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1. Introduction

1.1 About the project

The aim of the Warrnambool Harbour Masterplan is to prepare a plan to guide and coordinate any potential future development of the harbour and adjacent foreshore through staged implementation by Warrnambool City Council and the Department of Transport, Planning and Local Infrastructure - Local Ports.

The Warrnambool harbour, a State Government owned asset managed by Warrnambool City Council, has been identified as requiring further development and enhancement of public boating facilities, as recommended by a number of strategic planning documents, such as the Victorian Coastal Strategy and the Western Victoria Boating Coastal Action Plan. The Port of Warrnambool (Lady Bay) is identified as one of only two ‘State Marine Precincts’ west of Melbourne, with the other being Portland.

The harbour currently caters for the commercial fishing industry, recreation fishing and boating and other unstructured leisure activities. The capacity to improve on existing facilities is currently limited by the exposure to wave action that causes hazardous conditions within the harbour, particularly at the boat ramp. Warrnambool City Council are responsible for the ongoing management and maintenance of existing assets.

Future development to the harbour should cater for current and future levels of population, improve the provision, quality and diversity facilities, improve public amenity and safety, be constructed of durable materials to reduce ongoing maintenance costs, and support the local and regional economy particularly in regard to employment and increased visitation.

1.2 Warrnambool City Council

The Warrnambool City Council covers an area of 120 square kilometres and is located within in south west Victoria, approximately 260 kilometres east of Melbourne.\(^1\)

The local government area contains the city of Warrnambool, the major population centre, and the smaller towns of Allansford, Bushfield and Woodford.

Warrnambool City Council has an estimated population of almost 33,800 (as of 2016) and is currently experiencing an increase in population with a 1.44 per cent annual growth rate.\(^2\) With growth expected to continue, Warrnambool City Council is planning for the City’s population to reach 50,000 by 2036.\(^3\)

The Shire’s youth (0-15 year olds) make up almost 20% of the population whilst the senior demographic (65+ years) make more than 15%.\(^4\)

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2. Context

2.1 Strategic Context

Warrnambool Coastal Management Plan
Warrnambool City Council, 2013

The Warrnambool Coastal Management Plan provides a vision for the future use, development and management of Warrnambool’s coastline. The strategy aims for “an environment where the natural and cultural values of Warrnambool’s unique coastline are protected and enhanced and opportunities to access and enjoy the coastline are achieved in a sustainable way.”

The CMP identifies the most prominent environmental, cultural and recreational values along the coastline, defines management precincts, identifies key management issues affecting the coastline and provides prioritised management strategies including:

- Protect, enhance and restore natural and cultural values;
- Manage threats and impacts to native flora and fauna and landscape features;
- Retain and conserve natural coastal processes. Understand and plan for the management of climate change impacts and coastal processes;
- Ensure that access and use of the coastal environment is sustainable;
- Promote sustainable transport and passive connections;
- Protect and identify places of cultural significance and where appropriate provide interpretation;
- Concentrate active recreational use and development within highly modified environments, containing existing infrastructure;
- Support existing and future appropriate and sensitive development that is coastal dependent, demonstrates considerable net community benefit that complements and integrates with the coastal landscape;
- Maintain infrastructure to a high standard;
- Create iconic spaces in activity nodes to provide a variety of coastal destinations and experiences;
- Ensure that future use and development is not reactive and that projects are based on sound and up to date information;
- Provide amenities and opportunities for experiences that support tourism and community access to the coast, without compromising the natural environment;
- Ensure that, where appropriate internal and external stakeholder consultation is undertaken as part of project development and delivery.

The Victorian Coastal Strategy
Victorian Coastal Council, 2014

The Victorian Coastal Strategy provides guidance for agencies and statutory decision making along the coast and in marine environments and a framework for related plans, strategies and planning schemes for coastal Crown land.

The Strategy identifies key issues that are directed towards ensuring that coastal planning and management reflects the dynamic, complex and interconnected nature of coastal and marine habitats and addresses risks posed to coastal habitats and resources by a changing climate, an increasing population, and the growing cost of providing and maintaining coastal infrastructure.

The Coastal Management Act 1995 requires the Victorian Coastal Strategy to provide for the long-term planning of the Victorian coast, in order to ensure the protection of significant environmental features and provide clear direction for the future use of the coast, including the marine environment.

The Strategy outlines the following objectives:

1. Ensure protection of significant environmental and cultural values;
2. Undertake integrated planning and provide clean direction for the future; and
3. Ensure the sustainable use of natural and coastal resources.

When the above principles have been considered and addressed then:

4. Ensure development on the coast does not interfere with coastal processes and is located within existing, modified and resilient environments where the demand for development is evident and any impacts can be managed sustainably.

The Western Victoria Boating Coastal Action Plan
Western Coastal Board, 2010

The Western Victoria Boating Coastal Action Plan provides the strategic framework to guide the provision of improved and more sustainable boating facilities across the Western coastal region. The action plan seeks to ensure that the state’s west coast has a coordinated strategic plan with which to approach the provision, maintenance and management of recreational boating infrastructure. It also aims to ensure that appropriate levels of service are provided through a regional network of boating facilities.

The plan has assigned Warrnambool, a State Marine Precinct, a high priority for new boating facilities and recommends the redevelopment of the facilities at Warrnambool Harbour potentially including a marina or other fixed moorings, a modified breakwater to provide an all-weather safe harbour. The plan also recommends the development and implementation of a harbour masterplan to attract investment.

Warrnambool Coast Vegetation Management Plan
Warrnambool City Council, 2013

The Vegetation Management Plan assesses the existing vegetation and provides Council with a management strategy for the coast. The objectives of the plan include:

- Survey and map existing vegetation including ecological vegetation classes.
- Identify management zones including identification of significant vegetation and areas of high priority for vegetation management actions.
- Identify management issues that affect indigenous vegetation.
- Set priorities for the management of the vegetation, including weed management and revegetation.

The Economic and Social Value of Victoria’s Local Ports
Victorian Coastal Council, 2010

This study estimates the economic impact that local ports have on the regional and Victorian economy. In particular, this report focuses on:

- The contribution of local ports to the regional economy in which they are located.
- The contribution of local ports to the economy of Victoria.
- The value local ports add to local communities.
- The economic impact that investment in local port infrastructure has on the regional economy.

The Port of Warrnambool Safer Boating and Harbour Facility Study
Warrnambool City Council, 2013

The primary objective of this study is to identify and assess options that provide safer boating and harbour facilities for the Port of Warrnambool taking into consideration the Western Coastal Boards recommendation to provide a State Marine Precinct level of service. The report provides concept plans to provide an improved level of service and notes the following conclusions and recommendations:

- The exposure of the boat ramp and swing mooring to wave action was identified as significant constraint to providing safer boating and harbour facilities.
- Sedimentation and resulting impact on drafts was also identified as a high priority for providing safer boating and harbour facilities. The development of a short normal groyne and creation of sediment traps will assist in limiting the impact of sedimentation on the Port function.
- The requirement to increase the number of dedicated boat trailer parking bays to approximately 100.
- The cultural heritage values of the existing breakwater would need to be retained in any future development.
2.2 Planning Context

Warrnambool City Planning Scheme

The Warrnambool City Planning Scheme provides a framework to guide decisions about the use and development of land. It supports the State, regional and local policies affecting land use and development within the local government area.

The long term vision for Warrnambool City as outlined in the planning scheme is, “To be a thriving, culturally rich and inclusive leading regional city”.

The City’s planning for development is based on a number of objectives. The following outlines the principals from the planning scheme relevant to the Warrnambool Harbour Masterplan:

- To develop an open space network that protects a range of natural and cultural environments and contributes positively to biodiversity and water quality
- To retain and enhance coastal landscapes of high scenic value
- To protect and enhance the environmental values and significant features of coastal areas
- To ensure that the use of and access to the coastal environment is sustainable
- To enhance and expand the tourism industry, while protecting the environmental, landscape and cultural values of the municipality and the lifestyle of its residents
- To retain and enhance coastal landscapes of high scenic value
- To plan for and manage the potential coastal impacts associated with sea level rise and climate change

Zoning

Under the Planning Scheme, areas of land within the study boundary are zoned for the following purposes:
- Public Park and Recreation Zone (PPRZ); and
- Public Use Zone - Local Government (PUZ); and
- Public Conservation and Resource Zone.

The PPRZ recognises areas for public recreation and open space, protects and conserves areas of significance, providing for commercial uses where appropriate.

The PUZ recognises public land use for public utility and community services and facilities and provides for associated uses that are consistent with the intent of the public land reservation or purpose.

The PCRZ protects and conserves the natural environment and natural processes for their historic, scientific, landscape, habitat or cultural values and provides facilities associated with sea level rise and climate change.

Overlays

The Study area is covered by three of overlays: environmental significance overlay, a significant landscape overlay and a heritage overlay.

The environmental significance overlay identifies areas where the development of land may be affected by environmental constraints and ensures that development is compatible with identified environmental values.

The significant landscape overlay identifies significant landscapes in order to conserve and enhance the character of them.

The heritage overlay conserves and enhance heritage places of natural or cultural significance and those elements which contribute to the significance of heritage places. It aims to ensure that development does not adversely affect the significance of heritage places, conserve specifically identified heritage places.
2.3  Historical Context

Warrnambool was first noted by explorers in early 1800s and was frequented by whalers in the early part of the 19th century. The first settlers arrived from inland Victoria to the Lady Bay area in the early 1840s and was established soon after. The town grew quickly following pastoral settlement and the gold rush.

The formation of the commercial port in the 1880s was designed as an outlet for agricultural produce and was a thriving deep sea port, even though it was constantly exposed to south-westerly winds. In 1874, the Government approved a plan to provide protection to the harbour by constructing a concrete breakwater. Completed in 1890, the Warrnambool Breakwater consisted of two parts: the concrete breakwater extending out into the bay, and the timber viaduct which once joined it to the shore. The viaduct was originally a raised timber structure, but was filled in with bluestone rubble to create the asphalt road, Viaduct Road, seen today.

The coastal processes such as strong waves, currents and longshore drift has meant that the establishment and maintenance of the harbour continues to provide ongoing issues. Various extensions and modifications to the harbour and foreshore over the years has had a significant impact on Lady Bay including increased sedimentation, reduced depth within the port area and a significantly modified shoreline.

The major function of the Warrnambool Harbour today is to provide facilities for the commercial fishing industry, recreational fishing and boating and unstructured leisure activities.

A number of significant historic sites are either within the study area or in close proximity. The following items are included in the Victorian Heritage Register:

- Warrnambool Breakwater, Viaduct and Harbour (VHR Number H2124)
- Former Warrnambool Lifeboat Jetty (Heritage Vic Inventory No H7321-0076)

Several shipwrecks are also listed on the Victorian Heritage Register in Lady Bay and Middle Island including the following:

- Edinburgh Castle (VHR S208)
- La Bella (VHR S401)
- Maid of Julpha (VHR S439)
- Freedom (VHR S266)
- Free Trader (VHR S267)
- Alexandra (VHR S19)
- Enterprise (VHR S238)
- Archer (VHR S39)
- Yarra (VHR S746)
- Alfred (VHR S886)
- Fair Tasmanian (VHR S254)
- Jane (VHR S360)
- Alfred (VHR S20)
- Golden Spring (VHR S293)
- Jane (VHR S361)
2.4 Environmental Context

A Changing Coastline

The study area has undergone a series of modifications since the 1800’s. The changes in the shoreline has been influenced by the construction of coastal structures such as the breakwater.

Changes to the high water level from the year 1870 to current day is illustrated in Figure 3. This is a highly modified section of coast and reclaimed land which has resulted in the harbour that can be seen today.

Natural processes will continue to modify the coastal environment. In addition coastal processes present potential threats to Warrnambool’s coastal environment. These include erosion, shoreline recession and the potential impacts of climate change including storm surges and the impacts of sea level rise.

Vegetation

The vegetation in the study area has colonised the landscape in response to modifications of the coastline.

The Vegetation Management Plan (Biosis, 2012) identifies a total of 98 indigenous and 105 introduced plant species are along the Warrnambool Coast indicating a diverse coastal flora. Weed control and revegetation as recommended by the Vegetation Management Plan should be considered in any future development. Vegetation should also be considered in regards to climate change adaption measures, particularly its role in dune stabilisation.
3. **Existing Conditions**

3.1 **Observations**

No signage at the entrance to the precinct and informal parking along road verge. Well established trail network.

Bus parking has direct connection to pedestrian paths.

Native plant species included in planting works around buildings and car parks.

Northern car park under utilised during the day due to poor signage and existing access road being very narrow (which visitors may interpret as a maintenance road).

Existing parking areas a large expanse of asphalt with cars currently parking in long vehicle bays.

Car parking along the foreshore is very popular for walkers and people enjoying the water outlook.

Walking trails as well as food and beverage facilities highly used by local community and visitors.

Rock work provides protection from coastal processes but also creates a buffer between pedestrian areas and the beach.
Existing buildings and structures provide facilities for coastal dependent user groups.

Northern boat ramp relatively steep and experiences regular erosion at the base. Sand dispersal has an impact on trail users.

Fish cleaning areas are located in close proximity to the launch area with fish byproducts disposed of in the water.

A consistent suite of furniture, material and finishes has been used within the precinct. Some items are in need of repair or an upgrade.

Northern car park is used as a beach access for horses in the morning.

Current boat rigging areas, vehicle queuing areas and boat wash down facilities are inadequate.

Boat launching and associated activities such as displays of catch form part of the experience of the precinct with paths and furniture accessed by different user groups.
The breakwater is a historically significant part of the coastline. Existing facilities are degraded and regular maintenance and capital works is required to maintain its structural integrity.

Modifications to boat launch area needs to consider the function and use of existing platforms and historic significance of the breakwater.

The precinct forms part of a bigger trail network.

Confusing road network makes identification of car park circulation and exits difficult for visitors to the area.

Pedestrian connections between the breakwater, launch areas and former aquarium could be improved as part of improvements to car parking areas.

Existing signage needs to be upgraded.

Landscape features are located in traffic islands or away from pedestrian areas.

Former aquarium and associated parking areas are in need of enhancement.
4. Community Consultation

4.1 Community and Stakeholder Engagement

To be completed following consultation
5. Issues and Opportunities

1. Need for additional long vehicle parking and horse wash down facilities in the northern car park.

2. Northern car park under utilised during the day due to poor signage and existing access road being very narrow (which visitors may interpret as a maintenance road).

3. Northern boat ramp relatively steep and experiences regular erosion at the base.

4. Coast guard communications could be improved by relocation of antennae closer to the breakwater.

5. Food and beverage facilities highly used by local community and visitors.

6. Toilets are currently closed in the early morning and late evening when people are leaving or returning from fishing.

7. Problem with cars parking in long vehicle parking bays which reduces the number of spaces available to vehicles with trailers.

8. Car parking along the foreshore is very popular for walkers and people enjoying the water outlook.

9. Pedestrian access to the sand is poor especially in high pedestrian areas.

10. Visitors to the area often confuse the entrance to the boat launch as part of the car park.

11. Current boat rigging areas, vehicle queuing areas and boat wash down facilities area inadequate resulting in vehicle congestion at the boat launch, especially during busy periods.

12. Confusing road network makes identification of car park circulation and exits difficult for visitors to the area.

13. Modifications to boat launch area needs to consider the function and use of existing platforms and historic significance of the breakwater.

14. Pedestrian connections between the foreshore and breakwater could be improved.

15. Former aquarium and associated parking areas are in need of enhancement.

16. Consider installation of CCTV cameras to reduce incidences of hoon behavior.
6. Preliminary Concepts

6.1 Option 1

The following preliminary concepts are mainly concerned with the issue of circulation, particularly vehicular circulation, at the Warrnambool Harbour. Following consultation with the community and stakeholders, these concepts will help to inform the preparation of a Masterplan.

Key Objectives

- Improved northern carpark access
- Additional boat ramp lane
- Improved location of fish cleaning facilities
- Maintained area between the boat ramp to the breakwater
- Northern carpark joint use zone identified
- Improved access to the fish scale
- Improved pedestrian movements from the promenade to the breakwater
- Southern (Aquarium) carpark circulation improved
- Designated emergency vehicle park
- Rail trail connection to the promenade
- Maintain front beach view caparks
- Horse trailer movements avoid the carpark upon exit
- Heavy vehicles access to the breakwater avoids the car park

Car parking comparison

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<thead>
<tr>
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<th>Existing</th>
<th>Proposed</th>
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<tbody>
<tr>
<td>Boat parks</td>
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<td>85</td>
</tr>
<tr>
<td>Car parks</td>
<td>29</td>
<td>58</td>
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<tr>
<td>Additional car parks to northern car park</td>
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<td>33</td>
</tr>
<tr>
<td>Additional double length parks to northern car park</td>
<td>-</td>
<td>9</td>
</tr>
</tbody>
</table>
6.2 Option 2

Key Objectives

- Improved northern carpark access
- Additional boat ramp lane
- Improved location of fish cleaning facilities
- Maintained area between the boat ramp to the breakwater
- Northern carpark joint use zone identified
- Improved access to the fish scale
- Improved pedestrian movements from the promenade to the breakwater
- Southern (Aquarium) carpark circulation improved
- Designated emergency vehicle park
- Rail trail connection to the promenade
- Maintain front beach view caparks
- Horse trailer movements avoid the carpark upon exit
- Heavy vehicles access to the breakwater avoids the car park

<table>
<thead>
<tr>
<th></th>
<th>Existing</th>
<th>Proposed</th>
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<tbody>
<tr>
<td>Boat parks</td>
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<tr>
<td>Car parks</td>
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<td>Additional car parks to</td>
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<tr>
<td>northern car park</td>
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<td>Additional double length</td>
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<td>9</td>
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<tr>
<td>parks to northern car park</td>
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</table>
6.3 Proposed materials and finishes

Construction of structures is an integral component of harbours and boating facilities. The need for coastal structures will increase as the impacts of sea level rise start to shape the coast.

The following images illustrate different treatment options. Community input on preferred treatments will assist the development of interface treatments in the Masterplan.

**Treatment A**
Structures and finishes which enable interaction with the water.

**Treatment B**
Integration of ramps and seating to improve connections between paths and the beach. Concrete finishes could match existing paths and the Breakwater.

**Treatment C**
Rockwork which provides a clear separation between pedestrian areas and the beach or water.
7. Staging and implementation

The following table outlines the priorities for implementation of the key recommendations contained within the Master Plan. Priority time frames are defined in the table below.

<table>
<thead>
<tr>
<th>Priority</th>
<th>Time frame</th>
<th>Items</th>
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<tbody>
<tr>
<td>Short term</td>
<td>To be completed in 1-5 years</td>
<td>Boat ramp redevelopment</td>
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<tr>
<td></td>
<td></td>
<td>Port of Warrnambool Asset Management Plan</td>
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<tr>
<td></td>
<td></td>
<td>Interim car park redevelopment (linking new boat ramp access/exit to existing car park configuration)</td>
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<tr>
<td></td>
<td></td>
<td>Construction of wash down, de-rigging and fish cleaning area</td>
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<td></td>
<td></td>
<td>Breakwater structural repairs</td>
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<td>Medium term</td>
<td>To be completed in 5-10 years</td>
<td>Improved pedestrian access and linkages</td>
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<td>Northern car park extension</td>
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<td>Long term</td>
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<td>Construction of a bypass loop</td>
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<td>Car park redevelopment</td>
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<td>Ongoing</td>
<td>Recurring management and maintenance items</td>
<td>Breakwater maintenance</td>
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<td>Viaduct Road maintenance</td>
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<tr>
<td></td>
<td></td>
<td>Dredging of harbour</td>
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</table>

<<Preliminary list included - to be completed as part of the final Master Plan>>