# Worser Bay design brief

The purpose of this document is to define the design elements required from Victoria University for the dune restoration and recreational amenity upgrades at Worser Bay envisaged in Tatou Ki Uta, the Coastal Reserves Management Plan. The initial task is to provide conceptual designs that can be used for consultation purposes with both the Wellington Regional Council and the Wellington City Council. The concept designs will need enough detail so they can be used to inform consenting processes and preliminary costs estimates. The concept designs are needed by the end of July 2026. There are 9 conceptual designs that need to be created within 4 focus areas.


**1. Worser Bay beach pavilion precinct**

**2. Worser Bay lawn and dune**

**3. Worser Bay Boating Club carpark**

**4. Artificial reef in the Worser Bay intertidal zone**

This document should be read in conjunction with the following consultation material.

- Worser Bay Biodiversity projects
- Worser Bay Marine Management Area Proposal
- Worser Bay Coastal Recreation Amenity Proposals

See: **https://www.wbbc.org.nz/post/marine-management-area-conversation-begins**

## Focus area 1. Worser Bay beach pavilion precinct.

The first focus area is around the pavilion. In this area there are four conceptual designs to create.

1a Waka Storage

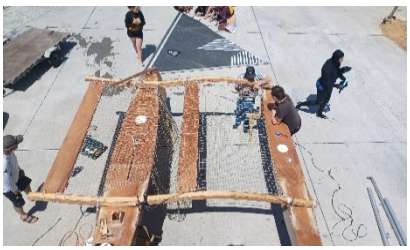
1b Grass reinstatement

1c Outdoor classroom

1d Boardwalk

**1a Waka Storage.** The first is a Waka Kohanga, a place to store Te Rongotai, the sailing waka, and four double paddling waka. A pergola type structure is required with a roof supported by posts with no sides. Some excavation will be required to ensure the floor under the structure aligns with the floor of pavilion, with the height of the posts aligning with height of the pavilion walls. It is envisaged that the pitch of the roof would complement the roof line of the pavilion.

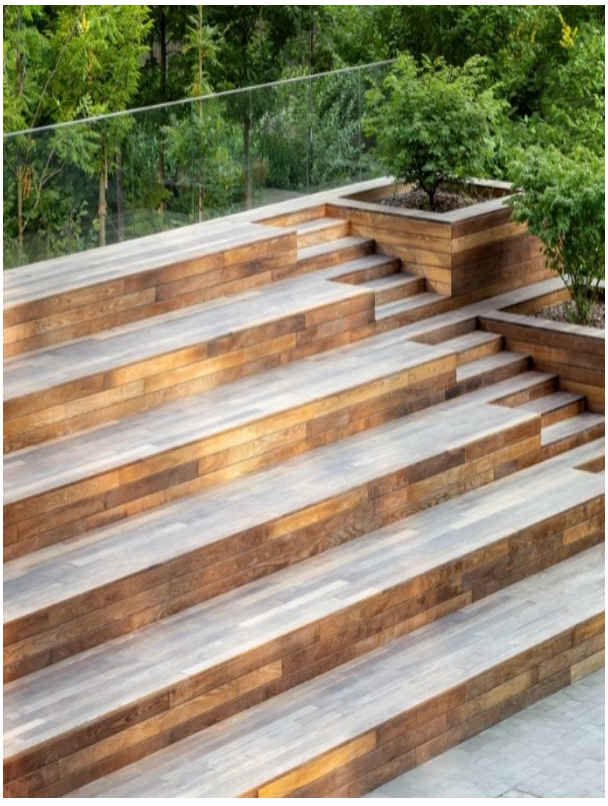
The design should resemble similar waka storage structures such as the structure used to house the large paddling waka at Waitangi. Eventually carving work on the structure will be undertaken in consultation with Taranaki Whānui ki Te Upoko o Te Ika and Te Kura Kaupapa Māori o Nga Mokopuna. Concept designs needn't show the carving elements at this early stage but should illustrate the intended form.



The four paddling waka will be stored on their side on a rack system like that used at Evans Bay Yacht & Motorboat Cub. Te Rongotai, the sailing waka, will be stored on its beach trailer.

**1b Grass reinstatement.** The concept designs in this area should show the dunes in front of the pavilion cut back somewhat and replaced by grass. The grass will need to be at the level of the floor of the pavilion. The remaining dunes will need a retaining edge along this section to help stop them from progressing westward in future years.

**1c Outdoor classroom.** Within the dune edge a tiered set of seats should be shown so they can be used as an outside classroom or 'lecture theatre'. These need to be able to sit at least up to 30 children with a clear view of the grass area in front of the pavilion where instructors and teachers can demonstrate various aspects of sailing, paddling and water safety concepts before embarking on the water.



**1d Boardwalk.** A board walk through the dunes, wide enough (3-4m) to take Te Rongotai down to the beach. The design should show the boardwalk from the height of the pavilion floor down to the level of the beach at the eastern edge of the dunes. The boardwalk should align with the centre of the pavilion.

## Focus area 2. Worser Bay lawn and dune.

The second focus area is the grass and dune area extending from the Pavilion in the south to the driveway onto the beach at the north. In this area there are three conceptual designs required.

2a Dune expansion

2b Grass reinstatement

2c Ramp

**2a Dune expansion.** The dunes should be shown extending further than they currently do so that they reach the north end of Worser Bay beach. The sand dune material and plants that are currently encroaching onto the grass area on the western side of the dunes should be shown as moved and replanted in the dune extension to the north end of the beach. The dunes that remain will need a retaining edge along this section to help stop them from progressing westward in future years onto the reinstated grass area.

**2b Grass reinstatement.** The reinstated grass area should be shown as gradually rising through this area from the level of the pavilion to the level existing at the northern end of the beach. Any seating or tables in this area should be kept to edges to ensure maximum grass space is retained throughout.

**2c Ramp.** An access ramp to the beach from the grass to be positioned approximately 3/4's of the way toward the north end of the grass area from the pavilion. The ramp should provide an erosion resistant way for people to access the beach from the grass. The ramp should be approximately 10-15 metres wide to allow small sailing boats up and down it when major national sailing championships are held at Worser Bay, which require the boats to be stored on the grass area over night.

Current situation at Worser Bay showing the extent to which the back (western edge) of the dune is starting to engulf the pavilion and the amount of grass that is now covered by dune

Grass reinstatement and extent of dune shifted to north end of beach

Extension of dune to north end of beach and approximate position and scale of ramp from beach to grass

## Focus area 3. Worser Bay Boating Club carpark

The third focus area is the Worser Bay Boating Club carpark. In this area there is one new conceptual design required and three other elelments that don't need concept designs.

3a Aquaculture Container

3b Pou (concept already developed)

3c Penguin Hotel (concept already in place)

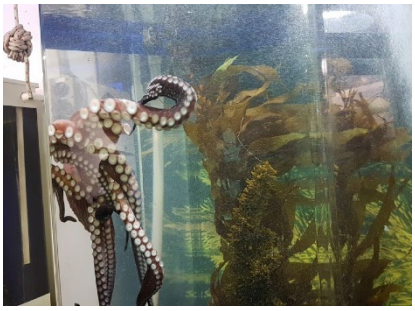
3d Underwater Sculpture Trail (concept under development)

**3a Aquaculture container.** A community aquaculture container to be placed on the grass directly behind the public toilet in the Worser Bay Car park. The container to be a modified 40ft container with its eastern side opening onto the grass area. The mounds in this area to be removed and flattened to the level of the existing grass space. The container will be placed where the mounds currently are.

The community aquaculture container will contain aquarium tanks for raising juvenile marine species to release into the Worser Bay marine management area. The container will serve as a citizen science education facility for both schools and the community and will be used to raise fish, shellfish, crustaceans and mollusks for release into the Worser Bay Blue Belt no-take zone, where there are five projects underway which are being led by local school children in partnership with the community and Te Whare Mātauranga o Waka Tuaone, the Boat & Beach Wise Education Centre. These projects are a Penguin hotel, a Kelp Forest, a Pāua Nursery, an Underwater Art Gallery and an Anemone Garden

The consent for the aquaculture container will be for an initial ten-year period through to 2036. It is anticipated that as 2036 approaches Te Whare Mātauranga o Waka Tuaone - The Boat & Beach Wise Education Centre will revisit the consents for the aquaculture container with Wellington City Council and either remove the container from the site or extend the consent for a further ten years.

The community aquaculture container will be modelled upon the containers used for the RŪNĀ activation hub at the viaduct harbour in Auckland during the 2024 Moana Festival. These containers had one wall which could open out fully, with activities taking place inside the open container.  Inside the community aquaculture container will be open and closed tanks like those found at the bait house in Island Bay, in which various species can be raised for release.

**3b Pou (concept already developed)**

Five pou will be installed in the rock revetment near the bridge to Worser Bay Boating Club. The pou will mark the significance of this place for Te Whanganui-a-Tara. The five pou will be named Wheke, Manaia, Tu Tangata, Tangaroa and Tāwhirimātea, and the pūrākau embodied in their design will be used throughout the school and community education programmes. No concept design images are required for the pou.

**3c Penguin Hotel (concept in place)**

Students designed a fenced off area adjacent to the carpark at Worser Bay with a tunnel through the rock revetment to the high tide zone. In the fenced off area they installed penguin nests and planted vegetation to encourage kororā to nest. In 2024 the first guests checked into the student's penguin hotel! Two mating pairs set up a nest in two of the nesting boxes and three kororā chicks were successfully hatched and fledged that season. And in 2025 three further chicks were successfully fledged. The kororā were tagged and are now part of the Earth Sciences NZ monitoring programme. No concept design images are required for the penguin hotel.

**3d Underwater Sculpture Trail (concept in development)**

The underwater sculpture trail will act as a snorkel trail and be part of the no-take zone within the Worser Bay Marine Management Area. The aspiration is for a high quality art installation that becomes a recreation attraction for Wellingtonians, tourists and other visitors to our city.

The project includes: establishing a baseline of what life exists in the area now; working out the size and path for the snorkel trail; researching materials to be used and methods for anchoring the sculptures; working with mana/tangata whenua to identify pūrākau that could help inform the design; and, engaging with artists to establish the initial designs for the sculptures. No concept design images are required for the underwater sculpture trail.

## Focus area 4. Artificial reef in the Worser Bay intertidal zone

Biodiveristy pots

Exploration trail

Toddler pool

### 4a. Anemone Garden

Students from schools across Wellington visit Te Whare Mātauranga o Waka Tuaone and learn how to use Marine Metre Squared and Photogrammetry to monitor biodiversity in the rock pools and inter-tidal zone at Worser Bay.

Marine Metre Squared and Photogrammetry are tools used by Dr Sally Carson from the New Zealand Marine Studies Centre to connect communities to their local coastlines. Marine Metre Squared involves counting the number of different species within a square metre of intertidal reef structures. Photogrammetry involves students taking multiple photos to generate a 3D digital model reefs and the species inhabiting them.

The idea is to establish an artificial reef structure called the Anemone Garden in the intertidal zone between the Worser Bay Boating Club launching ramp, the diving board and the beach. This will then be used by students to track changes in populations over time using the two research methods.

We are about to begin a trial of large-scale pots as a way of creating habitats for sea life. These will be compared to the use of 3-d printed modules which have been installed in the Waitematā in Auckland before the final design is completed. It is envisaged that some of the modules/pots will be permanently submerged underwater, while others will lie fully exposed at low tide. A set of bathyscope underwater viewers will be publicly available for viewing what is going on the pod/pots.

The exploration trail will be designed so that it also becomes habitat over time. The intention is that it is strong enough to dampen waves entering this corner of the bay, helping to mitigate the effects of sea level rise and gradual tectonic subsidence on the buildings in this area.

In this area there is one conceptual design required.