Tonkin + Taylor Te Araroa Marine Access Facility Investigations: Factual summary of terrestrial and wetland ecology effects to be managed

1 Introduction and methods

Vegetation, bat, avifauna (wetland, terrestrial and coastal bird species), lizard and freshwater fish physical (and acoustic for bats and Australasian bittern) surveys have been undertaken on the Te Rimu landholdings over and adjacent to the area proposed to create the marine access facility. In addition, eDNA samples have been taken within the stream and from the beach between mean high and mean low water spring in the vicinity of the proposed breakwater structures.

2 Summary of findings

The site is characterised by two sizeable coastal dune wetland systems that are natural and fed by groundwater flow from the hills behind. Between the wetlands and the beach parallel gravel dunes predominate.

2.1 Wetlands

The wetlands contain vegetation communities of native plant species raupo, flax and a selection of freshwater reeds and sedges. Native dominant dune wetlands are rare nationally because most have been drained for development.

The wetlands receive their water from groundwater moving through to the sea from the hills. While there may be small variations in water level within the wetland between summer and winter, the nature of the vegetation growing in these wetlands suggest that they are permanently wet and annual water level variation is small (less than 500mm). Any disruption of the groundwater level would have a significant negative impact on the wetland vegetation and its value as habitat.

The wetlands drain in a westward direction to the stream that flows through the Te Rimu property.

2.1.1 Wetland vegetation species

No rare native plant species have been recorded in these wetlands.

2.1.2 Wetland fauna

The wetlands have considerable populations of long-finned eels and the coastal wetland survey recorded one very large (probably land-locked) inanga.

Limited wetland bird life was observed at the wetland sites during the site visits however the threatened and very secretive Australasian bittern (Matuku) has been detected on our acoustic detectors. This species is classified as Threatened – Nationally Critical. This finding is not completely unexpected given the remoteness of the site and the reasonably healthy state of the wetlands.

No other threatened wetland bird species were detected but it is possible that spotless crake (At Risk – Declining) may also use the wetlands.

2.1.3 Likely project mitigation / offset requirements

- *The greatest risk to the wetland areas is the complete loss or lowering of the water table once the mooring basin is excavated. For this reason the mooring basin margins will need to be sealed to prevent accelerated groundwater draw-down.*
- *The projected noise and vibration that will occur during construction is likely to have a negative impact on Australasian bittern. Quantification of this effect and the development of*

suitable mitigation is currently being considered. Operational noise from the barge facility is unlikely to be significantly more disturbing than the natural noise of the breakers on the gravel coast so noise impact on bittern post-construction is not likely to be a problem.

2.2 Gravel dunes

The dune vegetation has been substantially modified by grazing and some superficial land clearance over many decades. However, the original form of the gravel dunes largely remains.

2.2.1 Dune vegetation

The dune vegetation is largely low grade pasture with scattered areas of native mid-dune species and introduced plant species such as gorse and cotoneaster. No threatened plant species were detected and the native vegetation is best described as degraded.

2.2.2 Dune ridge fauna

The only native animal life detected of high ecological value was shore skink (At Risk – Declining). This species is relatively abundant over the Project site occupying the exposed gravel mounds along most of the gravel ridges. Preliminary estimates suggest that 10 to 25% of the area proposed for excavation is occupied by this species.

2.2.3 Likely project dune ridge mitigation / offset requirements

Shore skink will need to be captured from all areas proposed for excavation and relocated to suitable adjacent habitat. It is proposed that existing lizard habitat adjacent to the site is enhanced by removal of weeds and animal pests and new habitat created by deposition of appropriately sized gravel to create new gravel mounds. Captured lizards would be released into this enhanced and new habitat.

2.3 Stream and stream margins

The Te Puni Stream flowing through the Te Rimu property is unfenced and has been adversely altered by cattle and horses. Despite this the native fish population in the stream is diverse and abundant.

The impact of the Project on the stream is likely to be low with a bridge and roadway the only significant works proposed. Effects on aquatic life are likely to be low.

Long-tailed bats have been reported in the native forest nearby the Project site but no bats were detected along the stream or wetland margins during several weeks of acoustic bat monitor recordings.

2.4 Coastal habitat

Coastal bird species are using the gravel areas at the Karakatuwhero River and Te Puni Stream outlets to the sea for roosting and nesting. However, these areas are unlikely to be affected by the Project. The coastal area to be created as the entrance to the mooring basin appears not to be used by coastal birdlife.

2.5 Gravel maggots

Earlier consultancy reports suggested that the gravel beach could be habitat occupied by the Threatened – Nationally Critical gravel maggot, a small air-breathing sea slug. Physical site surveys and eDNA testing have failed to detect the presence of these animals so it is assumed they are not present.

3 Interpretative report

This factual summary report has been prepared to assist with engagement that Te Rimu Trust is currently undertaking with the Community. A full interpretative report is currently being prepared and will be available in mid to late January 2023.