

# Native Habitats Tasman Ecological Assessment Report

<b>Site:</b>	MU 92
<b>Landowners/Occupiers:</b>	TDC – Ruby Bay Reserve

<b>Ecological District:</b>	Moutere
<b>Grid Ref:</b>	E2516905 N5997996
<b>Surveyed By:</b>	Michael North
<b>Date:</b>	28 July 2010
<b>Survey Time:</b>	4 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 4.7 ha site lies between near sea-level to 50m asl, and runs from the coast (albeit separated from it by the highway) inland for some 350m, with three deeply incised and in places vertically-sided gorges as well as the near-vertical coastal scarp face.

The geology is Pliocene Moutere Gravel composed of clay-bound gravels. This material is outwash from the Southern Alps.

## Vegetation

### GENERAL

The site is a complex mix of secondary forest, with mature titoki along the coastal toe-slopes, and highly variable broadleaved and kanuka associations elsewhere, with extensive and generally weedy bluffy faces. The site is mature secondary vegetation.

### COMMUNITIES

#### 1 Titoki +- mahoe forest on colluvial slopes and lower gullies

The coastal toe-slopes and the mouths of the gullies are dominated by titoki and in places by mahoe. Shading is deep and the understorey is dominated by kawakawa, with mahoe moderately common in the understorey and sub-canopy. Supplejack occurs locally. Dry coastal footslopes and narrow coastal flats are largely without ground cover, partly due to the loose substrate, with shining spleenwort, lowland shield fern and *Pteris tremula* rare. Damper gully mouths support a more diverse understorey, with toe-slopes holding rangiora locally, and where seepy, fern beds of *Blechnum chambersii* as well as *Lastreopsis glabella* are present. Mamaku are rare.

#### 2 Mixed broadleaved forest in incised and upper gullies

Lower to mid sections of gullies are narrowly and deeply incised with unstable and near vertical slopes subject to washouts and slips. Consequently perhaps, the forest/scrub vegetation varies considerably in height and openness, and can be quite weedy with gorse, and in places banana passionfruit and old man's beard. The vegetation is best developed in the central gully, featuring mahoe, wineberry and mamaku in particular. Kanuka is occasional with rare large kamahi and fuchsia. Kawakawa is generally abundant, with rangiora moderately common in places, and other broadleaves including mapou. Close to the stream bed, gully fern and hen and chickens fern are occasional.

The upper gully formations above the incised sections are on gentle slopes and are best developed in the southern-most gully, where the area is quite extensive. Mahoe, mapou, fivefinger and kohuhu are all prominent, with a variable kanuka presence. Large lemonwood trees are occasional. Mamaku and ponga are occasional to moderately common. A moderate broadleaved understorey is comprised largely of regenerating canopy species, with young mapou locally prominent as well as much shining coprosma. Hybrid fivefinger seedlings and saplings are present in places. Very rare saplings of rimu and lowland totara were noted. Ground cover includes inkberry and scattered ferns of species such as *Blechnum procerum*, *Blechnum vulcanicum*, and shining spleenwort. Climbing asparagus is scattered through.

Locally on very steep gully slopes, dense tall mixed broadleaved scrub of mapou, fivefinger, shining coprosma and rangiora occurs over dense beds of houndstongue fern with *Helichrysum lanceolatum* scattered.

#### 3 Kanuka-mixed broadleaved forest mosaics on upper slopes & gully side-slope crests

The upper gully of the northern-most gully is a broad basin of mature kanuka with associated canopy broadleaved trees, particularly mahoe. Understories are lush with mahoe, mapou and in places rangiora. Scrub coprosma occurs locally. Ground cover is sparse generally although the hookgrass *Uncinia scabra* is locally common. Shining spleenwort is occasional.

Elsewhere this community forms a narrow band along the top-most margins of the gullies where the ground levels sharply. Black beech occurs very locally, and one broadleaf tree was noted.

#### **4 Black beech forest on scarp crests**

A small stand of adult black beech occurs at one gully/coastal slope confluence, along the crest of the slopes and onto the gentle slopes above. Because of its small size, much lateral light influences its composition. The understorey is lush in places with 1-3m tall shining coprosma, fivefinger, mingimingi, and mapou. Inkberry is common.

In one area a stand of c20 sapling/pole beech is present.

#### **5 Gorse-mixed associations on coastal bluffs**

Most faces are bare eroding Moutere Gravels lacking vegetation cover. Some areas support scattered gorse. Vegetation at the crest includes coastal species locally, such as silver tussock and the herb rauhuia/*Linum monogynum*, as well as seedling radiata pine, stunted kanuka and gorse.

### **Botanical Values**

#### **COMMUNITIES**

Coastal broadleaved forest is hugely diminished in the Moutere ED. This is one of the more important remnants that have survived. It forms part of a coastal ribbon forest with adjoining QEII and DoC reserve lands that runs continuously (other than for the highway) for over 2km of the coast.

Lowland beech forest once covered 2/3 of the Moutere ED, but with extensive forest clearance this has now been reduced to 5% of the district, most of it occurring in Big Bush at the southern end. Forest up to 600m asl is defined as 'lowland' and whilst 5% remains, the figure is far less for forest below 300m which is probably of the order of 1-2% remaining. Loss of black beech-rich forest in the ED could exceed 99%. Although the stand of black beech here is small, it represents one of only three sites where beech is known to survive on the coastal margins of the Moutere ED.

Of particular interest at this site is the range of landforms and associated communities, ranging from moist gullies to arid coastal faces.

#### **SPECIES**

54 native plant species were noted. Species rare in the Moutere Ecological District are rangiora, rasp fern (1 plant), and the sedge *Carex lambertiana*. Quite a number however are scarce in the northern quarter of the ED including titoki, *Libertia ixioides/mooreae*, the hookgrass *Uncinia zotovii*, kawakawa, lemonwood, broadleaf, kamahi, and *Epilobium rotundifolium*.

### **Fauna**

Native forest birds noted were tui, korimako/bellbird, and kereru/pigeon. Riroriro/grey warbler, piwakawaka/fantail, kotare/kingfisher, and waxeye are also likely to occur at least seasonally.

### **Weed and Animal Pests**

Old man's beard and banana passionfruit are scattered through the site, with some moderate infestations locally, and occasional large vines. Other weeds of concern are radiata pine, climbing asparagus, Mexican daisy, NI lacebark, hybrid pseudopanax and wandering willy. Some areas are gorse rich but not to the exclusion of native species as it occupies such arid ground.

The suburban coastal setting precludes ungulates and probably possum as well.

### **Other Threats**

Garden waste dumping from neighbouring properties is not uncommon, with at least two unidentified species spreading from such areas.

### **General Condition**

The site is in good condition, with only localised weed issues and no apparent browse.

## Landscape/Historic Values

The site is part of the very significant native forest landscape along this stretch of coast.

## 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:

It scores highly for representativeness and moderately highly for rarity/distinctiveness and diversity/pattern, easily qualifying it for significance.

## Management Issues and Suggestions

The most pressing management issue is the advance of banana passionfruit and old man's beard through the site. The radiata pine, climbing asparagus, Mexican daisy, NI lacebark, hybrid pseudopanax and wandering willy should all be dealt in good time before they too become entrenched.

The dumping of garden waste from neighbouring properties is a serious concern and is something that the council may like to address (if they haven't already) with some local publicity.

The track system through the site is excellent and gives locals the opportunity to appreciate this unique reserve.



## PHOTO GALLERY



*A small part of the reserve is visible from the coastal highway but much is hidden within the gullies*



*Mature titoki forest occurs in the lower ends of the gullies and the lower coastal slopes*





*Titoki forest interior with lush kawakawa*



*A view vertically down the bluffs to the coastal strip of titoki-mahoe forest*





*Titoki forest also occupies a small strip of coastal flats; note the large rohutu in the background left*



*Upper gullies and hill-crest forests are dominated by kanuka and/or mixed broadleaved forest*





*Upper gullies tend to be shallow and gently-falling, with seepy areas along creek bottoms, as with this patch of the sedge *Carex dissita**



*Areas of very steep and dry upper side-slopes may have a low mixed broadleaved scrub canopy and understory with beds of houndstongue fern in places*





*Typical view up one of the gullies with mixed broadleaved forest in the bottoms, rising to kanuka-mixed broadleaved forest on the upper margins*



*The largest of black beech clusters at the reserve is large enough to be classed as beech forest (top and bottom)*





*The site adjoins further forest to the north under QEII or DoC reserve protection that is continuous all the way to Moutere Bluff – in total a stretch of over 2km of coastal forest; bluffs hold little native vegetation with gorse often the only sporadic cover*





*Silver tussock is localised along the bluff crests*



*Upper gullies characteristically drop precipitously into the lower gullies*





*Garden waste dumps are common – a serious concern as means of weed introduction*



*Hybrid pseudopanax and North Island lacebark seeding into the reserve from adjoining properties*





*Banana passionfruit is scattered through the site, which along with old man's beard present the most worrying threats to the site*



*Climbing asparagus occurs in places and should be dealt with before it becomes unmanageable*



# 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 includes mature secondary vegetation that strongly or moderately strongly resembles pre-human natural regeneration	MH	
The site contains one of the best examples of the characteristic ecosystem types in the ecological district	H	This is the only example of deeply incised forested coastal gullies in the Moutere ED
<b>Rarity and Distinctiveness</b>		
The site includes a primary community depleted to 5% or less of original pre-human cover in the Ecological District, unless in poor condition	MH	<i>Where the canopy cover is mature secondary score MH</i>
<b>Diversity and Pattern</b>		
An unusually large number of indigenous plant communities, plant species or habitat types are present at the site	MH	
<b>Secondary Criteria</b>		
<b>Ecological Context (highest score)</b>		
<b>Connectivity</b>		
The site adjoins indigenous vegetation and is partially connected to, and therefore partially buffers such vegetation	M	<1/3 of the site boundary is connected to indigenous vegetation on adjoining title(s) or adjoining but separately assessed parts of the same title
<b>Buffering to</b>		
The site is buffered by landform	ML	Forest remnant in an incised gully – as only part of the site is thus buffered it is scored ML
<b>Provision of critical resources to mobile fauna</b>		



<b>Significance Evaluation</b>		
	<b>Score</b>	<b>Example/Explanation</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	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.	H	Much of the catchment occurs within the site itself
<b>Size and Shape</b>		
The site is large for its vegetation community and Ecological District	H	Only McKee Domain may hold a larger area of coastal forest in the Moutere ED
<b>Other Criterion</b>		
<b>Sustainability</b> (average score)	<b>M</b>	
<b>Physical and proximal characteristics</b>		
Size, shape, buffering and connectivity provide for a moderately low overall degree of ecological resilience.	ML	Size ML Shape L Buffering ML Connectivity M
<b>Inherent fragility/robustness</b>		
Indigenous communities are inherently resilient.	H	
<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	MH
	Diversity and Pattern	MH
<b>Secondary Criteria</b>	Ecological Context	H
	Size/Shape	H
<b>Additional Criteria</b>	Sustainability	M

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? <b>YES</b>
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## 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>Alectryon excelsus</i>	titoki	c
<i>Aristotelia serrata</i>	makomako; wineberry	ml
<i>Brachyglottis repanda</i>	rangiora	m
<i>Carpodetus serratus</i>	putaputaweta; marbleleaf	o
<i>Coprosma lucida</i>	shining coprosma	c
<i>Coprosma repens</i>	taupata	r
<i>Coprosma rhamnoides</i>	scrub coprosma	o
<i>Coprosma robusta</i>	karamu	o
<i>Cordyline australis</i>	ti kouka; cabbage tree	r
<i>Dacrycarpus dacrydioides</i>	kahikatea	P
<i>Dacrydium cupressinum</i>	rimu	r
<i>Dodonaea viscosa</i>	akeaeke	?r/P
<i>Fuchsia excorticata</i>	kotukutuku; tree fuchsia	r
<i>Hebe stricta</i>	koromiko	r
<i>Hedycarya arborea</i>	porokaiwhiri; pigeonwood	r
<i>Helichrysum lanceolatum</i>	niniao	o
<i>Kunzea ericoides</i>	kanuka	m
<i>Leptecophylla juniperina</i>	prickly mingimingi	r
<i>Leucopogon fasciculatus</i>	mingimingi	o
<i>Lophomyrtus obcordata</i>	rohutu; NZ myrtle	r
<i>Macropiper excelsum</i>	kawakawa	f
<i>Melicytus ramiflorus</i>	mahoe, whiteywood	c
<i>Myoporum laetum</i>	ngaio	P
<i>Myrsine australis</i>	mapou, red matipo	c
<i>Nothofagus solandri</i>	tawhairauriki; black beech	ml
<i>Pittosporum eugenioides</i>	tarata; lemonwood	o
<i>Pittosporum tenuifolium</i>	kohuhu	ml
<i>Podocarpus totara</i>	lowland totara	r
<i>Pseudopanax arboreus</i>	whauwhaupaku; fivefinger	c
<i>Solanum avi/lac</i>	poroporo	r
<i>Weinmannia racemosa</i>	kamahi	r
<b>Lianes</b>		<b>x</b>
<i>Clematis paniculata</i>	native clematis	r
<i>Muehlenbeckia australis</i>	blackvine	o
<i>Ripogonum scandens</i>	supplejack	ml
<b>Dicot Herbs</b>		<b>x</b>
<i>Epilobium rotundifolium</i>	a willowherb	r???
<i>Linum monogynum</i>		r



<i>Senecio glomeratus</i>		o white
<b>Monocot Herbs</b>		<b>x</b>
<i>Dianella nigra</i>	inkberry	ml
<i>Libertia mooreae</i>		r???
<i>Phormium cookianum</i>	wharariki, coastal flax	P
<b>Grasses Sedges Rushes</b>		<b>x</b>
<i>Anemanthele lessoniana</i>	gossamer grass	P
<i>Baumea tenax</i>		r
<i>Carex dissita</i>		ml
<i>Carex lambertiana</i>		r
<i>Carex virgata</i>	pukio	r
<i>Gahnia setifolia</i>	a cutty grass	r
<i>Microlaena stipoides</i>		ml
<i>Poa cita</i>	silver tussock	r
<i>Uncinia scabra</i>	a hook grass	lc
<i>Uncinia zotovii</i>		??r
<b>Ferns</b>		<b>x</b>
<i>Asplenium appendiculatum</i>		r
<i>Asplenium bulbiferum</i>	hen & chickens fern	r
<i>Asplenium oblongifolium</i>	shining spleenwort	m
<i>Blechnum chambersii</i>		lc
<i>Blechnum novae-zelandiae</i>	kiokio	ml
<i>Blechnum procerum</i>	beech hard fern	o
<i>Blechnum vulcanicum</i>		r
<i>Cyathea dealbata</i>	ponga, silver fern	o
<i>Cyathea medullaris</i>	mamaku	ml
<i>Doodia media</i>		r
<i>Lastreopsis glabella</i>		ml
<i>Lycopodium volubile</i>	waewaekoukou	ml
<i>Microsorium pustulatum</i>	houndstongue fern	ml
<i>Pellaea rotundifolia</i>		r
<i>Pneumatopteris pennigera</i>	gully fern	o
<i>Polystichum neozelandicum</i>	lowland shield fern	r
<i>Pteridium esculentum</i>	bracken	o
<i>Pteris tremula</i>		o
<i>Pyrrhosia eleagnifolia</i>	leather leaf fern	r
<b>Weeds</b>		<b>x</b>
<i>Asparagus scandens</i>	climbing asparagus	o
<i>Clematis vitalba</i>	old man's beard	o
<i>Dactylis glomerata</i>	cocksfoot grass	o
<i>Erigeron karvinskianus</i>	Mexican daisy	r
<i>Frageria vesca</i>	wild strawberry	r
<i>Hoheria populnea</i>	common lacebark	o
<i>Hypericum androsaenum</i>	tutsan	r
<i>Leycesteria formosa</i>	Himalayan honeysuckle	r
<i>Passiflora mixta/mollisima</i>	banana passionfruit	m



<i>Pinus radiata</i>	radiata pine	r
<i>Pseudopanax x</i>	hybrid pseudopanax	m
<i>Rubus fruticosus agg</i>	blackberry	o
<i>Tradescantia fluminensis</i>	wandering jew	r
<i>Ulex europaeus</i>	gorse	o
<i>Zantedeschia aethiopica</i>	white arum lily	r
<b>Birds</b>		<b>x</b>
tui	tui	x
bellbird/korimako	bellbird/korimako	x
pigeon/kereru	pigeon/kereru	x
blackbird	blackbird	x

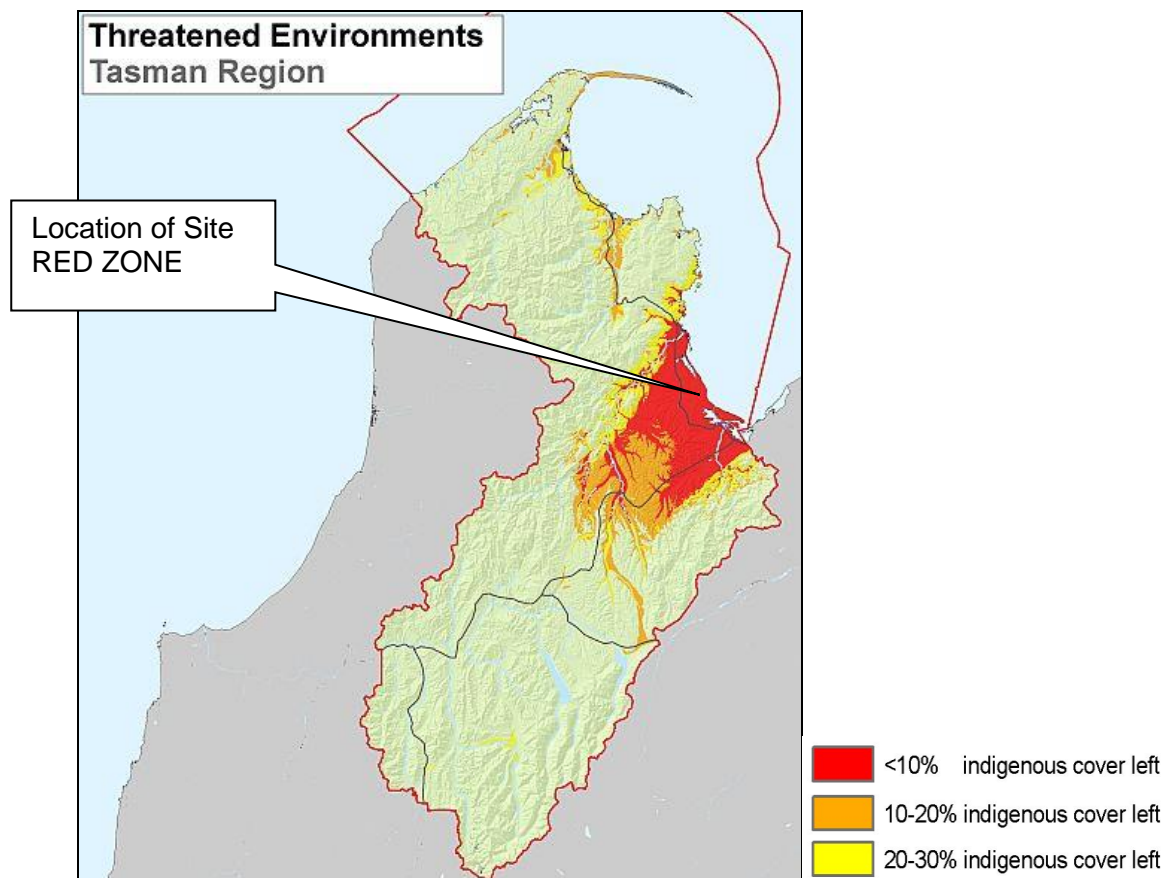


## Land Environments of New Zealand (LENZ)

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](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.





**MU 92**  
**TDC Ruby Bay Reserve**



- 1 Titoki ± mahoe forest on coastal toe-slopes & gully mouths
- 2 Mixed broadleaved forest in upper gullies & incised gully bottoms
- 3 Kanuka-(mixed broadleaved) forest on upper slopes & gully side-slope crests
- 4 Black beach forest on coastal scarp crests
- 5 Gorse shrub/rockland on coastal scarp bluffs

