED IN WORKING SAMPLE FORM AND APPROVED PRIOR TO ORDER.
- G16. ELECTRICAL ENCLOSURES SHALL HAVE PAINT SAMPLES SUBMITTED FOR APPROVAL, PRIOR TO PAINT APPLICATION.
- G17. COMPLETE ALL WORKS TO OBTAIN MAINTENANCE OF PUBLIC SECURITY LIGHTING AT ALL TIMES THROUGHOUT THE PROGRESS OF THE WORKS.
- G18. INSTALL ASSETS OF SERVICE UTILITIES IN ACCORDANCE WITH THESE SPECULATED REQUIREMENTS BOTH HORIZONTALLY AND VERTICALLY. OBTAIN REQUIRED CLEARANCES DIRECTLY FROM UTILITIES CONCERNED PRIOR TO WORKS COMMENCEMENT. DETAILS SHOWN ON DRAWINGS ARE INDICATIVE TO BE CONFIRMED AGAINST TO SUIT REQUIREMENTS OF THE SERVICES UTILITIES.
- G19. ANY DAMAGE TO EXISTING SERVICES SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE SUPERINTENDENT. WHERE LOCATIONS CAN BE REASONABLY ASCERTAINED PRIOR TO TRENCHING, IF FROM ONE CALL, NO-OR-ZONE ACCESSION OR SERVICES DETECTION SURVEY, ALONG WITH PROPOSED TRENCHING ROUTES.



This page - Examples of CoPP typical public lighting equipment

# HID Series



Building upon the success of the Urban Series, the Suburban delivers superior optical performance, which is supported by a precision, high pressure die-cast body and optical assembly complying with AS1158-1 Category P and AS1158.6 road lighting requirements.

The high performance aluminium reflector system incorporates a house side reflector which dramatically reduces the obtrusive lighting behind the Suburban. Combined with the injection moulded acrylic visor, the Suburban produces a typical light distribution pattern for precise street lighting requirements for lamps up to 70W High Pressure Sodium and 100W Metal Halide.

The control gear is mounted direct to the body chamber or on a removable gear cassette, as required, which is easily accessed by removing the top cover assembly. The cover is 100% compatible with the Urban and is uniquely retained by four patented non corrosive, quick release retention clips, which are of course captive to the cover assembly.

Both the lantern head and gear chamber form two discrete weatherproof compartments IP64 Optical, IP24 Gear. The visor which is sealed by a silicon gasket is retained by two secure, stainless steel toggles. Photo electric cell control is available in D2. Fixing mounting is via a 34mm O.D. spigot assembly.

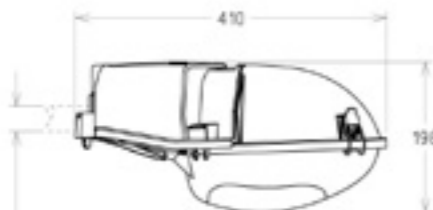
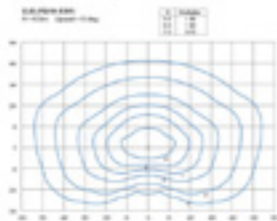
## Luminaire Construction

- Pressure die-cast one piece aluminium body
- IP64 optical chamber with acrylic visor
- IP24 control chamber with High density polyethylene cover with captive quick release clips
- Side entry mounting fits 27 to 34mm O.D. pipe
- Stainless steel toggle latches and fasteners
- Natural finish

## Features

- 35W – 100W HID lamps
- Integral 250V HPF control gear tray
- Complies to AS1158-1 Category V and AS1158.6
- Options:
  - 240V control gear
  - Double Insulation
  - Glare Shields
  - Photoelectric control switch
  - Polyester powdercoat finish in various colours

## Applications



Spigot ø 27 - 34 O.D. x 80 long



CODE	DESCRIPTION	TYPE	BASE	LAMP	WEIGHT
JS1000	SUBURBAN 50W MV	Mercury Vapour	E27	HSLBW50	3.6kg
JS1100	SUBURBAN 80W MV	Mercury Vapour	E27	HSLBW80	3.7kg
JS4000	SUBURBAN 50W HPS	High Pressure Sodium	E27	SHPSG/CO/1	4.0kg
JS4100	SUBURBAN 70W HPS	High Pressure Sodium	E27	SHP70/CO/1	4.2kg
JS2500	SUBURBAN 35W MH	Metal Halide	E27	MH35	3.7kg
JS2700	SUBURBAN 70W MA	Metal Halide	E27	M70/CO/U	4.2kg
JS1900	SUBURBAN 100W MA	Metal Halide	E27	M100/CO/U	4.2kg

Note: Above codes are for standard products only. Please refer to SLA Price List for options.

This page - An example of public lighting luminaire type



OCEANWATCH AUSTRALIA

HEALTHY CATCHMENTS  
HEALTHY OCEANS

## TAnglerBin

RECYCLE FISHING LINE TO SAVE WILDLIFE

OceanWatch Australia is launching its newest project - the TAnglerBin Project.

TAngler Bins are recycling bins for old recreational fishing line. The bins will be installed at key fishing sites throughout coastal NSW.



Recreational fishing line is made of monofilament nylon. When littered or lost in the environment, fishing line can:

- cause injury to wildlife
- spoils the enjoyment of other fishers
- is a hazard to boats and other watercraft
- is a danger to swimmers, divers and surfers
- is very unsightly - causing pollution and damage to the fishing environment.

With an estimated 17% of the NSW population fishing, the problem extends along the entire coast.

By encouraging fishers to dispose of their old fishing line in the TAngler Bins, the project aims to reduce the littering of fishing line in key fishing spots - improving the environment enjoyed by keen anglers. Working in partnership with coastal Councils, the project collects and recycles the line from the bins. Bin locations have been carefully identified in consultation with the NSW Department of Primary Industries and participating local Councils.

By taking an active role in helping anglers understand the problems their littered fishing line can have on their fishing environment, OceanWatch Australia has become part of the solution, by leading this project.

Ocean Watch Australia is building partnerships with recreational fishing clubs and associations, bait and tackle shops, animal rescue groups, the Department of Primary Industries and Local Councils on public awareness of responsible fishing techniques and establishing a network of TAnglerBins throughout coastal NSW.

The problem of littered line is widespread, affecting all recreational fishing areas. As a result, many seabirds, turtles and other wildlife become entangled in littered line.

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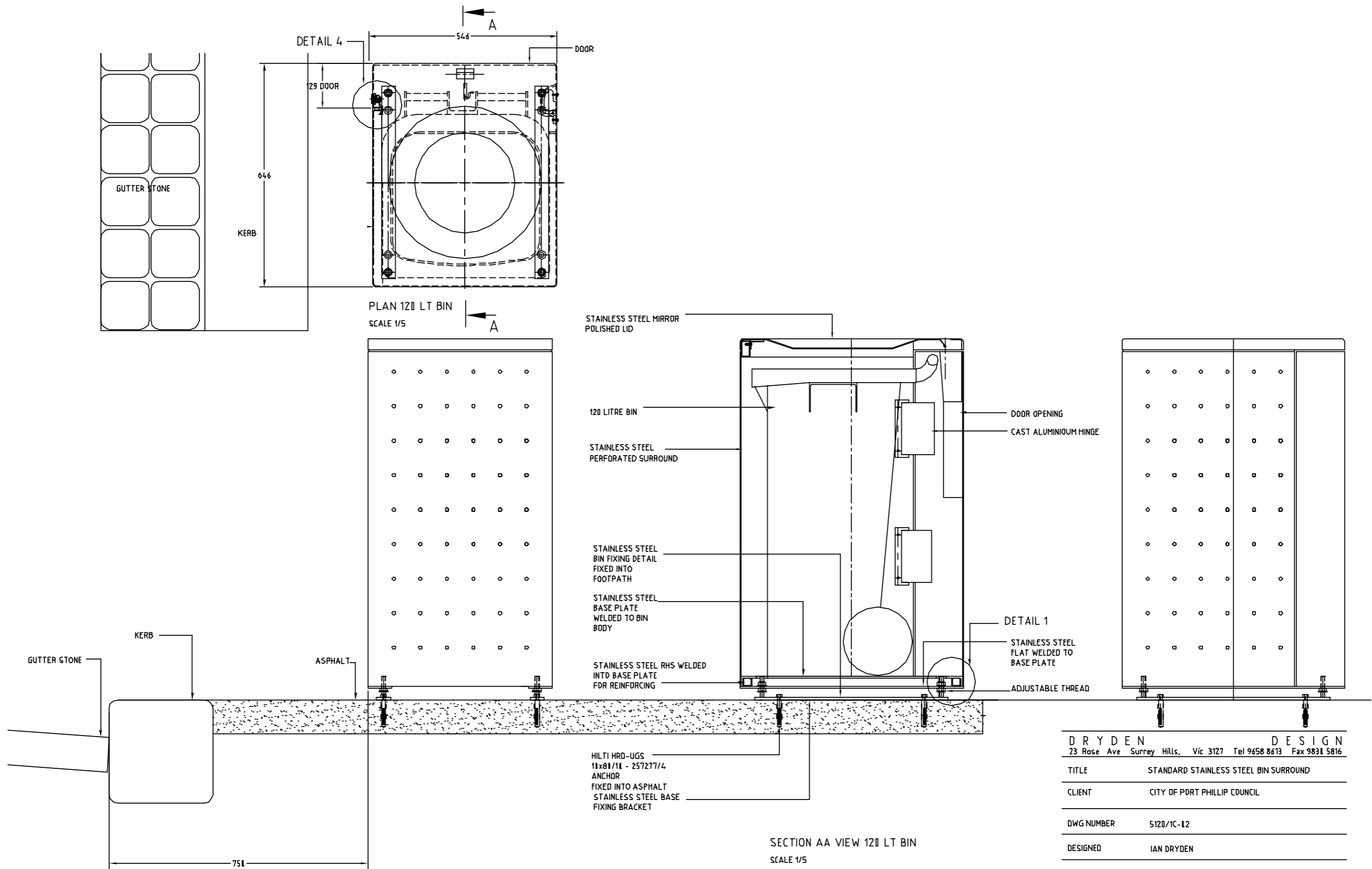
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**SEA NET**  
SMARTER FISHING FOR INDUSTRY

**TIDE TO TABLE**  
RESTORING AQUATIC HABITAT

[www.oceanwatch.org.au](http://www.oceanwatch.org.au)

This page - Tangler bin (proprietary product) available from Ocean Watch Australia Limited.



SECTION VIEW 121 LT BIN  
SCALE 1/5

SECTION AA VIEW 120 LT BIN  
SCALE 1/5

<b>DRYDEN DESIGN</b> 23 Rose Ave Surrey Hills, Vic 3127 Tel 9658 8613 Fax 9831 5816	
TITLE	STANDARD STAINLESS STEEL BIN SURROUND
CLIENT	CITY OF PORT PHILLIP COUNCIL
DWG NUMBER	5120/1C-12
DESIGNED	IAN DRYDEN
DRAWN	IAN DRYDEN
AMENDED	25/08/13
DATE	25/08/13

This page - Standard CoPP bin design





Source: RTA (2005).

Figure 10.3: Example of a bollard treatment

For paths that are 4 m wide or more, consideration could be given to the installation of a U-rail instead of a bollard. This arrangement shown in Figure 10.4 includes a hazard marker that provides a larger surface area and hence greater conspicuity for the treatment.

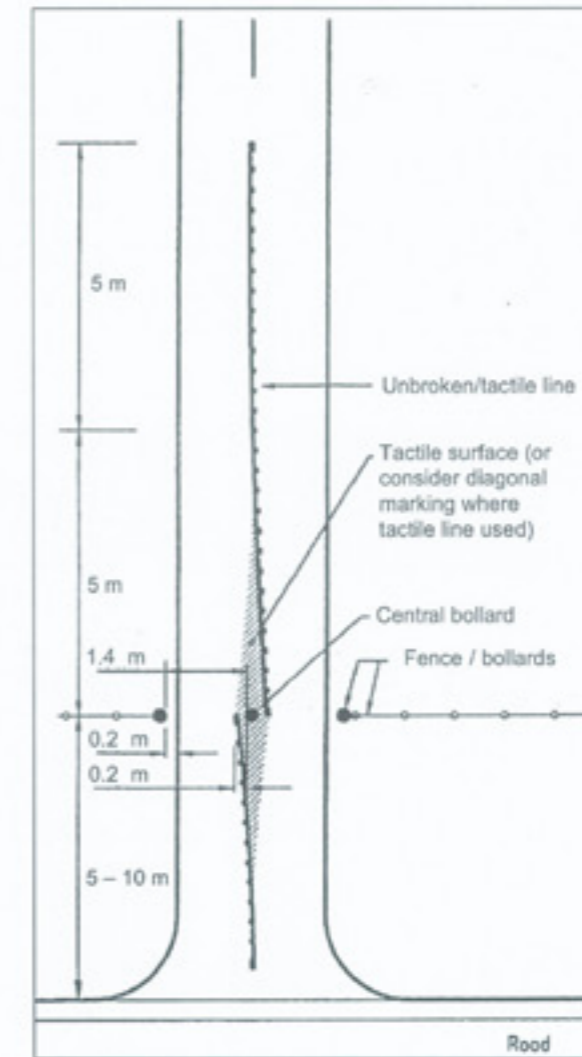


Source: RTA (2005).

Figure 10.4: Example of u-rail and hazard board treatment

Details of bollards and U-rails are provided in Figure 10.5.

Many instances exist where bollards are located in the centre of paths and no feature exists at the sides of the paths that would prevent access by motor vehicles and as such the devices serve no particular purpose. Where authorities are determined to maintain or construct central fixtures in the centre of paths the need must be justified in every instance; they should be effective in meeting their purpose, and should be provided with a high level of delineation. In particular, the locating of bollards and other fixtures centrally on paths is considered to be inappropriate at or near curves, or at intersections in the manoeuvring area of cyclists.



Source: VicRoads (2005).

Figure 10.2: Preferred layout for the use of a central bollard