

Memorandum

To: Aimee Page – Projects Engineer, Far North Holding Limited
From: Dr Pete Wilson – Principal Coastal Scientist, 4Sight Consulting Limited
Date: 6 April 2021
Subject: Rangitane Loop Road Boat Ramp – Ecology Overview

Introduction

4Sight Consulting Limited (4Sight) has been engaged by Far North Holdings Limited (FNHL) to provide an ecological assessment of a proposal at Rangitane Loop Road, Kerikeri. The proposal includes a reclamation within the coastal marine area (CMA), enabling the installation of a new public boat ramp and car parking facility.

A number of activities are proposed within the reclamation area relating to marine ecology, which require consent. Specifically:

- Limited mangrove removal;
- Reclamation;
- Stormwater management; and
- New structures.

Fieldwork was conducted on 8 March 2021. The fieldwork included a vegetation survey landward of the area the will potentially be impacted by the reclamation and a biological survey of the shoreline and intertidal areas in the reclamation area during low tide. Sediments were collected from the proposed reclamation area for chemical and biological characterisation.

4Sight are waiting on results from the laboratory for chemical and biological characterisation, which are anticipated to be received on 20 April 2021.

This memo presents a high-level, interim overview of our findings based on the information available so far. Our final conclusions will be presented in a report once all results are available.

Description of the Environment

- The site is located at the end of Rangitane Loop Road in Kerikeri and faces south-east into the Kerikeri Inlet. The existing site has a tidally limited, single-lane boat ramp that is accessed directly from the road and existing timber jetty.
- There is a relatively steep drop from the road berm to the foreshore, which is approximately 2–3 m away.
- The grassed road berm has 6–7 m high Pohutukawa trees (*Metrosideros excelsa*) spaced about 8 m apart.
- Plants on the lower banks and upper foreshore included some scattered natives including oioi (*Apodasmia similis*), coastal five-finger (*Pseudopanax lessonii*) and flax (*Phormium tenax*), and exotics including rank grasses but also pest plants such as agapanthus (*Agapanthus praecox*) and giant reed (*Arundo donax*).
- Mangroves, approximately 3 m high, are present on the lower shore and within the rock retaining wall. Their pneumatophores extend onto the beach.
- The intertidal habitat at the site was predominantly a grainy, muddy clay beach with abundant rocks and Pacific oysters (*Crassostrea gigas*). Other common species present include the mudcrab (*Austrohelice crassa*) and black nerita snail (*Nerita melanotragus*). A small rocky shoal is visible at low tide near the northern end of the site
- No seagrass was present at the site.

- The small area of exposed sandflat at low tide offers soft shore habitats to common birdlife within or likely to feed within the vicinity. These birds include the New Zealand kingfisher (*Todiramphus sanctus vagans*), white faced heron (*Egretta novaehollandiae*), southern black-backed gull (*Larus dominicanus dominicanus*) and little shags (*Phalacrocorax melanleucos brevirostris*) which are all native, non-threatened species.
- During the site survey, two variable oystercatcher (*Haematopus unicolor*) (at risk – recovering) were feeding within the proposed site area. One pied shag (*Phalacrocorax varius varius*) (at risk – recovering) was swimming within the area. Five red-billed gulls (*Larus novaehollandiae scopulinus*), a white-fronted tern (*Sterna striata striata*) (both at risk – declining), and two southern black-backed gulls (*Larus dominicanus*) were seen flying in the area.
- Fish have not been specifically surveyed. However, fish are likely to use the local estuary for feeding, shelter, spawning, and as a migratory route. Fish species likely to use the area at one time or another include yellow-eyed mullet, grey mullet, flounders, piper, anchovy like fishes, kahawai, koheru, kingfish, snapper, trevally, parore, rays, and small wrasses. These are common coastal species.

Potential Ecological Effects

Removal of vegetation:

- Vegetation along the grass berm may need to be removed, including some scattered natives including oioi, coastal five-finger, and flax along with exotics including rank grasses but also pest plants such as agapanthus and giant reed. The removal of this vegetation will not adversely affect botanical biodiversity or significant vegetation in the area. The removal of pest species and the proposed planting of the facilities could provide some small enhancement overall.

Reclamation and construction effects on marine invertebrates and other biota:

- The proposed reclamation will cover about 6,600 m² of mostly intertidal and shallow subtidal habitat, but will also include some mangroves, intertidal soft shore and seawall. Biota and habitat within this area will be lost.
- Biota at the site, that were able to be identified during the survey, are common and likely to be represented elsewhere in estuarine intertidal areas. Results from taxonomic identification of benthic macroinvertebrates are necessary to make a final conclusion regarding the overall value/uniqueness of the ecological community at the site.
- The loss of a few mangroves at the site is not significant relative to the extensive mangrove habitat present in the Kerikeri estuary.
- There will be some direct effects on intertidal and shallow subtidal benthic habitats when installing piles and the boat ramp. Such effects occur over a relatively small area and will be limited to the construction period. As such, the effect on the benthic habitat will be low. Machinery needing to cross the intertidal area are likely to have a low level of effect overall as the results to date indicate that the habitat and biota are not ecologically notable.
- No significant intertidal bird feeding areas will be affected. The impact on shorebirds will be negligible.
- The movement of estuarine fish and migratory native freshwater fish will not be impeded.

Water quality effects:

- The reclamation and construction will likely resuspend sediments and cause localised increases in turbidity. This may cause a visually conspicuous plume but it should be relatively localised given the small scale and probably intermittent nature of the operation. Tidal flows and flushing characteristics of the area should quickly dissipate intermittent small sediment plumes and prevent sediment concentration within the area over successive tidal cycles.