

# Native Habitats Tasman Ecological Assessment Report

<b>Site:</b>	MU 320 – Matahua Peninsula saltmarsh
<b>Landowners/Occupiers:</b>	Common Marine & Coastal Area
<b>Ecological District:</b>	Moutere
<b>Grid Ref:</b>	E25166472 N5994280
<b>Surveyed By:</b>	Michael North
<b>Date:</b>	11 August 2010
<b>Survey Time:</b>	1 ½ hrs



# THE SETTING – MOUTERE ECOLOGICAL DISTRICT (ED)

## Location and Physical Description

The Moutere Ecological District occupies most of the Moutere Depression. It is rolling hill country founded on deeply weathered fluvio-glacial outwash gravels (Moutere Gravels), with a little limestone and granite in the west. The hills are drained by numerous valleys with flat alluvial floors. There is a small amount of coast containing an estuarine shore and a series of bluffs. The climate is sunny and sheltered, with very warm summers and mild winters. Most of the land is in private ownership and is used for pastoral farming, forestry, horticulture and small-scale settlement. Tasman District Council has considerable landholdings in this District.



## Ecosystem Types Originally Present

Formerly, the Ecological District, apart from the waterways, would have been almost entirely covered in forest. The alluvial valley floors supported towering podocarp forests of totara, matai, rimu, miro and kahikatea. On the hills, black beech was dominant at the seaward end of the District, with hard beech prominent further inland, giving way further inland still to red beech with silver beech. In sheltered coastal gullies were pockets of lush broadleaved forest containing tawa, titoki, pukatea, nikau and tree ferns. Along the coastal bluffs was forest of ngaio, titoki, nikau and other broadleaved trees, with totara and black beech. Fringing the estuary would have been a vegetation sequence like that in the neighbouring Motueka Ecological District. Freshwater

wetlands occurred in the coastal valleys and would have included fertile lowland swamps with kahikatea, harakeke, cabbage tree and tussock sedge (*Carex secta*). Rivers and streams, including riparian ecosystems (trees, shrubs, flaxes, toetoe, etc) and some braided river beds, would have made up an appreciable although not large portion of the District. The table below gives estimates of the extent of these original ecosystems.

## Existing Ecosystems

Most of the natural terrestrial ecosystems have been lost. What remains is largely a scattering of fragments of beech forest, with some larger areas in the south. There are tiny remnants of coastal bluff forest, lowland broadleaved forest and podocarp forest only, and a few wee freshwater wetlands. The estuary margin is still surprisingly intact, although its fringing vegetation sequence has largely gone. The table below gives estimates of the proportions of the original ecosystems that remain.

## Degree of Protection

There is little protected land within the Ecological District. However, there are significant remnants protected in reserves and covenants. These include a coastal bluff forest remnant at Ruby Bay, tawa forest at Eves Valley, podocarp forest remnants near Upper Moutere, several key remnants of beech forest and larger tracts of beech forest in the south. A few tiny wetlands are also protected. The table below gives estimates of how much of the original and remaining ecosystems have formal protection.

<b>Indigenous Ecosystems – Moutere Ecological District</b>				
Ecosystem type	Original extent (% of ED)	Proportion of original extent remaining (%)	Proportion of original extent / remaining area protected (%)	
			Original	Remaining
Coastal sand dune and flat	—	—	—	—
Estuarine wetland	<1	30	?	?
Fertile lowland swamp and pond	1	<5	<2	<20
Infertile peat bog	—	—	—	—
Upland tarn	—	—	—	—
Lake	—	—	—	—
River, stream and riparian	1	40	?	?
Lowland podocarp forest	20	1	<1	50
Lowland broadleaved forest	1	<5	<5	100
Lowland mixed forest	5	<5	<5	50
Lowland beech forest	65	5	2	40
Upland beech forest	5	50	40	80
Subalpine forest	—	—	—	—
Lowland shrubland	<1	<5	<1	<10
Upland/subalpine shrubland	—	—	—	—
Frost flat communities	—	—	—	—
Tussock grassland	—	—	—	—
Alpine herbfield and fellfield	—	—	—	—

# SITE DESCRIPTION

## Location, Geology, Hydrology

This 2.8 ha site lies at and around sea level around the tip of the Matahura Peninsula in the NW sector of the Waimea Inlet, occupying estuarine deposits of muds, sands and gravels.

The site has been delineated to include all rush and sedge beds rising up to coastal margin shrubland, but to generally exclude glasswort saltmarsh herbfield as outside the scope of the survey.

## Vegetation

### COMMUNITIES

**1 Sea rush(land)**

**2 Oioi sedgeland**

**3 Saltmarsh ribbonwood scrub**

The site is dominated by extensive beds of sea rush, with smaller areas of oioi. Landward margins are lined with a narrow band of saltmarsh ribbonwood, wiwi and oioi, with some small stands of the former. Glasswort occurs in places. Harakeke flax and toetoe are very localised, occurring near to the landward margins where ground seepage is present.

## Botanical Values

### COMMUNITIES

An estimated 30% of the original extent of estuarine saltmarsh remains in the Moutere Ecological District (ED), accounting for c0.3% of the ED as they only ever originally covered <1% of the ED. They therefore constitute a very scarce habitat in the context of the ED as a whole, and all larger stands such as this one are of considerable value.

### SPECIES

Seven native plant species were noted. Toetoe is rare in the Moutere ED and is of extremely rare occurrence on the margins of saltmarsh where there is freshwater influence. Harakeke flax is also very restricted in such an estuarine context. It is not clear whether toetoe and harakeke have been planted or not, but they appear natural, due to the scattering of these species right along the eastern side of the peninsula.

## Fauna

No native birds were noted. The site was known to support banded rail in the early 1980s with breeding proven, with their presence confirmed in September 2010 by Chris Franklin.

## Weed and Animal Pests

Gorse has a minor presence, scattered occasionally along the landward margins.

## Other Threats

None noted.

## General Condition

The site is in very good condition with no apparent modification other than for its landward margins.

## Landscape/Historic Values

The saltmarsh is a very attractive feature off the end of the Matahura Peninsula, and unusual in that larger saltmarshes are otherwise confined to embayments in the Moutere ED.

## ASSESSMENT OF ECOLOGICAL SIGNIFICANCE

The following criteria are assessed:

**Representativeness:** *How representative is the site of the original vegetation?*

**Rarity:** *Are there rare species or communities?*

**Diversity and pattern:** *Is there a notable range of species and habitats?*

**Distinctiveness/special features:** *Are there any features that make the site stand out locally, regionally or nationally for reasons not addressed by the above criteria?*

**Size/shape:** *How large and compact is the site?*

**Ecological context:** *How well connected is the site to other natural areas, to what extent does the site buffer and is buffered by adjoining areas, and what hydrological services to the catchment and critical resources to mobile species does it provide?*

**Sustainability:** *How well is the site able to sustain itself without intervention?*

## Site Significance

The technical assessment of significance is tabled in the Appendix.

This site is significant for the following reasons:

The site has high representativeness values, being of largely unmodified habitat and one of the better examples of its kind in the Moutere Ecological District, and high rarity values, for which reason it qualifies for significance.

## Management Issues and Suggestions

This site is in very good condition, with no apparent obvious modification to its vegetation, other than for its landward margins. As the saltmarsh is not stopbanked, there is considerable scope on the adjoining private land for recreating some of the original vegetation sequences, and this has been undertaken to some degree. Weed issues are very minor, with gorse needing some controlling. A pest trapping programme would be useful to assist banded rail survival.

## PHOTO GALLERY



*Sea rush dominates much of this site, up to 80m deep*



*Oioi forms one large stand (shown above), scattered pockets and a part of the mosaic of the shoreline margin*



*One remaining black beech tree stands on the margins of the site, part of the original forest of the adjoining peninsula*



*Toetoe and harakeke flax are very localised around the upper margins of the site, indicative of ground water seepage*



*Saltmarsh ribbonwood forms narrow bands along parts of the landward margin of the site*



*Banded rail were recorded as breeding by Graeme Elliott in 1982, with their presence reconfirmed in 2010*



# APPENDIX

## Technical Assessment of Site Significance

Each site is ranked according to the highest ranking vegetation community or habitat that occurs within it. However, a site will be divided into more than one area for assessment purposes if they vary markedly in character, size or condition. Some examples are:

- (a) a core area of vegetation (say, a podocarp gully remnant) is surrounded by/adjoins a much larger area of markedly different vegetation (say, kanuka scrub);
- (b) a core area of vegetation has *markedly* different ecological values to the surrounding/adjacent vegetation;
- (c) where artificially abrupt ecological boundaries occur between an area of primary vegetation and a surrounding/adjacent area of secondary vegetation.

*Where such division of a site into two or more separately assessed areas occurs, such adjoining areas will also be considered in their buffering/connectivity roles to one another.*

***This site was assessed as one unit as the above considerations did not indicate the need to assess communities separately.***

Significance Evaluation		
	Score	Example/Explanation
<b>Primary Criteria</b>		
<b>Representativeness</b>		
The site strongly or moderately strongly resembles its original condition	H	No stop-banks on margins, few weed issues
The site contains one of the better examples, but not the best, of the characteristic ecosystem types in the ecological district	MH	
<b>Rarity and Distinctiveness</b>		
The site includes an ecosystem that is originally rare nationally as listed under DoC/MfE National Priority 3, and retains functional indigenous components	H	Estuaries
The site supports a species rare in the Ecological District (ED)	M	Toetoe
The site supports an indigenous species that is 'at risk - naturally uncommon/recovering/relic' nationally	M	Banded rail
<b>Diversity and Pattern</b>		
Indigenous plant communities species or habitats are present with typical diversity for such sites in the Ecological District	ML	
<b>Secondary Criteria</b>		
<b>Ecological Context (highest score)</b>		
<b>Connectivity</b>		

<b>Significance Evaluation</b>		
	<b>Score</b>	<b>Example/Explanation</b>
The site is separated from other areas of indigenous vegetation but provides an important part of a network of closely lying sites	M	
<b>Buffering to</b>		
The site is poorly buffered	L	
<b>Provision of critical resources to mobile fauna</b>		
The site provides seasonally important resources for indigenous mobile animal species and these species are present in the locality even though they may not have been observed at the site.	L	Eg Unusually important stands of podocarp, tawa or kowhai trees that provide seasonally important benefits for forest birds.
<b>Hydrological services to the catchment</b>		
The site provides hydrological services to the catchment.	L	
<b>Size and Shape</b>		
The site is of moderately large size for its plant community and Ecological District but is not compact	M	
<b>Other Criterion</b>		
<b>Sustainability</b> (average score)	<b>ML</b>	
<b>Physical and proximal characteristics</b>		
Size, shape, buffering and connectivity provide for a moderately low overall degree of ecological resilience.	ML	Size M Shape L Buffering L Connectivity M
<b>Inherent fragility/robustness</b>		
Indigenous communities are inherently fragile.	L	
<b>Threats</b> (low score = high threat; lowest score taken)		
Ecological impacts of grazing, surrounding land management, weeds and pests*	MH	Grazing H Surroundings H Weeds MH Pests H

\* observed pest impacts only


NB where scores are averaged, the score must reach or exceed a particular score for it to apply

<b>Summary of Scores</b>	<b>Criterion</b>	<b>Ecological District Ranking</b>
<b>Primary Criteria</b>	Representativeness	H
	Rarity	H
	Diversity and Pattern	ML
<b>Secondary Criteria</b>	Ecological Context	M
	Size/Shape	M
<b>Additional Criteria</b>	Sustainability	ML

H = High MH = Medium-High M = Medium ML = Medium-Low L = Low

## Summation of Scores to Determine Significance

If a site scores at least as highly as the combinations of primary and secondary scores set out below, it is deemed significant for the purposes of this assessment.

Primary Criteria		Secondary Criteria	
Any of the three primary criteria with a score at least as high as listed		Any of the two secondary criteria with a score at least as high as listed	
		Plus	
	H		—
	MH x 2		—
	MH + M		—
	MH	+	MH
	M x 2	+	H
	M x 2	+	MH x 2
	M	+	H + MH

H = High MH = Medium-High M = Medium

Is this site significant under the TDC assessment criteria? **YES**

# Species List

r = Rare o = Occasional m = Moderate Numbers ml = Moderate Numbers Locally c = Common  
 lc = Locally Common f = Frequent lf = Locally Frequent x = Present But Abundance Not Noted  
 P = Planted R = Reported

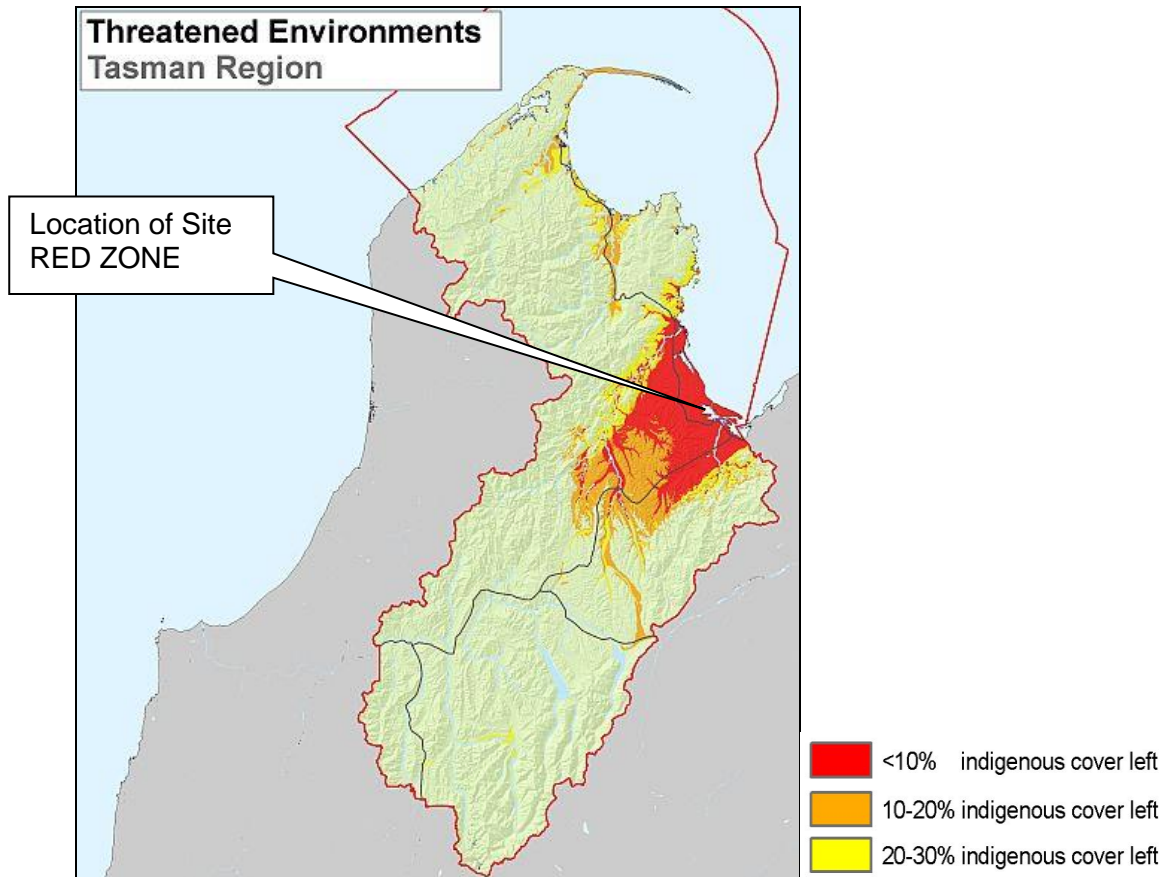
<b>Species Name</b>	<b>Common Name</b>	<b>Status</b>
<b>Trees Shrubs</b>		<b>x</b>
<i>Plagianthus divaricatus</i>	saltmarsh ribbonwood	o
<b>Lianes</b>		<b>x</b>
<b>Dicot Herbs</b>		<b>x</b>
<i>Sarcocornia quinquefolia</i>	glasswort	ml
<b>Monocot Herbs</b>		<b>x</b>
<i>Phormium tenax</i>	harakeke, swamp flax	r
<b>Grasses Sedges Rushes</b>		<b>x</b>
<i>Apodasmia similis</i>	oioi	lf
<i>Cortaderia richardii</i>	toetoe	r
<i>Ficinia nodosa</i>	knobby clubrush, wiwi	o
<i>Juncus kraussii</i>	sea rush	f
<b>Ferns</b>		<b>x</b>
<b>Weeds</b>		<b>x</b>
<i>Ulex europaeus</i>	gorse	o
<b>Birds</b>		<b>x</b>
banded rail	banded rail	R

## Land Environments of New Zealand (LENZ)

LENZ is a national classification system based on combinations of soil characteristics, climate and landform. These three factors combined are correlated to the distribution of native ecosystems and species.

When LENZ is coupled with vegetation cover information it is possible to identify those parts of the country (and those Land Environments) which have lost most of their indigenous cover. These tend to be fertile, flatter areas in coastal and lowland zones as shown in the map below for Tasman District.

Further information on the LENZ framework can be found at [www.landcareresearch.co.nz/databases/lenz](http://www.landcareresearch.co.nz/databases/lenz)



## National Priorities for Protecting Biodiversity on Private Land

Four national priorities for biodiversity protection were set in 2007 by the Ministry for the Environment and Department of Conservation.

<b>National Priorities</b>	<b>Does this Site Qualify?</b>
<b>1</b> Indigenous vegetation associated with land environments (ie LENZ) that have 20 percent or less remaining in indigenous cover. This includes those areas colored in red and orange on the map above.	Yes
<b>2</b> Indigenous vegetation associated with sand dunes and wetlands; ecosystem types that have become uncommon due to human activity	No
<b>3</b> Indigenous vegetation associated with 'naturally rare' terrestrial ecosystem types not already covered by priorities 1 and 2 (eg limestone scree, coastal rock stacks)	No
<b>4</b> Habitats of nationally 'threatened' or 'at risk, declining' indigenous species	No

Further information can be found at -

[www.biodiversity.govt.nz/pdfs/protecting-our-places-brochure.pdf](http://www.biodiversity.govt.nz/pdfs/protecting-our-places-brochure.pdf)

## Significance of LENZ and National Priorities

What does it mean if your site falls within the highly depleted LENZ environments, or falls within one or more of the four National Priorities?

These frameworks have been included in this report to put deeper ecological context to the site. They are simply another means of gauging ecological value. This information is useful in assessing the relative value of sites within Tasman District when prioritising funding assistance. They otherwise have no immediate consequence for the landowner unless the area of indigenous vegetation is intended to be cleared, in which case this information would be part of the bigger picture of value that the consenting authority would have to take into account if a consent was required.

- 1 Seagrass meadow
- 2 Brackish wetland
- 3 Saltmarsh ribbonwood scrub

- 4 Open muds with occasional seagrass

