ECOLOGICAL ASSESSMENT OF A PROPOSED TRUCK ROUTE ADJACENT TO THE WHAKATANE ESTUARY

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Prepared for:

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1. INTRODUCTION

A truck route is proposed to assist with remedial works in the Kopeopeo Canal which runs parallel to, and then drains into the Whakatane Estuary. The proposed truck route is shown in Figure 1. The alignment follows a raised formed track from Keepa Road towards the river mouth before turning north-west along an embankment to the canal and then follows the edge of the canal back towards the starting point. The section along the canal is a temporary road for the duration of the works (approximately four weeks).

This report provides a description of the vegetation, habitats, fauna, and ecological values of the proposed route. A list of vascular plants noted on the field visit is attached (Appendix 1).

2. ECOLOGICAL CONTEXT

The Whakatane Estuary (approximately 150 hectares) is one of the few estuarine wetlands remaining in the Te Teko Ecological District (Beadel 1994; Beadel *et al.*1999). The estuary has been heavily modified by infilling and drainage control works and relatively little saltmarsh remains.

3. VEGETATION AND HABITATS

The proposed alignment of the truck route is mostly through modified exotic vegetation but does traverse an area of indigenous saltmarsh vegetation alongside the Kopeopeo Canal. Three vegetation types were identified and have been mapped in Figure 1 and described below:

1. Sea rush tussockland

   Sea rush (*Juncus kraussii* subsp *australiensis*) forms an almost monotypic sward on intertidal flat beside the Kopeopeo Canal. Occasional species present include the indigenous herbs remuremu (*Selliera radicans*) and sea primrose (*Samolus repens*) as well as weeds such as *Atriplex prostrata* and bachelor's button (*Cotula coronopifolia*). Arrow grass (*Triglochin striata)* is present in small patches in very wet areas. Bachelor's button forms sparse cover over mudflat beside the canal and in open areas between sea rush tussocks. There are several water channels from the canal that dissect this vegetation type and an area of open water in the eastern end adjacent to the embankment.

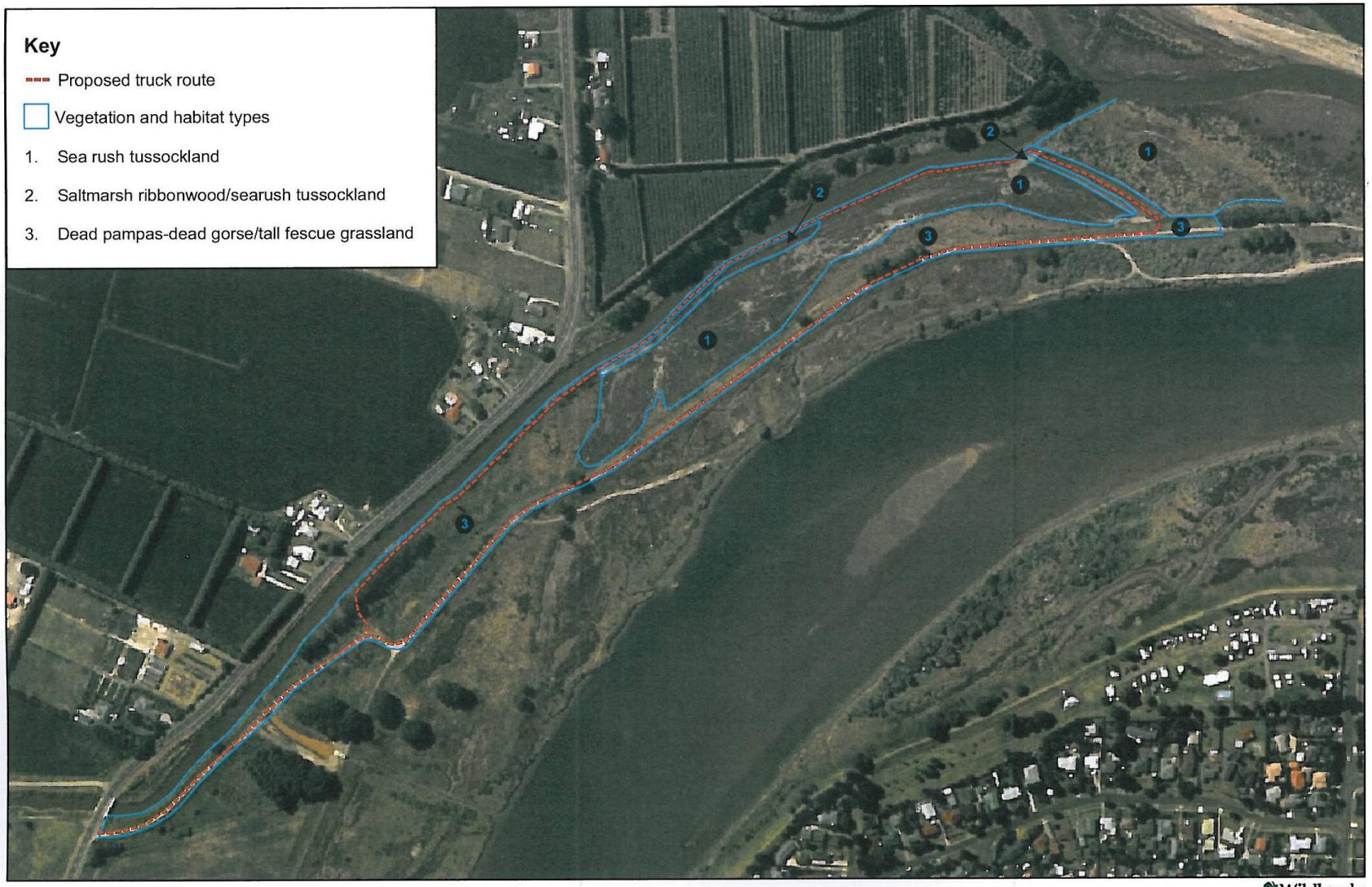

Figure 1: Proposed Truck Route, Whakatane

2. Saltmarsh ribbonwood/searush tussockland

The shrub salt marsh ribbonwood (*Plagianthus divaricatus*) occurs with searush in drier areas, particularly along the banks of the canal and the western edge of the embankment at the eastern end of the proposed truck route. Other occasional species include *Haloragis erecta*, and the adventive grasses cocksfoot (*Dactylis glomerata*) and tall fescue (*Schedonorus phoenix*).

3. Dead pampas–dead gorse/tall fescue grassland

The adventive grasses tall fescue, cocksfoot, and kikuyu (*Pennisetum clandestinum*) form a dense cover on the embankments with occasional weeds such as inkweed (*Phytolacca octandra*), ragwort (*Senecio jacobaea*), plantain (*Plantago uniflora*), dock, wild teasel (*Dipsacus sylvestris*), and pampas (*Cortaderia selloana*). Dead gorse and pampas (sprayed) overtop this cover. There is a row of poplars (*Populus* sp.) at the western end of the proposed temporary truck route.

4. FLORA

Nine indigenous vascular plant species were recorded along the proposed truck route (listed in Appendix 1). They are all relatively common species, and none are threatened species (as per de Lange *et al*. 2004). Seventeen adventive vascular plant species were also recorded.

5. AVIFAUNA

Eight threatened species have been recorded in the Whakatane Estuary, as summarised in Table 1.

Table 1: Threatened bird species recorded in the Whakatane Estuary. Source: OSNZ 2006; Rasch 1989.

Common Name	Scientific Name	Threat Level	Ranking (Hitchmough 2002)
White heron	*Ardea novaehollandiae*	Acutely threatened	Nationally critical
Caspian tern	*Sterna caspia*	Acutely threatened	Nationally vulnerable
Reef heron	*Egretta sacra* ssp. *sacra*	Acutely threatened	Nationally vulnerable
Banded dotterel	*Charadrius bicinctus*	Chronically threatened	Gradual decline
Banded rail	*Gallirallus philippensis*	At risk	Sparse
North Island fernbird	*Bowdleria punctata* ssp. *vealeae*	At risk	Sparse
Spotless crake	*Porzana tabuensis* ssp. *plumbea*	At risk	Sparse
NZ dabchick	*Poliocephalus rufopectus*	At risk	Sparse

The species most likely to use the saltmarsh habitat on the proposed truck route is banded rail, with lower likelihood of use by spotless crake.

6. ECOLOGICAL EVALUATION

The proposed truck route mostly passes through modified vegetation habitats dominated by adventive species, but there is one area beside the canal that has indigenous salt marsh vegetation. The Whakatane Estuary has been noted as one of the few estuarine wetlands in the Te Teko Ecological District (Beadel 1994; Beadel *et al.* 1999). The area that will be affected by the proposed temporary truck route does not contain any threatened or notable plant species. The presence of several threatened bird species has been noted in the Whakatane Estuary and it is likely that some of these species may utilise this area, particularly banded rail.

It is therefore considered that detrimental effects on the small area of saltmarsh vegetation that is part of the proposed temporary truck route should be minimised where possible.

7. OPPORTUNITIES TO AVOID, MAXIMISE OR MITIGATE FOR POTENTIAL NEGATIVE EFFECTS

The following approach is suggested to reduce potential negative effects:

- The removal of saltmarsh vegetation should be minimised. This should be done by careful placement of the road alignment and by keeping the road footprint as small as possible.
- It would be preferable for works in the saltmarsh area to be undertaken outside of the breeding season of threatened bird species. The main breeding season for banded rail is September-December (Heather and Robertson 1996).

- The site should be reinstated as soon as practicable after works are completed, to original ground levels and include replanting if necessary.

- Any planting should be of locally-sourced indigenous species.

ACKNOWLEDGMENTS

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LIST OF VASCULAR PLANTS

INDIGENOUS SPECIES

Dicot. trees and shrubs

Plagianthus divaricatus	saltmarsh ribbonwood

Sedges

Cyperus ustulatus	
Isolepis prolifer	

Rushes

Juncus krausii subsp australiensis	sea rush
Leptocarpus similis	oioi

Herbs

Haloragis erecta	
Samolus repens	sea primrose
Selliera radicans	remuremu
Triglochin striata	arrow grass

ADVENTIVE SPECIES

Dicot. trees and shrubs

Populus sp.	poplar
Solanum mauritianum	woolly nightshade
Ulex europaeus	gorse

Grasses

Cortaderia selloana	pampas
Dactylis glomerata	cocksfoot
Holcus lanatus	Yorkshire fog
Pennisetum clandestinum	kikuyu
Schedonorus phoenix	tall fescue

Dicot. herbs

Atriplex prostrata	orache
Calystegia sylvatica	great bindweed
Cotula coronopifolia	bachelor's button
Dipsacus sylvestris	wild teasel
Lotus pedunculatus	lotus
Phytolacca octandra	inkweed
Plantago uniflora	plantain
Rumex obtusifolius	dock
Senecio jacobaea	ragwort
Verbena bonariensis	purple top

SITE PHOTOGRAPHS

Plate 1: Sea rush tussockland on canal edge.

Plate 2: Saltmarsh ribbonwood/sea rush tussockland.

Plate 3: Dead pampas-dead gorse/tall fescue grassland with fringe of saltmarsh ribbonwood/searush tussockland on eastern embankment.

Plate 4: Mudflat with bachelor's button in sea rush tussockland.