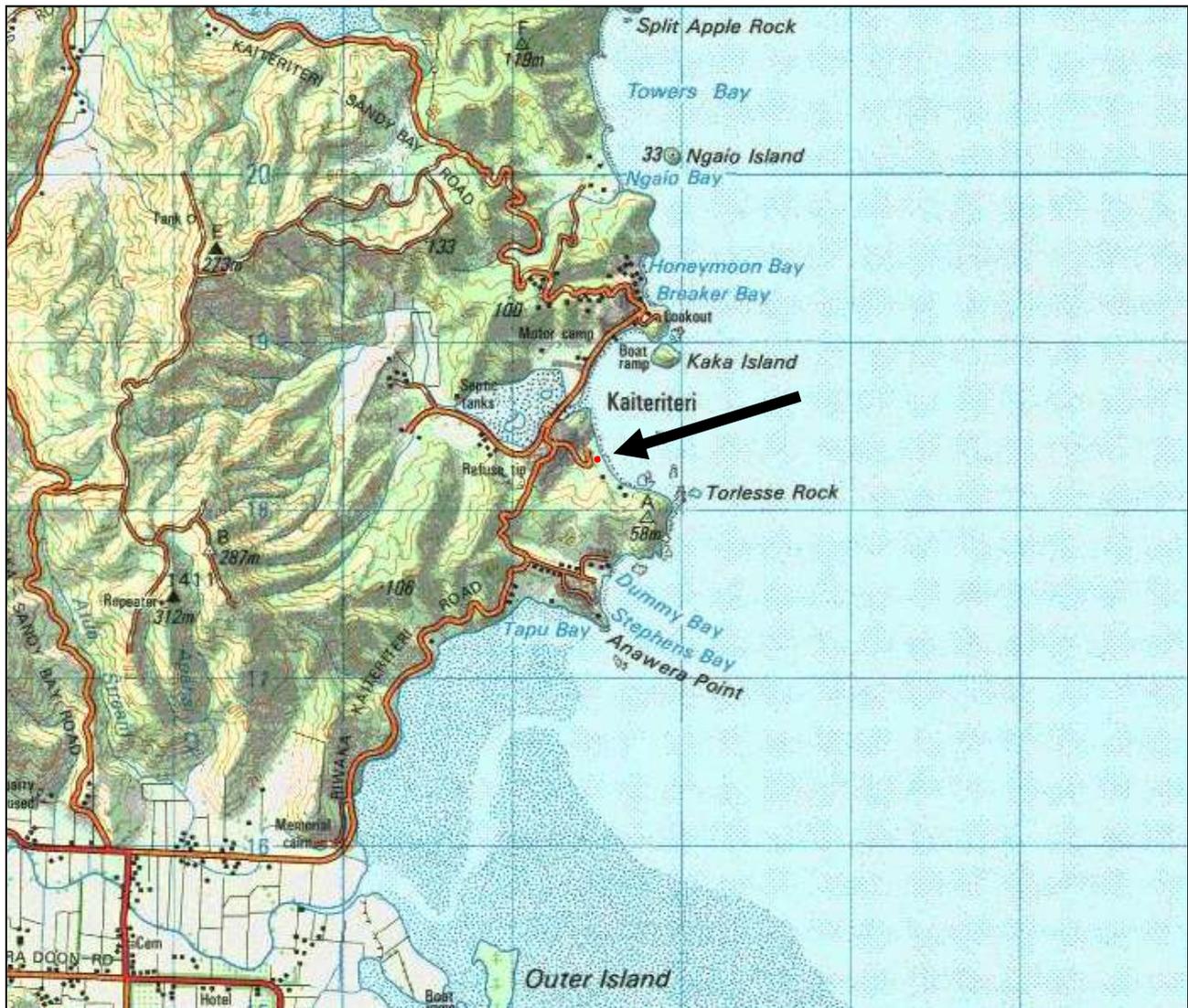


Native Habitats Tasman Ecological Assessment Report

Site:	T 10
Landowners/Occupiers:	Tasman District Council – Alex Ryder Memorial Reserve (Recreation Reserve)

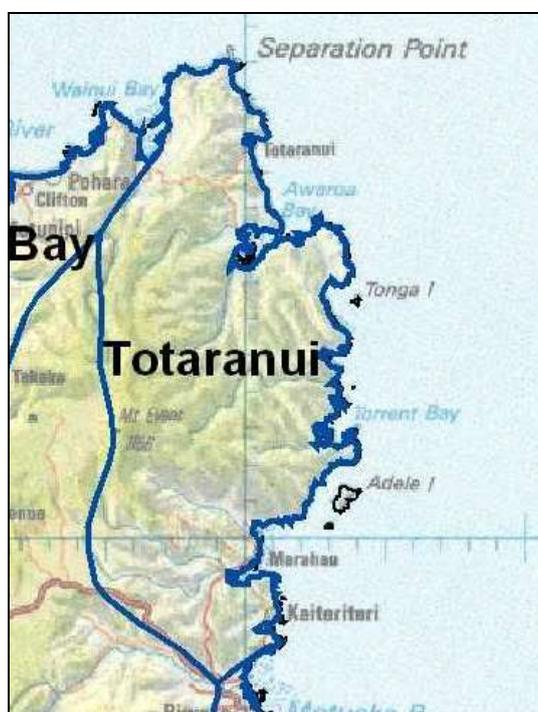
Ecological District:	Totaranui
Grid Ref:	E2511451 N6018263
Surveyed By:	Michael North
Date:	13 November 2013
Survey Time:	1 ¼ hrs



THE SETTING – TOTARANUI ECOLOGICAL DISTRICT (ED)

Location and Physical Description

The Tataranui ED represents distinctive coastal granite country. Seventy per cent of the 26.5 thousand ha is included in the Abel Tasman National Park. Almost the entire district is composed of granite, apart from small areas of alluvium. The land forms a dissected tableland sloping from the highest points along the western boundary (Mt Evans, 1156m) to the north and east, so that most of the district is lowland. Steep small rivers drain the country, usually opening to estuarine inlets. The indented coastline has many headlands rock stacks and some small islands. The rainfall varies from about 4000mm at the highest points, to 1500 around much of the coast. The vegetation is mainly beech forest (black, hard, red and silver) with broadleaved species in the gullies and swampland in the valley floor. Much of the coastal vegetation has been cleared for farmland but most has regenerated to secondary forest. However farmland is present around the northern inlets and in the SE hills.



Tataranui Ecological District

Ecosystem types originally present

Apart from swampland (flax) behind dunes at the mouths of some valleys the entire district was originally forest covered. Forest was predominantly beech forest, silver beech at the highest levels, black beech over much of the lower slopes, red beech in the gullies and hard beech on the drier ridges. Gully beech forest was mixed with broadleaved species, especially northern rata, and podocarps, especially rimu. In the lower valleys the range of broadleaved species increased, mixed with podocarps such as rimu and kahikatea. Kahikatea swamp forest was present in the lower valleys. Estuarine vegetation bordered the inlets.

Existing ecosystems

The core of the district remains in original beech forest, and there are remnants of mixed broadleaved/podocarp forest in the valleys, although much of the original valley floor forest has

been removed and only small remnants and patches of swamp remain. Much of the original forest around the coast has been burnt and secondary forest dominated by tree ferns and kanuka covers large areas, especially in the north and south.

Degree of protection

Seventy per cent of the district lies within the national park and there are a number of other protected areas. There are significant natural areas of original forest remaining unprotected, and large areas of secondary forest are included in the national park.

Indigenous Ecosystems – Tataranui Ecological District				
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	3	10	8	80
Estuarine wetland	5	90	72	80
Fertile lowland swamp and pond	0.4	55	50	90
Infertile peat bog	-	-	-	-
Upland tarn	-	-	-	-
Lake	-	-	-	-
River, stream and riparian ecosystems	1	80	80	100
Lowland podocarp forest	1	<1	<1	5
Lowland broadleaved forest	-	-	-	-
Lowland mixed forest	20	1	.5	50
Lowland beech forest	40	60	50	85
Upland beech forest	20	95	85	90
Subalpine forest	-	-	-	-
Lowland shrubland	-	-	-	-
Upland/subalpine shrubland	-	-	-	-
Frost flat communities	-	-	-	-
Tussock grassland	-	-	-	-
Alpine herbfield and fellfield	-	-	-	-

[From Simpson & Walls (2004): Tasman District Biodiversity Overview]

SITE DESCRIPTION

Location, Geology, Hydrology

This 0.6 ha wetland lies close to sea level, being a degraded dune-slack wetland at the rear of Kaiteriteri Beach. It's waters are fed from the adjoining slopes. Water flow was noted along the ditch that runs around much of the site. It is classified as a duneslack swamp.

Vegetation

COMMUNITIES

1 Oioi- [harakeke] +-(manuka) sedgeland and shrubland associations

The lowest-lying and least weedy section of wetland is in the NW sector. Pure stands of oioi grade into scattered depauperate harakeke, and towards its margins, young manuka that increasingly thickens toward manuka scrub. Spanish heath is locally common, pampas is scattered and gorse occasional. One small patch of dense sea rush was noted. Tall fescue is scattered thinly through. In the centre of the site, and in a smaller area to the southeast oioi and scattered tall harakeke form a distinctive association, merging into community 3. Manuka is rare to absent.

2 Manuka scrub

Tall manuka scrub forms one large stand with smaller outliers. It grows densely, and in the shadiest areas lacks other associates. Towards its margins are occasional weakly-growing harakeke, patches of *Centella uniflora*, and occasional blackberry, trefoil, and native lobelia.

3 Raupo- tall fescue- (Yorkshire fog)- (harakeke)- [*Carex virgata*] reedland and grassland

A large area of variable associations of these species occurs in the southern title of the site. It merges into the two areas of oioi- tall harakeke.

4 Harakeke- raupo- blackberry flaxland and reedland

The southern flank of the site supports a tract of harakeke and raupo with much blackberry threading through the native plants. Occasional karamu is present.

Botanical Values

COMMUNITIES

Freshwater wetlands have been reduced by over 90% nationally, but only by 55% within Tōtaranui Ecological District (Preece (2000) *An Overview of Freshwater Wetlands of Tasman District*, prepared for Tasman District Council). Depletion is lower than for most other ecological districts in the country, largely as a result of the Abel Tasman coastline never having been intensively developed for farmland.

The nationally catastrophic level of wetland loss has resulted in a joint declaration by the Department of Conservation and the Ministry for the Environment that states that retaining all remaining freshwater wetlands is a national priority. All freshwater wetlands within the ecological district (ED) are considered very important.

This example is small and in poor condition. However it is a very rare example in the ecological district of a dune slack (rear dune) wetland, with both estuarine and freshwater wetland species.

SPECIES

Ten native plant species were noted. None are of any particular rarity in the ED.

Fauna

Four pukeko were noted. It is possible that crane species may occur in passing, but the wetland is not really wet enough to suit them.

Weed and Animal Pests

The most troubling weed is pampas (*Cortaderia jubata?*) that is steadily colonising the wetland. Blackberry is well established in the raupo beds along the SE margins. Spanish heath is locally common. Gorse is occasional, and Himalayan honeysuckle and broom are rare. Tall fescue is abundant along the NE margins where it grades into grassland.

Other Threats

A ditch runs around 2/3 of the wetland margins, that has the effect of draining the wetland as the waterlevel (at the time of survey) is some 30-40cm below ground level. Very recently (and seemingly in the past) all materials dredged from the ditch during its maintenance has been piled up on the wetland margins adjoining the ditch. This has created elevated ground susceptible to weed invasion by such species as pampas, gorse and Spanish heath.

General Condition & Other Comments

This wetland is heavily modified by past management, particularly in the southeastern sector, and infrastructure development around it has compromised its values with hard and artificial margins. With a lowered water table caused by ditching, the swamp is very compromised as a functional wetland and is open to weed invasion. It sits on two titles and clearly has had differing management regimes in the two halves until recently reserved – judging from the patterns of vegetation.

Landscape/Historic Values

The nearest other freshwater wetlands lie 700m and 800m away to the west and south. The wetland is a very attractive feature of the locality, overlooked by all the surrounding houses on the hills.

ASSESSMENT OF ECOLOGICAL SIGNIFICANCE

The following criteria are assessed:

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

Rarity and Distinctiveness: *Are there rare species or communities? Are there any features that make the site stand out locally, regionally or nationally for reasons not otherwise addressed?*

Diversity and Pattern: *Is there a notable range of species and habitats? To what degree is there complexity in this ie patterns and gradients?*

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 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 is tabled in the Appendix.

This site is significant for the following reasons:

With high rarity values (due wetlands being heavily depleted nationally), there are sufficient scores for the site to be considered 'significant'.

Management Issues and Suggestions

The wetland is part of the Alex Ryder Memorial Reserve and is subject to a management plan (Harding 2001: *Motueka Ward Reserves Management Plan*, prepared for Tasman District Council). This states that this part of the reserve serves as a ponding area for stormwater and that it is policy to retain this function. It is not clear why this is important as water flows straight out to the beach via a meandering channel. However the ditching that runs around much of the wetland perimeter serves the opposite effect of draining water rapidly away from the wetland as much as taking incoming stormwater away from the settlement that surrounds much of the reserve.

The track that runs from the public road across the reserve to the beach drops into a depression (presumably formerly part of the dune slack), with the water level in the parallel ditch only c30cm below the track level during a fairly dry spell of weather. If the track level were raised, surely the ditch waterlevel could be raised by an equivalent amount without causing flooding issues through the reserve or surrounding land. This would serve to rewet the wetland, discouraging weeds from invading and returning it to a more healthy and functional state.



The NW half of the site is mostly manuka and oioi, with scattered harakeke



The SE half of the site is a patchwork of oioi, raupo, harakeke and manuka, with the weedy sections of the reserve excluded from the site



Manuka scrub is dense with few associates other than on the margins



Raupo beds along the SE margins, infested with blackberry



Four pukeko were present, here amongst harakeke and Baumea rubiginosa



A drainage ditch runs around $\frac{3}{4}$ of the perimeter of the wetland, lowering the water table and drying out the wetland; ditch dredgings have been piled alongside creating a haven for weeds

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 - that is more than just a change in canopy composition.

The above does not apply if such adjoining vegetation forms only a small part of the total site, or if such vegetation forms a critical buffer to the core area.

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
Primary Criteria		
Representativeness		
Primary vegetation or habitat that poorly or moderately-poorly resembles its original condition	M	Vegetation characterised by original canopy species, but which has been heavily affected by herbivores or direct human intervention
Rarity and Distinctiveness		
An ecosystem that is nationally uncommon and retains functional indigenous components	H	Ecosystem types (dunes and wetlands), as listed by MfE (2007) for protection as National Priority 2
Diversity and Pattern		
Presence of a lower diversity of indigenous species, communities or habitat types than is typical for the ecological district	L	
Secondary Criteria		
Ecological Context (highest score)		
Connectivity		
The site is reasonably well separated from other areas of indigenous vegetation	ML	Guideline: 500 m to 1 km between sites
Buffering to		
The site is poorly buffered	L	
Provision of critical resources to mobile fauna		

Significance Evaluation		
	Score	Example/Explanation
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	e.g. Unusually important stands of podocarp, tawa or kowhai trees that provide seasonally important benefits for forest birds.
Size and Shape		
A small area for this type of vegetation or habitat for the ecological district, and with a reasonably compact shape	ML	
Other Criterion		
Sustainability (average score)	L	
Physical and proximal characteristics		
Size, shape, buffering and connectivity provide for a moderately low overall degree of ecological resilience.	ML	Size L Shape H Buffering L Connectivity ML
Inherent fragility/robustness		
Indigenous communities are inherently fragile.	L	
Threats (low score = high threat; lowest score taken)		
Ecological impacts of grazing, surrounding land management, weeds and pests*	L	Grazing H Surroundings (ditch surrounds much of the site) L Weeds M Pests H

* observed pest impacts only

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

Summary of Scores	Criterion	Ecological District Ranking
Primary Criteria	Representativeness	M
	Rarity and Distinctiveness	H
	Diversity and Pattern	L
Secondary Criteria	Ecological Context	ML
	Size and Shape	ML
Additional Criteria	Sustainability	L

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
 v = Very. For example: vlc = very locally common, mvl = moderate numbers very locally

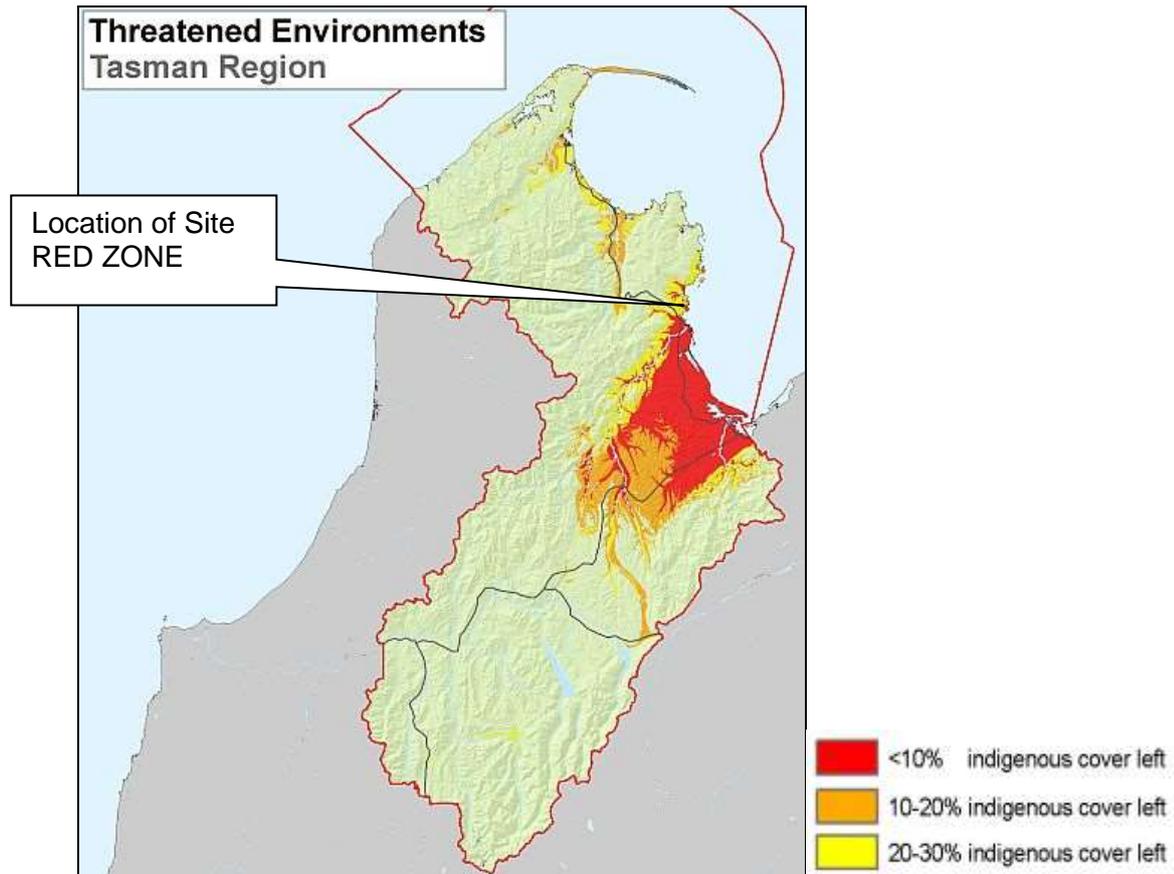
Species Name	Common Name	Status
Trees Shrubs		x
<i>Coprosma robusta</i>	karamu	o
<i>Leptospermum scoparium</i>	manuka	c
Lianes		x
Dicot Herbs		x
<i>Centella uniflora</i>		vlc
<i>Lobelia anceps</i>	shore lobelia	o
Monocot Herbs		x
<i>Phormium tenax</i>	harakeke, swamp flax	c
<i>Typha australis</i>	raupo	c
Grasses Sedges Rushes		x
<i>Apodasmia similis</i>	oioi	f
<i>Baumea rubiginosa</i>		r
<i>Carex geminata</i>	rautahi	r
<i>Isolepis prolifer</i>		r
<i>Juncus kraussii</i>	sea rush	vlc
Ferns		x
Weeds		x
<i>Cortaderia jubata</i>	purple pampas	ml
<i>Cytisus scoparius</i>	broom	r
<i>Leycesteria formosa</i>	Himalayan honeysuckle	r
<i>Lotus pedunculatus</i>	birdsfoot trefoil	o
<i>Myosotis laxa</i>	water forgetmenot	o
<i>Rubus fruticosus agg</i>	blackberry	lc
<i>Schedonorus phoenix</i>	tall fescue	lc
<i>Ulex europaeus</i>	gorse	o
Birds		x
waxeye	waxeye	x
pukeko	pukeko	x

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



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.

National Priorities	Does this Site Qualify?
1 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
2 Indigenous vegetation associated with sand dunes and wetlands; ecosystem types that have become uncommon due to human activity	No
3 Indigenous vegetation associated with 'naturally rare' terrestrial ecosystem types not already covered by priorities 1 and 2 (eg limestone scree, coastal rock stacks)	No
4 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

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.







Top of the South Maps
1 Oioi - [parakeke] ± (manuka) selfeland + shrubland associations
2 Manuka scrub
3 Raupo - tall fescue - (Yorkshire fog) - (karakeke) [*Carex virgata*] reedland + grassland
3 Hardkeke - raupo - blackberry - flaxland + reedland
4 Raupo - blackberry reedland
5 *Baobea rubiginosa* - raupo - blackberry selfeland




© 2022 Top of the South Maps