

Te Ara Tupua: Ngā Ūranga ki Pito-One

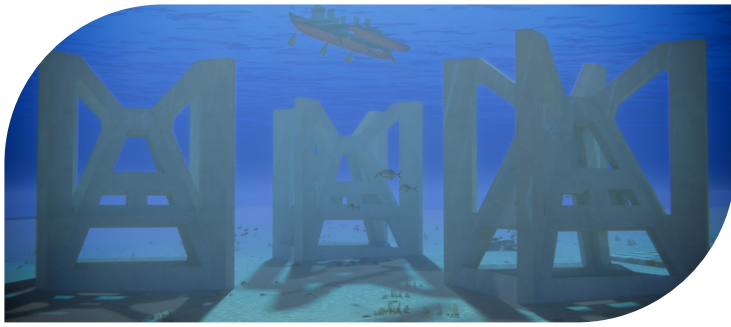
Enhanced reef habitat



Te Ara Tupua is the project to create a walking and cycling link and improve transport resilience between Wellington and Lower Hutt.

The Reef enhancement initiative is made of 54 engineered reef 'pyramid' units that will be submerged off the western edge of Te Whanganui-a-Tara. Covering 5 ha, it forms part of an enhancement project to mitigate the loss of rocky reef habitat from building the walking and cycling link. Each pyramid unit is 4m long by 4m wide, and 5m tall, weighing approximately 22 tonnes. They will be 7-10 metres below sea level with a minimum 2m clearance from the top of the pyramid unit.





Reef units shortly after being placed – growth is just beginning.



Reef units with growth expected after approximately 2.5 years.



Reef units with five years of growth.

Why is the reef enhancement initiative needed?

- Constructing the new, more resilient, coastal edge (the seawalls and embankments that will protect the road, rail and shared path), results in some loss of habitat along the shoreline.
- This means we need to include environmental improvements in the project, to replace some of this loss.
- The conditions imposed on the project, as part of its fast-tracked consent, require implementation of either a habitat improvement project (this reef enhancement), or an alternative, more expensive proposal.

Learn more about
Te Ara Tupua at
nzta.govt.nz/tearatupua

How will it create improved habitats in our harbour?

- The pyramids are made of concrete and designed to funnel nutrients to the surface and encourage growth of plant life, algae, shellfish, snails and kina.
- These units are designed to mirror a natural rocky reef, creating habitat for species through a variety of life cycles.
- This will be the first of its kind and scale for biodiversity compensation purposes in New Zealand.
- The centre of the pyramid units will create suitable conditions for a wide variety of marine growth and nursery conditions for juvenile fish.
- Based on tidal movements of Te Whanganui-a-Tara, common micro-organisms will begin to grow on the enhanced reef habitat.
- Within the first few years, there will be an increase in common fish populations with algae, kelp and invertebrates also occupying the surface of the units.
- As the pyramid units become more established, additional species are expected to inhabit the pyramid structures and sandy habitat between the structures.
- A monitoring programme is planned, to measure the development of the reef habitat over time, while assessing marine biodiversity. This will incorporate mana whenua values along with ecological measures.
- Benefits will be seen up the food chain where an increased abundance of fish will increase availability of food for seabirds and other species in the area.