

## Waikiekie

At a glance (last updated: February 2006)			
TRC reference:		Ecological district:	North Taranaki
Other reference:	NPDC SNA 6	LENZ environment:	F1.1b (55.7 ha) F7.2a (2.6 ha)
Land tenure:	Private	Protection status:	B
GPS:	2646504E – 6259269N	Area:	58.3 ha

### Location

Waikiekie is located on privately owned land, 21.5 km north of Urenui. It lies in the North Taranaki Ecological District.

### General description

Waikiekie consists of coastal forest (58.3 ha) on steeply dissected hill country on the northern margins of the Whitecliffs Conservation Area. Combined with the Conservation Area, the Department of Conservation has identified this remnant as representing the best remaining examples of primary coastal hardwood and podocarp hardwood forest on the west coast of the North Island.

### Ecological features

#### Vegetation

The most common canopy species are puriri (*Vitex lucens*), tawa (*Beilschmiedia tawa*), mahoe (*Melicytus ramiflorus*), and karaka (*Corynocarpus laevigatus*). Occasional mangleo (*Litsea calicaris*), kohekohe (*Dysoxylum spectabile*), hinau (*Elaeocarpus dentatus*), rewarewa (*Knightia excelsa*), mamaku (*Cyathea medullaris*) and manuka (*Leptospermum scoparium*) are also present.

There is a significant colony of king fern (*Marattia salicina*) in the adjacent Whitecliffs Conservation Area. This fern is identified as 'Chronically Threatened (Serious Decline)' nationally but is regionally distinctive as it is known to inhabit only a few scattered coastal and semi-coastal locations in north Taranaki. It may also be present in this area.

### Fauna

Notable birdlife present in Waikiekie include North Island brown kiwi (*Apteryx australis mantelli*), which is identified as 'Chronically Threatened (Serious Decline)' and New Zealand pigeon (*Hemiphaga novaseelandiae*), which is identified as 'Chronically Threatened (Gradual Decline)'.

### Ecological values

Ecological values	Rank	Comment
Rarity and distinctiveness	Medium	Contains the 'Chronically Threatened' North Island brown kiwi and New Zealand pigeon
Representativeness	Low to medium	Contains small area of indigenous vegetation on F7.2a – an 'At Risk' LENZ environment
Ecological context	High	Interconnected with the Whitecliffs Conservation Area. Together with that Conservation Area, Waikiekie represents the best remaining examples of primary coastal hardwood and podocarp hardwood forest on the west coast of the North Island
Sustainability	Positive	In good vegetative condition. Key ecological processes still influence the site. Under appropriate management, it can remain resilient to existing or potential threats

### Management threats and response

Potential and actual threats to the sustainability of Waikiekie's ecological values are as follows:

Threats to ecological values	Level of risk	Comment
Pest animals	Medium to high	Possums, hares, rabbits, and rats
Weeds	Low	
Habitat modification	Low to medium	Stock grazing

Site protection measures addressing potential threats and actual threats are as follows:

Site protection	Yes/No	Description
A	No	Public ownership or formal agreement
B	Yes	Site specific rules apply – New Plymouth District Council rules for Significant Natural Areas (refer Appendix 21 of the District Plan) General regional or district rules might also apply
C	No	Active protection



## Waikirikiri (Komene Lagoon)

### At a glance (last updated: February 2006)

<b>TRC reference:</b>	0915-0	<b>Ecological district:</b>	Egmont
<b>Other reference:</b>	STDC SNA 1	<b>LENZ environment:</b>	G1.1d
<b>Land tenure:</b>	Private	<b>Protection status:</b>	A, B, C
<b>GPS:</b>	2580885E – 6224974N	<b>Area:</b>	4.7 ha

### Location

The Waikirikiri Wetland (Komene Lagoon) is located partly on unformed legal road, partly on Maori Reserve and partly on privately owned land, 5 km west of Okato. The lagoon lies in the Egmont Ecological District.

### General description

Waikirikiri Wetland is an ephemeral wetland located south of the Hangatahua/Stony River mouth.

This type of coastal habitat is nationally rare. The wetland contains native wetland vegetation that provides habitat for a large variety of native birds.



### Ecological features

#### Vegetation

The Waikirikiri Wetland contains a number of native, semi-aquatic plants including pondweed (*Potamogeton cheesemani*), water milfoil (*Myriophyllum propinquum*) and sharp spike sedge (*Eleocharis acuta*), with flax (*Phormium tenax*) and taupata (*Coprosma repens*) on the margins. There has been supplementary planting of flax and taupata on the inland margin.

#### Fauna

The Waikirikiri Wetland is an important feeding area for a variety of native birds. Up to 59 bird species have been recorded, including pied stilt

(*Himantopus himantopus*), little shag (*Phalacrocorax melanoleucos brevirostris*), paradise shelduck (*Tadorna variegata*), South Island and variable oystercatcher (*Hematopus finschi*, *H. unicolor*), grey teal (*Anas gracilis*), white faced heron (*Ardea novaehollandiae*), Canadian geese (*Branta canadensis*), and New Zealand shoveler (*Anas rhynchotis*).

New Zealand dotterel (*Charadrius obscurus*), which is identified as 'At Risk (Sparse)' have also been observed with one breeding pair and three eggs noted in December 2004.

### Ecological values

Ecological values	Rank	Comment
Rarity and distinctiveness	Medium	Contains the 'At Risk' New Zealand dotterel
Representativeness	High	Contains indigenous vegetation on G1.1d – an 'At Risk' LENZ environment. However, coastal ephemeral wetlands are nationally rare
Ecological context	High	Important feeding and nesting ground for a large number of indigenous bird species. Possible breeding site for the threatened New Zealand dotterel
Sustainability	Positive	In relatively good vegetative condition. Key ecological processes still influence the site. Under appropriate management it can remain resilient to existing or potential threats

### Management threats and response

Potential and actual threats to the sustainability of Waikirikiri's ecological values are as follows:

Threats to ecological values	Level of risk	Comment
Pest animals	Low to medium	Possums, cats, hares, rabbits, mustelids, magpies, and rats
Weeds	Medium	Mercer grass dominates the wetland. Margins contain introduced grasses, boxthorn, blackberry and lupin
Habitat modification	Low	The wetland is permanently fenced and not grazed. However, the coastal fence has been buried by sand and neighbouring livestock have entered in the past

Site protection measures addressing potential threats and actual threats are as follows:

Site protection	Yes/No	Description
<b>A</b> Public ownership or formal agreement	Yes	<b>In part:</b> Taranaki Regional Council memorandum of encumbrance with 1 owner, part Maori Reserve, part unformed legal road
<b>B</b> Regulatory protection by local government	Yes	Site specific rules apply <ul style="list-style-type: none"> <li>– Taranaki Regional Council rules for wetlands (refer Appendix IIB of the Regional Fresh Water Plan)</li> <li>– South Taranaki District Council rules for Significant Natural Areas (refer Schedule II of the District Plan)</li> </ul> General regional or district rules might also apply
<b>C</b> Active protection	Yes	The wetland is fenced Enhancement planting of inland margin Self-help Possum Control Programme



## Waipipi Dunes

At a glance (last updated: February 2006)			
TRC reference:	0946-0	Ecological district:	Foxton
Other reference:	STDC SNA 22	LENZ environment:	J4.2a
Land tenure:	Crown (14.3 ha) Private (28.8 ha)	Protection status:	A, B
GPS:	2643196E – 6153521N	Area:	43.1 ha

### Location

The Waipipi Dunes are located near the coast, 8 km south-west of Waverley. The dune system includes the Crown owned Marginal Strip, which is administered by the Department of Conservation and extends onto private land. The dunes lie in the Foxton Ecological District.

### General description

The Waipipi Dunes site cover 43.1 ha. It consists of a highly dynamic complex of low (less than 4m) dunes and small wet sand flats and depressions (swales) extending from the coast inland 200-300 metres to taller (15 metres) more stable relic foredunes.

Water flows (slowly) across the wetlands in a north-west to south-east direction and the water course is very meandering. Some swales have permanent water. Most of the water flows out to the sea at Waipipi Point, where it appears that temporary, shallow lagoons form periodically on the beach.

The site are one of the best examples of early foredune/swale colonising vegetation in the Foxton Ecological District. The site is difficult to access and the surrounding land use is low impact agriculture. This makes it the only sizeable area in the Foxton Ecological District that has no artificially induced erosion caused by livestock or recreational vehicle tracks.

### Ecological features

#### Vegetation

Only four plant species are recorded on the foredune. The dominant plant is pingao (*Desmoschoenus spiralis*), which is identified as 'Chronically Threatened (Gradual Decline)'. However, small amounts of marram

(*Ammophila arenaria*), spinifex (*Spinifex sericeus*) and sand convolvulus, are also present.

Vegetation within the swale area is more diverse and contains a large number of threatened indigenous herbs and sedges. *Lilaeopsis* species dominate where the sand is flat and covered with a few centimetres of water. Sand sedge (*Carex pumila*) dominates the boundaries of the swale areas. There is also club sedge, marram, *Myriophyllum votschi*, sand coprosma (*Coprosma acerosa*), and tauhinu (*Pomaderris amoena*).

Of particular note is the presence of the half star (*Selliera rotundifolia*) in slightly drier areas and sand daphne (*Pimelea arenaria*), sand gunnera (*Gunnera arenaria*), and the sedge (*Eleocharis neozealandica*). These plants are all identified as 'Chronically Threatened (Gradual Decline)' nationally.

The 'Acutely Threatened (Nationally Critical)' sand spike sedge (*Sebaea ovata*) has also been recorded at this site although it has not been found since 1990.

#### Fauna

Unknown. No specific indigenous fauna species have been recorded for the Waipipi Dunes.

### Ecological values

Ecological values	Rank	Comment
Rarity and distinctiveness	High	The 'Acutely Threatened' sand spike sedge has been recorded at the site Also contains 'Chronically Threatened' pingao, half star, sand gunnera, sand daphne and sedge
Representativeness	High	Contains indigenous vegetation on J4.2a – an 'Acutely Threatened' LENZ environment
Ecological context	High	Provides core habitat for threatened native flora species and likely habitat for coastal birds.
Sustainability	Positive	Long, narrow dune system in very good vegetative condition. Key ecological processes still influence the site. Under appropriate management, it can remain resilient to existing or potential threats



## Management threats and response

Potential and actual threats to the sustainability of the Waipipi Dunes's ecological values are as follows:

Threats to ecological values	Level of risk	Comment
Pest animals	Medium to high	Possums, rabbits, hares, and rats
Weeds	Low to medium	Marram grass
Habitat modification	Low	The site is subject to threat from grazing, but is well buffered by sand and other natural barriers

Site protection measures addressing potential threats and actual threats are as follows:

Site protection	Yes/No	Description
<b>A</b> Public ownership or formal agreement	Yes	Taranaki Regional Council memorandum of encumbrance Department of Conservation (Marginal Strip)
<b>B</b> Regulatory protection by local government	Yes	Site specific rules apply <ul style="list-style-type: none"> <li>- Taranaki Regional Council rules for wetlands (refer Appendix IIB of the Regional Fresh Water Plan)</li> <li>- South Taranaki District Council rules for Significant Natural Areas (refer Schedule II of the District Plan)</li> </ul> General regional or district rules might also apply
<b>C</b> Active protection	Yes	Fenced along inland margin



# Waipu Lagoons

At a glance (last updated: February 2006)			
TRC reference:	Ecological district:	Egmont	
Other reference:	LENZ environment:	F5.2b	
Land tenure:	District	Protection status:	A, B, C
GPS:	1. 2608433E – 6241023N 2. 2608109E – 6240886N	Area:	7.9 ha

## Location

The Waipu Lagoons, a Local Purpose Reserve owned and administered by the New Plymouth District Council, are located on the western outskirts of Bell Block. The lagoons lie in the Egmont Ecological District.

## General description

Waipu Lagoons cover 7.9 ha and comprise of two irregularly shaped natural coastal lagoons and their margins. The lagoons provide habitat for a wide variety of birdlife including threatened species. Dune swamps and lagoon systems of this size and condition are regionally rare.



## Ecological features

### Vegetation

Vegetation at the Waipu Lagoons includes dense raupo (*Typha orientalis*), flax (*Phormium tenax*), and bamboo spike-sedge (*Eleocharis sphacelata*).

### Fauna

Birdlife in the Waipu Lagoons include matuku/Australasian bittern (*Botaurus poiciloptilus*), which is identified as 'Acutely Threatened (Nationally Endangered)'. Other native birds present include grey teal (*Anas gracilis*), Australian coot (*Fulica atra australis*), and pukeko (*Porphyrio porphyrio*).

Other birds present or which visit the site Canadian geese (*Branta canadensis*), mallard duck (*Anas platyrhynchos*) and black swan (*Cygnus atratus*).

## Ecological values

Ecological values	Rank	Comment
Rarity and distinctiveness	High	Contains the 'Acutely Threatened' matuku/Australasian bittern
Representativeness	High	Contains indigenous vegetation on F5.2b – an 'Acutely Threatened' LENZ environment
Ecological context	High	Provides core habitat for the threatened matuku/Australasian bittern. Interconnected with Barrett Lagoon and Tank Farm Ponds in terms of habitat for these birds
Sustainability	Positive	In excellent vegetative condition. Key ecological processes still influence the site. Under appropriate management it can remain resilient to existing or potential threats.

## Other Values

Waipu Lagoons are a popular recreation area. There are also Maori pa and food storage pits nearby.

## Management threats and response

Potential and actual threats to the sustainability of Waipu Lagoon's ecological values are as follows:

Threats to ecological values	Level of risk	Comment
Pest animals	Medium to high	Possums, cats, mustelids, hedgehogs, and rats
Weeds	Low	
Habitat modification	Low	Reserve status. Enrichment/alteration of water supply from surrounding agriculture.

Site protection measures addressing potential threats and actual threats are as follows

Site protection	Yes/No	Description
A	Yes	Public ownership or formal agreement District council land (Local Purpose Reserve)
B	Yes	Regulatory protection by local government General regional or district rules might apply
C	Yes	Active protection Reserve management programme





## Waitara River Scenic Reserve

### At a glance (last updated: February 2006)

<b>TRC reference:</b>	0863-0	<b>Ecological district:</b>	Egmont
<b>Other reference:</b>	DOC 70692	<b>LENZ environment:</b>	F5.2b
<b>Land tenure:</b>	Crown	<b>Protection status:</b>	A, B
<b>GPS:</b>	2616459E – 6245216N	<b>Area:</b>	2.3 ha

### Location

The Crown-owned Waitara River Scenic Reserve is located in the Waitara township. The Reserve lies in the Egmont Ecological District.

### General description

This Waitara River Scenic Reserve (2.3 ha) is part of the Waitara River estuary, located approximately 500 metres upstream from the sea. The wetland site consists of mudflats which support saltmarsh vegetation, whitebait and wading birds.



### Ecological features

#### Vegetation

The Waitara River Scenic Reserve contains saltmarsh vegetation including sea sedge (*Carex litorosa*), which is identified as 'Chronically Threatened (Serious Decline)', and the regionally uncommon saltmarsh ribbonwood (*Plagianthus divaricatus*).

Other saltmarsh vegetation includes rushes (*Leptocarpus* species), sedge (*Isolepis nodosa*), raupo (*Typha orientalis*), flax (*Phormium tenax*), taupata (*Coprosma petiolata*), and cabbage trees (*Cordyline australis*).

#### Fauna

The wetland is a whitebait congregating and spawning area. It also provides a habitat for many wading birds, including occasional royal spoonbills

(*Platalea regia*),- and white faced heron (*Ardea novaehollandiae novaehollandiae*).

### Ecological values

Ecological values	Rank	Comment
Rarity and distinctiveness	High	Contains the regionally uncommon saltmarsh ribbonwood and 'Chronically Threatened' sea sedge
Representativeness	High	Contains indigenous vegetation on F5.2b – an 'Acutely Threatened' LENZ environment
Ecological context	High	The wetlands provides an important whitebait spawning area and provides habitat for threatened and regionally uncommon indigenous flora
Sustainability	Positive	In good vegetative condition. Key ecological processes still influence the site. Under appropriate management, it can remain resilient to existing or potential threats

### Management threats and response

Potential and actual threats to the sustainability of the Waitara River Scenic Reserve's ecological values are as follows:

Threats to ecological values	Level of risk	Comment
Pest animals	Medium to high	Possums, cats, mustelids, and rats
Weeds	Low	
Habitat modification and other threats	Low	Pre season whitebait poaching

Site protection measures addressing potential threats and actual threats are as follows:

Site protection	Yes/No	Description
A	Yes	Public Conservation Estate (Scenic Reserve)
B	Yes	Site specific rules apply – Taranaki Regional Council rules for wetlands (refer Appendix IIA of the Regional Fresh Water Plan) General regional or district rules might also apply
C	No	



## Waitara West Marginal Strip Lagoon

At a glance (last updated: February 2006)			
TRC reference:	0864-0	Ecological district:	Egmont
Other reference:	DOC 70666	LENZ environment:	F5.2b
Land tenure:	Crown	Protection status:	A, B, C
GPS:	2612768E – 6244854N	Area:	1.2 ha

### Location

The Waitara West Marginal Strip Lagoon is located on Crown land, 3.9 km west of the Waitara township. The lagoon lies within the Egmont Ecological District.

### General description

The Waitara West Marginal Strip Lagoon covers 1.2 ha, and is located near the Waiongana River mouth. The estuarine wetland has formed within a low coastal foredune system with an actively accreting stony beach, which is a result of river diversion works. The site is notable for the number and variety of resident and migratory birds.

### Ecological features

#### Vegetation

Vegetation on the foredunes is predominantly exotic and includes fescue (*Festuca coxii*), pasture grasses, bracken fern (*Pteridium esculentum*), gorse (*Ulex europaeus*) and boxthorn (*Lycium ferocissimum*).

#### Fauna

The lagoon is used by a large variety of waterfowl, including the banded dotterel (*Charadrius bicinctus*), which is identified as 'Chronically Threatened (Gradual Decline)'.

Other native bird and wildlife include variable oystercatcher (*Haematopus unicolor*), poaka/pied stilt (*Himantopus himantopus*), kuaka/godwit (*Limosa lapponica*), lesser knot (*Calidris canutus*), turnstone (*Arenaria interpres*), pacific golden plover (*Pluvialis fava*), red necked stint (*Calidris ruficollis*), sharptail sandpiper (*Calidris melanotos*), and greenshanks (*Calidris* species).

### Ecological values

Ecological values	Rank	Comment
Rarity and distinctiveness	Medium	Contain the 'Chronically Threatened' banded dotterel
Representativeness	High	Contains indigenous vegetation on F5.2b – an 'Acutely Threatened' LENZ environment
Ecological context	High	Provides excellent habitat for diverse bird life (resident and migratory), including the threatened banded dotterel
Sustainability	Positive	Key ecological processes still influence the site. Under appropriate management, it can remain resilient to existing or potential threats

### Management threats and response

Potential and actual threats to the sustainability of the Waitara West Marginal Strip Lagoon's ecological values are as follows:

Threats to ecological values	Level of risk	Comment
Pest animals	Medium to high	Possums, cats, mustelids, hedgehogs, and rats
Weeds	Medium to high	Gorse, boxthorn, bracken fern and pine trees present. Along the eastern and western ends of the lagoon, long grass and rushes are encroaching upon the roosting and nesting sites of the resident and migratory birds
Habitat modification	Low	Partially fenced. No apparent stock access

Site protection measures addressing potential threats and actual threats are as follows:

Site protection	Yes/No	Description	
<b>A</b>	Public ownership or formal agreement	Yes	Public Conservation Estate (Marginal Strip)
<b>B</b>	Regulatory protection by local government	Yes	Site specific rules apply – Taranaki Regional Council rules for wetlands (refer Appendix IIA of the Regional Fresh Water Plan) General regional or district rules might also apply
<b>C</b>	Active protection	Yes	Some fencing on the dunes



## Waitiri Conservation Area

At a glance (last updated: February 2006)		
TRC reference:	Ecological district:	Matemateonga
Other reference: DOC 70390	LENZ environment:	F1.1d (197.4 ha) F7.2a (19.1 ha)
Land tenure: Crown	Protection status:	A, B, C
GPS: 2644880E – 6203991N	Area:	216.5 ha

### Location

The Crown-owned Waitiri Conservation Area is located 22.5 km east of Stratford. The Conservation Area lies in the Matemateonga Ecological District.

### General description

The Waitiri Conservation Area is a relatively large (216.5 ha) podocarp and tawa forest on deeply dissected hill country.

### Ecological features

#### Vegetation

Tawa (*Beilschmiedia tawa*) is the dominant canopy species on the valley sides of the Waitiri Conservation Area, though rimu (*Dacrydium cupressinum*), northern rata (*Metrosideros robusta*), pigeonwood (*Hedycarya arborea*), and mahoe (*Melicytus ramiflorus*) are also present in the canopy. Also present are soft tree fern (*Cyathea smithii*), scarlet rata vine (*Metrosideros fulgens*), kiekie (*Freycinetia baueriana* subsp. *banksii*), kiokio (*Blechnum* sp.), and bush ricegrass (*Microlaena avenacea*).

In the gullies, mahoe is the dominant canopy species. Pigeonwood, soft tree fern, and bush rice grass are also present.

Of particular note is the presence of the wood rose (*Dactyloctenium aegyptium*). This plant is identified as 'Chronically Threatened (Serious Decline)' but has only been recorded at one other site in Taranaki.

#### Fauna

Notable fauna species present include the 'Acutely Threatened (Nationally Vulnerable)' New Zealand falcon (*Falco novaeseelandiae*) and the

'Chronically Threatened (Gradual Decline)' New Zealand pigeon (*Hemiphaga novaeseelandiae*).

Also present are bellbird (*Anthornis melanura melanura*), tui (*Prosthemadera novaeseelandiae*), riroriro/grey warbler (*Gerygone igata*), fantail (*Rhipidura fuliginosa*) and Australasian harrier (*Circus approximans*).

### Ecological values

Ecological values	Rank	Comment
Rarity and distinctiveness	High	Contains the 'Acutely Threatened' New Zealand falcon and the 'Chronically Threatened' New Zealand pigeon. Regionally distinctive in that it contains the regionally rare <i>Dactyloctenium aegyptium</i> .
Representativeness	Medium	Contains indigenous vegetation on F7.2a – an 'At Risk' LENZ environment.
Ecological context	Medium	The forest provides core habitat for threatened and regionally uncommon indigenous flora and fauna.
Sustainability	Positive	In fair vegetative condition. Key ecological processes still influence the site. Under appropriate management, it can remain resilient to existing or potential threats.

### Management threats and response

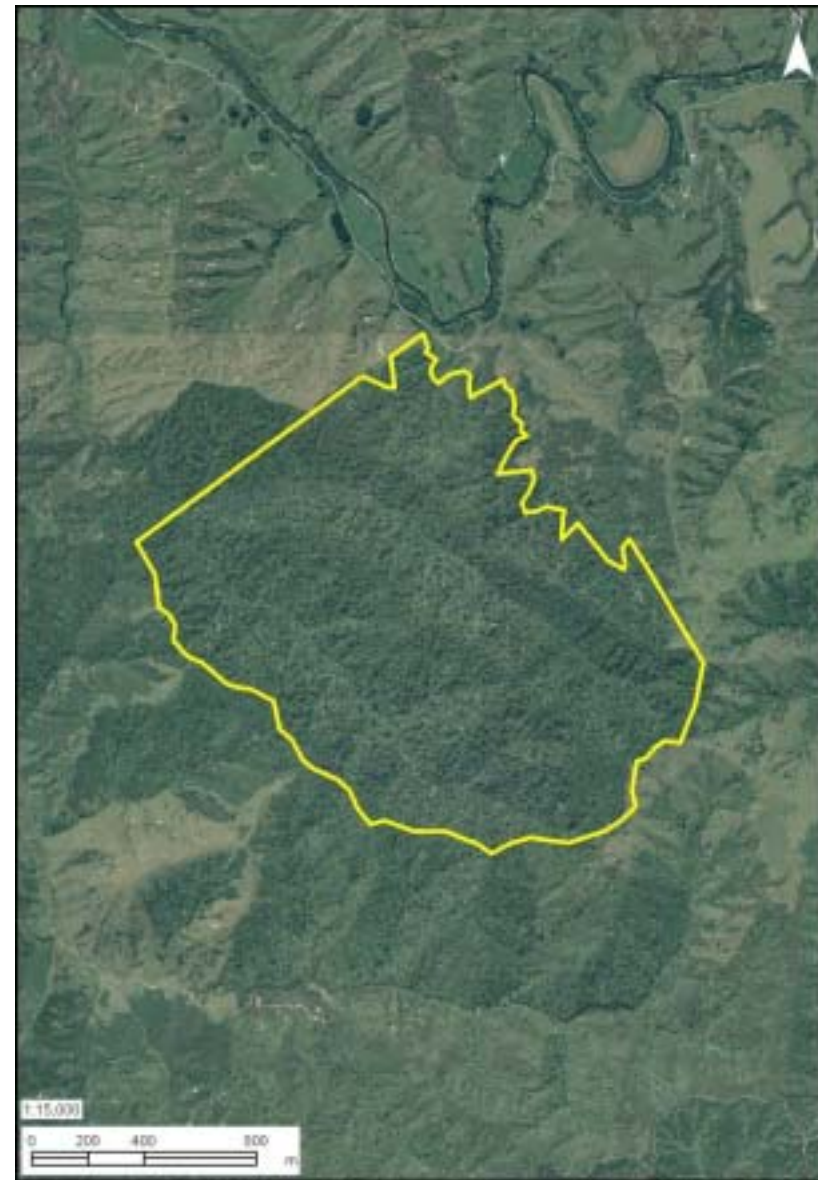
Potential and actual threats to the sustainability of the Waitiri Conservation Area's ecological values are as follows:

Threats to ecological values	Level of risk	Comment
Pest animals	Medium to high	Possums, goats, pigs, cats, mustelids, and rats
Weeds	Low	Blackberry, foxgloves and thistles
Habitat modification and other threats	High	Unfenced and accessible to livestock. Pest and livestock impacts noticeable.



Site protection measures addressing potential threats and actual threats are as follows:

Site protection		Yes/No	Description
A	Public ownership or formal agreement	Yes	Public Conservation Estate (Conservation Area)
B	Regulatory protection by local government	Yes	General regional or district rules might apply
C	Active protection	No	



## Waitotara Conservation Area (including Makakaho Road Wetland)

At a glance (last updated: February 2006)	
<b>TRC reference:</b> 0987-0	<b>Ecological district:</b> Matemateaonga
<b>Other reference:</b>	<b>LENZ environment:</b> F1.1c (13.4 ha)
	F1.1d (22,679.2 ha)
	F1.1e (35.3 ha)
	F1.3b (2,040.7 ha)
	F7.2a (2,357.8 ha)
	F7.2b (1.9 ha)
	F7.3a (142.8 ha)
	H3.1b (47.9 ha)
	P7.1a (2.6 ha)
P7.1b (44.4 ha)	
P7.1c (139.5 ha)	
P8.2a (0.8 ha)	
<b>Land tenure:</b> Crown	<b>Protection status:</b> A, B
<b>GPS:</b> 2676229E – 6188070N	<b>Area:</b> 27,506.3 ha

### Location

The Crown owned Waitotara Conservation Area and Makakaho Road Wetland are located 60 km north-east of Hawera. They are in the Matemateaonga Ecological District.

### General description

The Waitotara Conservation Area is administered by the Department of Conservation. For the purposes of this Inventory, the Waitotara Conservation Area includes the Makakaho Road Wetland but excludes that part of the Conservation Area that has been addressed elsewhere in the Inventory as part of the Rotokoho Wetland (Scenic reserve).

The Waitotara Conservation Area supports a large area (27,506.3 ha) of forest on moderate to steep slopes of mainly sandy mudstone, sandstone and conglomerate.

The Makakaho Road Wetland, which is also administered by the Department of Conservation, covers 2.0 ha. It lies on the southern boundary of the Waitotara Conservation Area in the eastern hill country.

### Ecological features

#### Vegetation

The predominant vegetation type is rimu (*Dacrydium cupressinum*)-rata (*Metrosideros robusta*)/tawa (*Beilschmiedia tawa*) forest with black beech (*Nothofagus solandri*) forest prominent on the ridges. There are also areas of maunka (*Leptospermum scoparium*) scrub.

No specific indigenous native species have been recorded for the Makakaho Road Wetland. However, small infestations of willow (*Salicaceae*) noted.

#### Fauna

Notable native bird species present in the Waitotara Conservation Area including kaka (*Nestor meridionalis*), New Zealand falcon (*Falco novaeseelandiae*) and blue duck (*Hymenolaimus malakorhynchos*) – all of which are identified as 'Acutely Threatened (Nationally Endangered)'. Also present are kakariki (species not specified), which is particularly uncommon in Taranaki.

Other notable and threatened birdlife present are the North Island brown kiwi (*Apteryx mantelli*), which is identified as 'Chronically Threatened (Serious Decline)', and New Zealand pigeon (*Hemiphaga novaeseelandiae*), which is identified as 'Chronically Threatened (Gradual Decline)'.

Two species of native bat are also found in Waitotara Conservation Area: These being the long tailed bat (*Chalinolobus tuberculata* (North Island)), which is identified as 'Acutely Threatened (Nationally Vulnerable)', and the short-tailed bat (*Mystacina tuberculata rhyacobia*), which is identified as being 'At Risk (Range Restricted)'.

Birdlife within the Makakaho Road Wetland includes the 'At Risk (Sparse)' fernbird (*Bowdleria punctata vealeae*), spotless crane (*Porzana tabuensis plumbea*), and New Zealand dabchick (*Poliocephalus poliocephalus*). The fernbird and spotless crane are particularly uncommon in the region.



# Waitotara Lagoon

At a glance (last updated: February 2006)			
TRC reference:	1005-0	Ecological district:	Manawatu
Other reference:	STDC SNA 33	LENZ environment:	C3.2b
Land tenure:	Private	Protection status:	B
GPS:	2657725E – 6152754N	Area:	5.7 ha

## Location

The Waitotara Lagoon wetland is located on privately owned land, 1 km south of Waitotara. The lagoon lies in the Manawatu Plains Ecological District.

## General description

The Waitotara Lagoon is an oxbow lake formed from an old course of the Waitotara River. The riverine wetland covers 5.7 ha.

## Ecological features

### Vegetation

Vegetation within the wetland includes raupo reedland (*Typha orientalis*) and toetoe (*Cortaderia toetoe*).

Some weeds such as pampas (*Cortaderia selloana*) and willows (*Salix* spp.) are also present.

### Fauna

Present in the Lagoon are Australasian bittern (*Botaurus poiciloptilus*), which is identified as 'Acutely Threatened (Nationally Endangered)'.

Other notable birds present are fernbird (*Bowdleria punctata vealeae*) and spotless crane (*Porsana tabuensis plumbea*) – both identified as 'At Risk (Sparse)' nationally but are particularly uncommon in Taranaki.

## Ecological values

Ecological values	Rank	Comment
Rarity and distinctiveness	High	Contains the 'Acutely Threatened' Australasian bittern and the 'At Risk' and regionally uncommon spotless crane
Representativeness	High	Contains indigenous vegetation on C3.2b – an 'Acutely Threatened' LENZ environment
Ecological context	Medium	Provides core habitat for the threatened Australasian bittern and spotless crane, close to the Waitotara river mouth
Sustainability	Positive	In fair vegetative condition. Key ecological processes still influence the site. Under appropriate management, it can remain resilient to existing or potential threats

## Management threats and response

Potential and actual threats to the sustainability of the Waitotara Lagoon's ecological values are as follows:

Threats to ecological values	Level of risk	Comment
Pest animals	Medium to high	Possums, cats, mustelids, hedgehogs, and rats
Weeds	Low to medium	Willows and pampas
Habitat modification	Medium to high	The margin is unfenced and accessible to livestock grazing Sedimentation associated with flood events may also be a problem on occasion



Site protection measures addressing potential threats and actual threats are as follows:

Site protection	Yes/No	Description
<b>A</b> Public ownership or formal agreement	No	
<b>B</b> Regulatory protection by local government	Yes	Site specific rules apply – Taranaki Regional Council rules for wetlands (refer Appendix III of the Regional Fresh Water Plan) – South Taranaki District Council rules for Significant Natural Areas (refer Schedule II of the District Plan) General regional or district rules might also apply
<b>C</b> Active protection	No	





## Waitotara Wharangi Block

At a glance (last updated: February 2006)		
TRC reference:	Ecological district:	Manawatu Plains
Other reference: STDC SNA 35	LENZ environment:	F1.3a (2.6 ha) F5.2c (1.3 ha)
Land tenure: Private	Protection status:	B
GPS: 2659700E – 6156007N	Area:	3.9 ha

### Location

The Waitotara Wharangi Block is located on privately owned land approximately 2.5 km north-east of Waitotara. It lies in the Manawatu Plains Ecological District.

### General description

The Waitotara Wharangi Block is a small (3.9 ha) area of mixed broadleaved forest on a steep terrace above the Waitotara River. The site contains vegetation more commonly associated with coastal sites, such as wharangi on the lower slopes, ngaio on the mid slopes, and akeake and kanuka towards the top. Although disturbed in nature the vegetation is still healthy. This site is significant as a repository of rare vegetation types within the Manawatu Plains Ecological District.

### Ecological features

#### Vegetation

Vegetation in the Waitotara Wharangi Block is diverse and best described as mixed broadleaved forest. However, two species in particular make this vegetation unusual compared to other similar areas in the Manawatu Plains Ecological District. These are wharangi (*Melicope ternata*), and akeake (*Dodonaea viscosa*), which are present in high numbers, but are uncommon elsewhere in the district. Along with ngaio (*Mycoprum laetum*), also common, these species give this sheltered inland area a coastal character.

Lower down on the slopes wharangi is the most common but is gradually replaced by ngaio mid-slope, and akeake and kanuka (*Kunzea ericoides* var. *ericoides*) towards the top. However, there is considerable overlap between the species. Other common trees include tawa (*Beilschmiedia tawa*), titoki (*Alectryon excelsus*), hinau (*Elaeocarpus dentatus*), and karaka

(*Corynocarpus laevigatus*). Kahikatea (*Dacrycarpus dacrydiodes*), mahoe (*Melicytus ramiflorus*), *Coprosma propinqua*, turepo (*Streblus heterophylla*), black maire (*Nestegis cunninghamii*) and New Zealand jasmine (*Parsonsia* sp.), are also present.

Much of the understorey has been grazed out by stock but several species persist, especially on steeper parts. These include kawakawa (*Macropiper excelsum*), mapou (*Myrsine australis*), pigeonwood (*Hedycarya arborea*), kohuhu (*Pittosporum tenuifolium*), turepo (*Streblus heterophylla*), lancewood (*Pseudopanax crassifolium*), poroporo (*Solanum aviculare*), manuka (*Leptospermum scoparium*), rangiora (*Brachyglottis repanda*), karamu (*Coprosma robusta*), shining karamu (*Coprosma lucida*), thin leaved coprosma (*Coprosma areolata*), native broom, hangehange (*Geniostoma rupestre* var. *ligustrifolium*), mamaku (*Cyathea medullaris*), and ponga (*Cyathea dealbata*).

The area also supports two species of flax (*Phormium tenax* and *P. cookianum*), toetoe (*Cortaderia fulvida*), and cutty grass (*Gahnia lacera*), which is uncommon in the district, *Machaerina sinclairii*, a native iris (*Libertia grandiflora*), and several sedges. Climbers are sparse but include pohuehue (*Muehlenbeckia australis*), three species of rata (*Metrosideros perforate*, *M. diffusa* and *M. fulgens*) and one native clematis (*Clematis forsteri*). Seventeen species of fern have been recorded, including tree ferns and epiphytic ferns, though all are species that are relatively common in the ecological district.

#### Fauna

Unknown. No specific indigenous fauna species have been recorded for the Waitotara Wharangi Block.

### Ecological values

Ecological values	Rank	Comment
Rarity and distinctiveness	High	Regionally distinctive through the presence of regionally uncommon flora species, including akeake, wharangi and cutty grass
Representativeness	High	Contains indigenous vegetation on 'Acutely Threatened' (F5.2c) and 'At Risk' (F1.3a) LENZ environments
Ecological context	Medium	Vegetation composition is unique within the ecological district. Also provides core habitat for regionally uncommon flora
Sustainability	Positive	Although the vegetation is in disturbed and poor condition, under appropriate management, it can remain resilient to existing or potential threats. Key ecological processes still influence the site

## Management threats and response

Potential and actual threats to the sustainability of the Waitotara Wharangi Block's ecological values are as follows:

Threats to ecological values	Level of risk	Comment
Pest animals	Medium to high	Possums, rabbits, hares, and rats
Weeds	Medium to high	Hawthorn is common. Gorse is very dense at the top edges
Habitat modification	Medium to high	Much of the under storey has been grazed out by stock, and the vegetation is in poor condition

Site protection measures addressing potential threats and actual threats are as follows:

Site protection	Yes/No	Description
<b>A</b> Public ownership or formal agreement	No	
<b>B</b> Regulatory protection by local government	Yes	Site specific rules apply – South Taranaki District Council rules for Significant Natural Areas (refer Schedule II of the District Plan) General regional or district rules might also apply
<b>C</b> Active protection	No	



## Waverley Beach

At a glance (last updated: February 2006)		
TRC reference:	Ecological district:	Foxton
Other reference:	LENZ environment:	J4.2a
Land tenure: Crown/District	Protection status:	A
GPS: 2649780E – 6151295N	Area:	1.5 ha

### Location

Waverley Beach is located 5.5 km south of Waverley. The beach lies in the Foxton Ecological District.

### General description

Waverley Beach comprises of the foreshore, which is Crown owned land (administered by the Department of Conservation) and the Wairoa Recreation Reserve and Okahu Maori Reservation, which is administered by the South Taranaki District Council. Its combined area is 1.5 ha.

Waverley Beach is a beach with unique landforms of caverns, ravines, blowholes and eroding stacks carved from the cliffs by wave erosion. Eleven small peninsulas project 5-15 metres out to sea, and one island has been formed. The cliff tops support mats of small native plants. The coast is dynamic with many unvegetated and unstable dunes, and much of the area is continually being eroded by wind and wave action. Waverley Beach is approximately 8 km long with 13 metre high cliffs. The low undulating dunes are on the cliff tops and extend inland. These dunes are stable and the vegetation includes lupin, marram grass, and kikuyu.

Waverley Beach is part of the south Taranaki uplifted marine terraces, which form a 20 km wide coastal strip from Hawera to Wanganui and is New Zealand's most complete sequence of uplifted marine terraces.

## Ecological features

### Vegetation

There are native herbfields on the cliff tops containing a diverse range of cliff vegetative species. There is a thriving population of the 'Chronically Threatened (Gradual Decline)' succulent *Crassula manaia*, which is endemic to the Egmont – Waverley coast. This plant population represents the most abundant population in the Taranaki region and is at the southern limit of its known range. There is also one patch of the plant *Leptinella squalida* (a rare plant in the Foxton Ecological District). Other plants present in the herbfield include *Zoysia*, *Juncus*, and *Isolepis* species.

The 'At Risk (Range Restricted)' native daisy *Leptinella dispersa* subsp. *rupestris* is also present in sand on wet cliff edges.

Other vegetation present on the dunes include lupin, marram grass (*Ammophila arenaria*) and kikuyu.

### Fauna

Unknown. No specific indigenous fauna species have been recorded for Waverley Beach.

## Ecological values

Ecological values	Rank	Comment
Rarity and distinctiveness	High	Contains the 'Chronically Threatened' succulent <i>Crassula manaia</i> , which is endemic to the Egmont – Waverley coast and the 'At Risk' <i>Leptinella dispersa</i> subsp. <i>rupestris</i>
Representativeness	High	Contains indigenous vegetation on J4.2a – an 'Acutely Threatened' LENZ environment
Ecological context	Medium	Provides core habitat for threatened flora species
Sustainability	Positive	In relatively good vegetative condition. Key ecological processes still influence the site. Under appropriate management, it can remain resilient to existing or potential threats

## Other Values

Waverley Beach has recreation and scientific value. It is used for swimming and fishing and has high scenic value. It is also part of the South Taranaki uplifted marine terraces, New Zealand's most complete sequence of uplifted marine terraces.

## Management threats and response

Potential and actual threats to the sustainability of Waverley Beach's ecological values are as follows:

Threats to ecological values	Level of risk	Comment
Pest animals	Medium to high	Possums, rabbits, hares, and rats
Weeds	Low	
Habitat modification	Medium	Coastal erosion processes

Site protection measures addressing potential threats and actual threats are as follows:

Site protection	Yes/No	Description
<b>A</b> Public ownership or formal agreement	Yes	Crown owned land (foreshore) District owned land (Wairoa Recreation Reserve and Okahu Maori Reservation)
<b>B</b> Regulatory protection by local government	Yes	General regional or district rules might apply
<b>C</b> Active protection	No	



# Welbourn Scenic Reserve

At a glance (last updated: February 2006)		
TRC reference:	Ecological district:	Egmont
Other reference: LD No 108,	LENZ environment:	F5.2b
Land tenure: Crown	Protection status:	A, B
GPS: 2604711E – 6236064N	Area:	0.7 ha

## Location

The Crown owned Welbourn Scenic Reserve lies within New Plymouth city, at the southern end of Brooklands Park. The Reserve lies in the Egmont Ecological District.

## General description

Welbourn Scenic Reserve is 0.7 ha in area and is administered by the Department of Conservation. It comprises of a steep sided gully covered in semi-coastal forest with a flattish swampy bottom.

## Ecological features

### Vegetation

The Welbourn Scenic Reserve supports rewarewa (*Knightia excelsa*)-pukatea (*Laurelia novaezelandiae*)/kohekohe (*Dysoxylum spectabile*) forest. Overall pukatea is the dominant canopy and is particularly abundant in the swampy areas lining the streams where kahikatea (*Dacrycarpus dacrydioides*) and swamp maire (*Syzygium maire*) are also present. On the drier slopes canopy associates include rewarewa, tawa (*Beilschmedia tawa*), kohekohe, mamaku (*Cyathea medullaris*), and puriri (*Vitex lucens*).

The understorey is dominated by kawakawa (*Macropiper excelsum*) with kohekohe, mahoe (*Melicytus ramiflorus*), hangehange (*Geniostoma rupestre* var. *ligustrifolium*), raurekau (*Coprosma grandifolia*), pigeonwood (*Hedycarya arborea*), and nikau (*Rhopalostylis sapida*).

King fern (*Marattia salicina*) which is a regionally rare and nationally 'Chronically Threatened (Serious Decline)' species is locally abundant on steep moist shaded banks in the Reserve.

The Reserve also contains some planted 'natives' not natural to the area including kauri (*Agathis australis*) and *Pseudopanax laetus*.

## Fauna

Unknown. No specific indigenous fauna species have been recorded for the Welbourn Scenic Reserve.

## Ecological values

Ecological values	Rank	Comment
Rarity and distinctiveness	High	Regionally distinctive in that it contains a significant colony of the regionally rare and 'Chronically Threatened' king fern
Representativeness	High	Contains indigenous vegetation on F5.2b – an 'Acutely Threatened' LENZ environment
Ecological context	Medium	Gully systems in New Plymouth support native forest
Sustainability	Positive	Key ecological processes still influence the site though relatively small and long and thin shape in shape (follows the headwaters of the stream). Close to other native seed sources

## Other values

Welbourn Scenic Reserve also has important recreational values. Public walking track well used.

## Management threats and response

Potential and actual threats to the sustainability of Welbourn Scenic Reserve's ecological values are as follows:

Threats to ecological values	Level of risk	Comment
Pest animals	Low - medium	Possums, cats, mustelids, and rats
Weeds	Medium	Western boundary garden rubbish – wandering willy, nasturtiums.
Habitat modification	Medium	



Site protection measures addressing potential threats and actual threats are as follows:

Site protection	Yes/No	Description
A	Yes	Public Conservation Estate (Scenic Reserve)
B	Yes	General regional or district rules might apply
C		



## Whenuakura Estuary

At a glance (last updated: February 2006)			
<b>TRC reference:</b>		<b>Ecological district:</b>	Foxton
<b>Other reference:</b>	DOC 70003 70576	<b>LENZ environment: *</b>	C2.1a (0.1 ha) C3.2b (0.8 ha) C3.2d (3.0 ha) J4.2a (10.8 ha)
<b>Land tenure:</b>	Crown	<b>Protection status:</b>	A, B
<b>GPS:</b>	2639407E – 6157240N	<b>Area:</b>	28.2 ha

\* LENZ environments do not extend to coastal waters

### Location

The Whenuakura Estuary is located 3.5 km south of Patea. The estuary lies in the Foxton Ecological District.

### General description

The Whenuakura Estuary is on Crown land and comprises of estuary, foreshore and Foreshore Reserve (administered by the Department of Conservation).

The Whenuakura Estuary is a small (28.2 ha) but relatively unmodified estuary with extensive mudflats. It has tidal lagoons, a sand bar, and an island often forms. To the south-west of the estuary the cliffs gradually disappear under eight metre high sand dunes. This is part of the south Taranaki uplifted marine terraces, and is a dynamic coast with many unvegetated and unstable dunes. Much of the area is continually being eroded by wind and wave action.

The sand dunes extend either side of the river for approximately 3 km, with high irregular foredunes, and dune ridges extending up to 50m inland. The dunes are vegetated with marram grass, some sand convolvulus and isolated pingao and spinifex. The area is also important for a number of threatened bird species and other sea birds. It is interconnected with the Waipipi Dunes (3.7 km south) and the Patea Wetland (3.8 km north).

## Ecological features

### Vegetation

Vegetation on the dunes in the Whenuakura Estuary includes pingao (*Desmoschoenus spiralis*), which is identified as 'Chronically Threatened ('Gradual Decline)'. Other vegetation present is marram grass (*Ammophila arenaria*), sand convolvulus, and isolated spinifex (*Spinifex sericeus*).

### Fauna

The Whenuakura Estuary contains the 'Acutely Threatened (Nationally Vulnerable)' caspian tern (*Sterna caspia*). Variable oystercatcher (*Haematopus unicolor*) and royal spoonbill (*Platalea regia*) are also present, and the site is on the migratory route of several other bird species.

The northern bank of the estuary is an important whitebait spawning area and there is a large frog population in the dune swales.

## Ecological values

Ecological values	Rank	Comment
Rarity and distinctiveness	High	Contains the 'Acutely Threatened' caspian tern Also contains the 'Chronically Threatened' pingao
Representativeness	High	Contains indigenous vegetation on 'Acutely Threatened' (J4.2a, C3.2d) LENZ environments
Ecological context	High	Provides core habitat for threatened flora and fauna, is an important 'stopover' for migratory birds, and is an important whitebait spawning area
Sustainability	Positive	In good vegetative condition. Key ecological processes still influence the site. Under appropriate management, it can remain resilient to existing or potential threats

## Other Values

Whenuakura Estuary also has cultural, historical and spiritual values. The sand dunes on the left bank were the site of a Maori Kainga (village) and a pa existed on the island in the estuary.

## Management threats and response

Potential and actual threats to the sustainability of Whenuakura Estuary's ecological values are as follows:

Threats to ecological values	Level of risk	Comment
Pest animals	Low to medium	Possums, cats, mustelids, hedgehogs, and rats
Weeds	Medium	Spartina
Habitat modification	Medium	Coastal erosion processes

Site protection measures addressing potential threats and actual threats are as follows:

Site protection	Yes/No	Description
<b>A</b> Public ownership or formal agreement	Yes	Public Conservation Estate (estuary, foreshore and Foreshore Reserve administered by the Department of Conservation)
<b>B</b> Regulatory protection by local government	Yes	General regional or district rules might apply
<b>C</b> Active protection	No	



# Whitecliffs Conservation Area, Mt Messenger Scenic Reserve and Conservation Area

At a glance (last updated: February 2006)			
<b>TRC reference:</b>		<b>Ecological district:</b> North Taranaki	
<b>Other reference:</b>	DOC 70007	<b>LENZ environment:</b>	C1.2a (25.3 ha)
	DOC 70008		F1.1b (4,468.5 ha)
	DOC 70438		F1.1d (92.8 ha)
			F5.2a (6.6 ha)
			F7.2a (422.8 ha)
<b>Land tenure:</b> Crown		<b>Protection status:</b> A, B, C	
<b>GPS:</b> 2648722E – 6254690N		<b>Area:</b> 5,016.0 ha	

## Location

The Crowned owned Whitecliffs Conservation Area, Mount Messenger Scenic Reserve and Mount Messenger Conservation Area, are located 20 km north of Urenui. They lie in the North Taranaki Ecological District.

## General description

The Whitecliffs Conservation Area, Mount Messenger Scenic Reserve and Mount Messenger Conservation Area lie adjacent and are interconnected with one another. Together, they have a combined area of 5,016 ha and support a large tract of mainly primary forest centred around the Waipingau Stream catchment.

The combined areas stretch over 3 bioclimatic zones – from the Whitecliffs coastal escarpment to the remanant dipslopes at the headwaters of the Mimi River and provide a unique continuous forest sequence through coastal semi-coastal and lowland bioclimatic zones with associated vegetation gradients. They also contain one of the best remaining examples of primary coastal hardwood and podocarp-hardwood forests on the west coast of the North Island.

## Ecological features

### Vegetation

Puriri (*Vitex lucens*), karaka (*Corynocarpus laevigatus*) and tawa (*Beilschmiedia tawa*) are the dominant species with occasional rimu (*Dacrydium cupressinum*), mangeao (*Litsea calicaris*), kohekohe (*Dysoxylum spectabile*), hinau (*Elaeocarpus dentatus*), and rewarewa (*Knightia excelsa*).

Secondary kahikatea (*Dacrycarpus dacrydioides*) dominant forest is present on the valley floors of the Mimi River.

The dune system at the mouth of the Waipingau Stream supports the only natural population of pingao in the district.

A total of at least 40 other species either rare elsewhere in the district or known in the district from this area only. Notable species include a large colony of king fern (*Marattia salicina*). This fern is identified as 'Chronically Threatened (Serious Decline)' nationally but is regionally distinctive as it is known to inhabit only a few scattered coastal and semi-coastal locations in north Taranaki. Other notable species present include – *Adiantum viridescens* *Asplenium terrestre* ssp *maritimum*, *Lindsaea viridis*, king fern, *Lastreopsis velutina*, *Lophomyrtus obcordata*, *Pittosporum cornifolium*, *Parahebe catarractae* ss *diffusa* *Arthropodium candidum*, and *Tetragonia tetragonioides*.

Also of note is that this area represents the southern limit of the native forget-me-not *Myosotis petiolata* var. *pansa* and *Schoenus tendo*. Conversely, the area is the northern limit for NZ of *Alepis flavida*.

### Fauna

The 'Chronically Threatened (Serious Decline)' North Island brown kiwi (*Apteryx australis mantelli*) and the 'Chronically Threatened (Gradual Decline)' New Zealand pigeon (*Hemiphaga novaseelandiae*) are both present in the area.

The area is also of high entomological value, being the type locality for a number of insects including *Odontrio velutina*, a scarab beetle endemic to Mt Messenger. The area is the 'meeting zone' for insects with largely northern or southern distributions, consequently resulting in a very diverse insect fauna and is distinctive in that it is one of the few North Island localities for a group of otherwise South Island insects.



## Ecological values

Ecological values	Rank	Comment
Rarity and distinctiveness	High	Large number of regionally significant species
Representativeness	High	Contains indigenous vegetation on 'Acutely Threatened' (C1.2a, F5.2a) and 'At Risk' (F7.2a) LENZ environments
Ecological context	Medium	Large area with diverse range of habitats providing core habitat for threatened species
Sustainability	Positive	In good vegetative condition. Key ecological processes still influence the site. Under appropriate management, it can remain resilient to existing or potential threats

## Management threats and response

Potential and actual threats to the sustainability of Whitecliffs and Mount Messenger conservation areas' ecological values are as follows:

Threats to ecological values	Level of risk	Comment
Pest animals	Medium	Possums, goats, cats, mustelids, and rats
Weeds	Low	Pampas
Habitat modification	Low	Pipeline corridor traverses Whitecliffs Conservation Area

Site protection measures addressing potential threats and actual threats are as follows:

Site protection	Yes/No	Description
<b>A</b> Public ownership or formal agreement	Yes	Public Conservation Estate (Conservation Area and Scenic Reserve administered by the Department of Conservation in association with Ngati Tama)
<b>B</b> Regulatory protection by local government	Yes	General regional or district rules might apply
<b>C</b> Active protection	No	





## Wiremu Road Wetland

### At a glance (last updated: February 2006)

TRC reference:	0956-0	Ecological district:	Egmont
Other reference:		LENZ environment:	H1.3b
Land tenure:	Private	Protection status:	B, C
GPS:	2593743E – 6201241N	Area:	7.7 ha

### Location

The Wiremu Road Wetland is located on privately owned land, 10 km north of Opunake. The wetland lies in the Egmont Ecological District.

### General description

The Wiremu Road Wetland covers 7.7 ha and consists of dense secondary forest vegetation and includes palustrine wetland.

Overall the wetland is in very good condition, with an excellent range of flora and fauna.

### Ecological features

#### Vegetation

Vegetation within the Wiremu Road Wetland includes kahikatea (*Dacrycarpus dacrydiodes*), pukatea (*Laurelia novae zelandiae*) and tawa (*Beilschmiedia tawa*) emergent over a canopy consisting of kamahi (*Weinmannia racemosa*), and swamp maire (*Syzygium maire*). Lancewood (*Pseudopanax crassifolium*), swamp coprosma (*Coprosma tenuicaulis*), pate (*Schefflera digitata*), coprosma (*Coprosma grandifolia*) and mahoe (*Melicytus ramiflorus*), are all present in the understorey.



Grazing has affected the understorey around the edges. However, away from the edges, ground cover consists of seedlings of species represented in the canopy, mosses, kiekie (*Freycinetia baueriana* subsp. *banksii*), bush flax (*Astelia fragrans*), herbs, and *Juncus*. Epiphytes include rata (*Metrosideros* spp.).

Wetlands with swamp maire are much reduced from their former extent.

### Fauna

The Wiremu Road Wetland is important for winter feeding as it is at lower altitude than the nearby Egmont National Park.

The wetland has kereru/New Zealand pigeon (*Hemiphaega novaeseelandiae*), which is identified as 'Chronically Threatened (Gradual Decline)'. Other birdlife present include tui (*Prosthemadera novaeseelandiae*), fantail (*Rhipidura fuliginosa*) and pukeko (*Porphyrio porphyrio*).

### Ecological values

Ecological values	Rank	Comment
Rarity and distinctiveness	Medium	Contains the 'Chronically Threatened' New Zealand pigeon
Representativeness	Medium	Contains indigenous vegetation on H1.3b – an 'Underprotected' LENZ environment
Ecological context	High	Wetlands with swamp maire are much reduced from their former extent. Also provides an important winter feeding ground for indigenous fauna, including the threatened New Zealand pigeon The wetland is in close proximity to Egmont National Park and Kawerora Wetland
Sustainability	Positive	In good vegetative condition. Key ecological processes still influence the site. Under appropriate management, it can remain resilient to existing or potential threats

## Management threats and response

Potential and actual threats to the sustainability of the Wiremu Road Wetland's ecological values are as follows:

Threats to ecological values	Level of risk	Comment
Pest animals	Low to medium	Possums, cats, rabbits, rats, mice, and magpies
Weeds	Low	Blackberry
Habitat modification	Medium	Unfenced and affected by livestock grazing around the edges

Site protection measures addressing potential threats and actual threats are as follows:

Site protection	Yes/No	Description
<b>A</b> Public ownership or formal agreement	No	QEII Covenant in progress
<b>B</b> Regulatory protection by local government	Yes	General regional and district rules might apply
<b>C</b> Active protection	Yes	Self Help Possum Control Programme



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## Appendix I: LENZ classifications Level II in relation to Taranaki

Classification	Description
A5	Widespread. Consisting of flat sites at low elevation levels (30 to 70 metres above sea level)
C1	Consisting mostly as scattered small units of poorly-drained flat or gently undulating plains along rivers and streams on lahar deposits in Taranaki. Soils are poorly to very poorly-drained and of low natural fertility
C2	Gently undulating plains. Loess is the predominant parent material, along with some fine alluvium. Soils are of imperfect drainage and low natural fertility
C3	Dry, low-lying flat plains. While loess is the most widespread soil material, alluvium and old dune sands are also common. Soils are generally imperfectly drained
D1	Strongly rolling hills with very low fertility. Predominant soil parent materials are deeply weathered andesites with greywacke and sandstone locally important
D2	Consists of easy rolling hills at low elevations. Greywacke is the most extensive soil parent material but tertiary mudstones and rhyolitic ash are also common. Soils are mediumly well-drained and of low natural fertility
D4	Steep mountains and hills. Greywacke with some argillite the predominant parent material Soils are well drained, of low fertility. No annual water deficits
F1	The largest and most geographically diverse of the Level II environments and includes the extensively dissected Tertiary hills of inland Taranaki. Soils consist of mudstones and sandstones and are well-drained of low natural fertility
F5	Encompasses the rolling lower slopes of the Taranaki ring plain. Soils are generally well-drained and of high natural fertility and are formed from either andesitic ash and lahar deposits
F6	Steep mountains with well drained low fertility soils from mid age rhyolitic tephra
F7	Encompasses undulating landforms of the central volcanic plateau and has a high mean elevation (500 m average). The distinctive, well-drained but relatively infertile soils are formed from rhyolitic ash, much of it deposited in a major eruption approximately 1800 years ago
G1	Consists of gentle undulating coastal dunes. Dune sands are by far the most extensive soil parent material. Soils are well drained but of low natural fertility
G3	Widely distributed along gently sloping flood-plains of rivers and larger streams throughout the northern half of the North Island. Soil parent materials are mostly fine-textured alluvium with some rhyolitic ash, dune sand and loess. Drainage is medium and the natural soil fertility is medium to low
G5	Of very limited extent, this environment consists of three coastal wetlands on the north Taranaki coast at Mokau and Waitoetoe. These wetlands have very poorly-drained, saline soils formed from fine estuarine alluvium
H1	Occurs widely at low to medium elevations throughout the central and southern North Island and along the north coast of the northern South Island. In Taranaki, it consists of lower elevation, well-drained soils of low natural fertility formed from andesitic ash
H2	Recent well drained soils of low fertility developed from rhyolitic tephra on easy rolling hills
H3	In Taranaki, H3 occurs on gently undulating flood plain in the eastern Taranaki – primarily along the Mangehu River. Soil parent materials are andesitic alluvium and mostly have poor or imperfect drainage and of medium fertility
H4	Upper parts of the Taranaki ring plain. Cool climate, high solar radiation, nil annual water deficits. Soils formed from fine textured andesitic tephra and alluvium have high fertility but imperfect drainage
J4	Flat flood plains. Mixed alluvium and dune sands are the most widespread soil parent materials with some volcanic ash and loess
P4	Volcanic cone of Mount Taranaki, cold temperatures, high solar radiation, well drained soils of high fertility from andesitic tephra
P7	Steep mountainous terrain at an elevation of 960metres asl with well drained soils of low fertility from andesitic tephra with some greywacke, argillite and sandstone
P8	Steep mountainous terrain. Soils formed on parent material of andesite imperfectly drained with low fertility





## Appendix II: Description of the New Zealand Threat Classification System

NZ threat classification		Description
<b>Acutely Threatened</b>	<b>Nationally critical</b>	Very small population or a very high predicted decline.
	<b>Nationally endangered</b>	Small population and moderate to high recent or predicted decline or small to moderate population and high recent or predicted decline.
	<b>Nationally vulnerable</b>	Small to moderate population and moderate recent or predicted decline.
<b>Chronically Threatened</b>	<b>Serious decline</b>	Moderate to large population and moderate to large predicted decline, or small to moderate population and small to moderate predicted decline.
	<b>Gradual decline</b>	Moderate to large population and small to moderate decline.
<b>At Risk</b>	<b>Sparse</b>	Taxa with very small, widely scattered populations.
	<b>Range restricted</b>	These taxa either occur in a small geographic area, are restricted to a particular habitat, or require very specific substrates, and for colonial breeders, have fewer than 10 subpopulations.





