

Pukeiti

At a glance (last updated: 30/06/09)			
TRC reference:	Ecological district:	Egmont	
Other reference:	LENZ environment:	F1.1b (27.3ha)	
		F5.3b (303.3ha)	
		F5.2a (3.5ha)	
Land tenure:	Private	Protection status:	A, B, C
GPS:	E1685028 N5661130	Area:	334.0 ha

Location

Pukeiti is located on Carrington Road, approximately 25 kilometres south from New Plymouth. Pukeiti lies in the Egmont Ecological District.

General description

Pukeiti is a 334 hectare Private Scenic Reserve consisting almost entirely of indigenous forest but with approximately 10 hectares of exotic garden. It is bordered on three sides by Egmont National Park with the Pouakai Ranges to the south and Kaitake Ranges to the north.

Ecological features

Vegetation

Pukeiti has a high diversity of vascular plants. The forest canopy predominantly consists of kamahi (*Weinmannia racemosa*), with components of tawa (*Beilschmedia tawa*), hinau (*Elaeocarpus dentatus*), and to a lesser extent toro (*Mrysiene salicina*), pukatea (*Laurelia novae-zelandiae*) and rewarewa (*Knightia excelsa*). Emergent rata are scattered through the Reserve, however podocarps are relatively scarce due to past logging.

Understorey species include pigeonwood (*Hedycarya arborea*), mahoe (*Melicactus ramiiflorus*), tree fuschia (*Fuschia excorticata*), raurekau (*Coprosma grandifolia*), (*Coprosma tenuifolia*), (*Alseuosmia macropophylla*), wheki (*Dicksonia squarrosa*), soft tree fern (*Cyathea smithii*), gully tree fern (*Cyathea cunninghamii*), mamaku (*Cyathea medullaris*). Common climber species include rata (*Metrosideros fulgens*), kiekie (*Freycinetia banksii*), supplejack (*Ripogonium scandens*) and *Parsonsia capsularis*.

The ground cover comprises a variety of ferns including hen and chicken fern (*Aplenium bulbiferum*) and *Blechnum fluviatile*, as well as localised patches of bush rice grass (*Microlaena avenacea*) giant moss (*Dawsonia superba*) and tawa,

kamahi, rimu and hinau seedlings.

Hutu (*Ascarina lucida*) is also present at this site. This species is not threatened but is uncommon in the North Island and has a particularly restricted distribution in Taranaki.

Fauna

Pukeiti hosts a greater number and variety of forest birds than other comparably sized forested areas nearby – including Egmont National Park. Native bird species present include the 'Chronically Threatened (Serious Decline) New Zealand pigeon (*Hemiphaga novaeseelandiae*). Other notable birdlife present include shining cuckoo (*Chrysococcyx lucidus lucidu*), long tailed cuckoo (*Eudynamis taitensis*), morepork (*ninox novaeseelandiae noveseelandiae*), kingfisher (*Halcyon sancta vangans*), whitehead (*Mohoua albicilla*) grey warbler (*Gerygone igata*), North Island fantail (*Rhipidura fuliginosa placabilis*), North Island tomtit (*Petroica macrocephala toitoi*), silvereye (*Zosterops lateralis lateralis*) bellbird (*Anthornis melanura melanura*) and tui (*Prosthemadera novaeseelandiae novaeseelandiae*).

The North Island rifleman (*Acanthisitta chloris granti*) and North Island brown kiwi (*Apteryx australis mantelli*) were also previously found in the Reserve. These species are present in the adjacent Egmont National Park and could probably inhabit this site again given adequate protection from predators. North Island kaka (*Nestor meridionalis septentrionalis*) and New Zealand falcon (*Falco novaeseelandiae*) visit the site occasionally. The forest gecko (*Hoplodactylus granulatus*) is also likely to be present at this site

The tributaries of the Timaru Stream within the Reserve are inhabited by native fish including the 'Chronically Threatened (Gradual Decline)' shortjaw kokopu (*Galaxias postvectis*) and long finned eel (*Anguilla dieffenbachia*). Other native fish include the banded kokopu (*Galaxias fasciatus*) and koaro (*Galaxias brevipinnis*).

Ecological values

Ecological values	Rank	Comment
Rarity and distinctiveness	High	Contains the regionally distinctive hutu (<i>Ascarina lucida</i>), a species of restricted distribution in Taranaki.
Representativeness	High	Contains small area of indigenous vegetation on 'Acutely Threatened' LENZ environments – F5.2a.
Ecological context	High	Pukeiti has a high diversity of vascular plants, highest of all the scenic reserves in west Taranaki. Contiguous with Egmont National Park. Provides important linkages between the Kaitake and Pouakai ranges and is a very good source of food for wildlife.
Sustainability	Positive	Key ecological processes still influence this site. Under appropriate management it can remain resilient to existing or potential threats

Other values

Pukeiti has very high recreational and educational value. The public are free to visit the site during opening hours to walk its numerous forest tracks and enjoy its birdlife. Moreover, Pukeiti is long running community based conservation and enhancement project which has involved many volunteers in pest control and planting over the years.

Management threats and response

Potential and actual threats to the sustainability and ecological values of Pukeiti are as follows:

Threats to ecological values	Level of risk	Comment
Pest animals	Low/medium	Possums, goats, stoats, cats, rodents and hedgehogs.
Weeds	Low	Weed control is undertaken but care should be taken with regards to what is planted in the gardens.
Habitat modification	Low	Formally protected but there is potential for gardens to encroach on forest, and for plantings of native species that would not occur naturally.

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

Site protection	Yes/No	Description
A Public ownership or formal agreement	Yes	Private Scenic Reserve
B Regulatory protection by local government	Yes	General regional or district rules might apply
C Active protection	Yes	Planting Weed control Some possum, goat, stoat and feral cat control



Tikorangi (Covenant 05/06/164)

At a glance (last updated 22/07/09.)	
TRC reference:	Ecological district: Egmont
Other reference: QEII 05/06/164	LENZ environment: F5.2a
Land tenure: Private	Protection status: A, C
GPS: 2625828E – 6239695N	Area: Total 11.7 ha

Location

QEII covenant 05/06/164 consists of three bush blocks located on private land close to the end of Tikorangi Road, 9.2 km south-east of Waitara. It lies in the Egmont Ecological Region.

General description

QEII covenant 05/06/164 consists of three small forest fragments (Block A 4.24ha, Block B 3.37ha, Block C 4.1ha) that total 11.7ha in size. All three blocks are on uplifted marine terrace approximately 80m above sea level.

Ecological features

Vegetation

Each of the three forest fragments that make up QEII covenant 05/06/164 contains unique types of semi coastal primary forest.

Block A is swamp forest on flat ground with emergent with emergent kahikatea (*Dacrycarpus dacrydiodes*), tawa (*Beilschmedia tawa*), pukatea (*Laurelia novae-zealandiae*). Canopy dominants in this block include kamahi (*Weinmannia racemosa*) *Hoheria sixtylosa* and swamp maire (*Syzygium maire*). Understorey species common in Block A include karamu (*Coprosma robusta*), kawakawa (*Macropiper excelsum*), lancewood (*Pseudopanax crassifolius*), mahoe (*Melicytus ramiflorus*) and pate (*Schefflera digitata*).

Block B is terrestrial forest on an easy hillside with emergent rimu (*Dacrydium cupressinum*), kohekohe (*Dysoxylum spectabile*) and rewarewa (*Knightia excelsa*) and canopy dominants including tawa (*Beilschmedia tawa*), mamaku (*Cyathea medullaris*), puka (*Griselinia lucida*), nikau (*Rhopalostylis sapida*) and karaka (*Corynocarpus laevigatus*).

Block C is terrestrial forest that exists partly on flat terrace and partly on steep hillslope and contains emergent rewarewa (*Knightia excelsa*) and kahikatea (*Dacrycarpus dacrydiodes*), and canopy dominants including putaputaweta (*Carpodetus serratus*), hinau (*Eloeocarpus dentatus*), puriri (*Vitex lucens*).

Present in the understorey within these three blocks are karamu (*Coprosma robusta*), kawakawa (*Macropiper excelsum*), lancewood (*Pseudopanax crassifolius*), mahoe (*Melicytus ramiflorus*), pate (*Schefflera digitata*) five finger (*Pseudopanax arboreus*) and fuschia (*Fuschia excortica*).

Ground cover and epiphyte species present include *Blechnum spp.*, silver fern (*Cyathea dealbata*), kiekie (*Freycinetia baueriana*), supplejack (*Ripogonium scandens*), rata (*Meterosiderous robusta*) and *Astelia spp.*

Fauna

Forest birds including grey warbler (*Gerygone irata*), fantail (*Rhipidura fulginosa*), silvereve (*Zosterops lateralis*), tui (*Prosthemadera novaeseelandiae*), New Zealand pigeon (*Hemiphaga novaeseelandiae*), bellbird (*Anthornis melanura*) and morepork (*ninox novaeseelandiae*). Western North Island brown kiwi is also present in the area. The site (which is not large enough to sustain a pair of kiwi on its own) and nearby larger remnants form part of the home range of a kiwi population.

Ecological values

Ecological values	Rank	Comment
Rarity and distinctiveness	Low	Not known to contain any 'Acutely Threatened' species or species uncommon in Taranaki
Representativeness	High	Contains indigenous vegetation on ecosystem type (F5.2c) that is 'Acutely Threatened'. Also contains swamp maire which occupies <2% of its former extent.
Ecological context	Medium	Relatively isolated remnants
Sustainability	Positive	Key ecological processes still influence the site. Under appropriate management, it can remain resilient to existing or potential threats

Other values

Educational values: Tikorangi School are involved with predator control at this site, primarily for kiwi protection purposes.

Management threats and response

Potential and actual threats to the sustainability and ecological values of QEII covenant 05/06/164 are as follows:

Threats to ecological values	Level of risk	Comment
Pest animals	Medium	Possums, cats and rodents.
Weeds	Low	Barberry (<i>Berberis darwinii</i>), woolly nightshade (<i>Solanum mauritianum</i>), wandering willy (<i>Tradescantia fluminensis</i>), blackberry (<i>Rubus spp.</i>)
Habitat modification	Low	Covenanted area has been fenced to exclude livestock

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

Site protection	Yes/No	Description
A Public ownership or formal agreement	Yes	QEII covenant
B Regulatory protection by local government	Yes	General regional and district rules may apply
C Active protection	Yes	Fully fenced Mustelid control around the perimeter and some possum control Weed control



Waitotara East Dunes

At a glance (last updated: 30/06/09)	
TRC reference:	Ecological district: Foxton
Other reference:	LENZ environment: J4.2a (178.2ha) C3.1a (97.6ha)
Land tenure: Crown	Protection status: A, B
GPS: E1745653 N5586924	Area: 277.4 ha

Location

Waitotara East Dunes is located on Crown land but is administered by the South Taranaki District Council as a Recreation Reserve. The Reserve lies 10 km south west of Waverly and is in the Foxton Ecological District.

General description

The Waitotara East Dunes cover 277.4 ha and is located on the true left bank of the Waitotara River. The Reserve consists of area of actively eroding broken foredune, and extensive series of undulating dunes and hollows further inland parallel to the beach and limestone and sedimentary rock outcrops along the beach.

Ecological features

Flora

The foredune is made of up spinifex (*Spinifex sericeus*) and the 'Chronically Threatened (Gradual Decline)' pingao (*Desmoschoenus spiralis*) with scattered exotic marram (*Ammophila arenaria*).

The flats behind are mostly of sand sedge and spinifex, while the dune complex behind carries marram, spinifex and pingao, with large areas of moving sand. The extensive inland dunes are dominated by marram, with exotic lupin (*Lupinus arboreas*) and boxthorn (*Lycium ferocissimum*) scrub along with native cassinia (*Cassinia retorta* and/or *C. leptophylla*). The limestone cliffs carry the 'Range Restricted' sand coprosma (*Coprosma acerosa*) and sea celery (*Apium prostratum*).

Fauna

The Waitotara East Dunes contain the 'Acutely Threatened (Nationally Endangered) Southern North Island speckled skink (*Oligosoma* aff. *infrapunctatum* "Southern North Island"). The 'Chronically Threatened (Serious Decline) red katipo spider (*Latrodectus katipo*) and the 'Sparse' carabid beetle (*Brullea antarctica*) is also present.

The Reserve also provides habitat for coastal and migratory birds and is occasionally visited by the 'Acutely Threatened (Nationally Critical)' kotuku or white heron (*Egretta alba modesta*).

Ecological values

Ecological values	Rank	Comment
Rarity and distinctiveness	High	Contains 'Acutely Threatened' Southern North Island speckled skink. Also contains 'Chronically Threatened' pingao and katipo spider, the 'Sparse' carabid beetle <i>Brullea antarctica</i> and the 'Range Restricted' sand coprosma.
Representativeness	High	Contains indigenous vegetation on J4.2a and C3.1a – both 'Acutely Threatened' LENZ Environments.
Ecological context	High	Relatively large area adjacent to the Hawken's Lagoon Conservation Area and Hawken's Swamp. Provides key habitat for threatened plant, reptile and invertebrate species and habitat for coastal and migratory birds.
Sustainability	Positive	Key ecological processes still influence this site. Under appropriate management it can remain resilient to existing or potential threats

Other values

The Waitotara East Dunes are adjacent to the Waitotara River, which is a popular whitebaiting area.

Management threats and response

Potential and actual threats to the sustainability and ecological values of Waitotara East Dunes are as follows:

Threats to ecological values	Level of risk	Comment
Pest animals	High	Feral cats, rodents, mustelids, hedgehogs, possums, rabbits, hares and stock.
Weeds	High	Marram, lupin and boxthorn.
Habitat modification	Medium	Site is a Recreation Reserve but is subject to damage from people driving on the dunes and is poorly fenced.

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

Site protection	Yes/No	Description
A Public ownership or formal agreement	Yes	Recreation Reserve
B Regulatory protection by local government	Yes	General regional and district rules might apply
C Active protection	No	



Welbourn School Bush

At a glance (last updated: 30 June 2009)	
TRC reference:	Ecological district: Egmont
Other reference:	LENZ environment: F5.2b
Land tenure: Crown (Ministry of Education)	Protection status: B,C
GPS: E1694605, N5674687	Area: 1.2 ha

Location

Welbourn School Bush lies within New Plymouth City at Welbourn School. The Te Henui walkway runs through the bush alongside the adjacent Te Henui Stream. The bush lies in the Egmont Ecological District.

General description

Welbourn School Bush is a small 1.2ha lowland/semi coastal forest remnant and is administered by the Ministry of Education. The majority of the bush lies on a well drained steep south facing gully slope with a flattish swampy bottom immediately adjacent to the Te Henui Stream.

While the bush is small, it forms an important part of a larger habitat fragment matrix. This site is less than 250m from Welbourn Scenic Reserve (another Key Native Ecosystem) and is adjacent to other covenanted areas. The bush is also less than 500m from Brooklands Park and several other patches of forest, some of which it is connected to by riparian vegetation along the banks of Te Henui Stream.

Ecological features

Vegetation

Welbourn School Bush is dominated by kohekohe (*Dysoxylum spectabile*). Kohekohe forest now has a very limited distribution nationally due to clearance and its high vulnerability to possum browse. Other canopy species present include tawa (*Beilschmiedia tawa*), pukatea (*Laurelia novae-zealandiae*), puriri (*Vitex lucens*) and rewa rewa (*Knightia excelsa*).

In the understory kawa kawa (*Macropiper excelsum*), mahoe (*Meliccytus ramiflorus*), hange hange (*Geniostoma rupustre*), raurekau (*Coprosma grandifolia*), pigeonwood (*Hedycarya arborea*), wineberry (*Aristostelia serrata*), pate (*Schefflera digitata*), lancewood (*Pseudopanax crassifolius*) and nikau (*Rhopostylis sapida*) are present.

On the ground, kiekie (*Freycinetia banksii*) is very common. Common ferns include hen and chicken fern (*Asplenium bulbiferum*), *Blechnum novae-zealandiae*, gully fern (*Pneumatopteris pennigera*), kiwakiwa (*Blechnum fluviatile*) and hairy fern (*Lastreopteris hispida*). The regionally rare and 'Chronically Threatened (Gradual Decline)' king fern (*Marattia salicina*) is also present.

Epiphytic species present include hanging spleenwort fern (*Asplenium flaccidum*), fragrant fern (*Microsorium scandens*), scarlet rata (*Metrosiderous fulgens*) and white rata (*Metrosiderous perforata*). This site is also inhabited by a good diversity of native orchid species including one that is restricted to the Te Henui (*Nemtoceras rivularis* aff. *Te Henui*).

Fauna

Welbourn School Bush provides habitat for 'Chronically Threatened (Gradual Decline)' gold-stripe gecko (*Hoplodactylus chryssirecticus*) – a species which is largely restricted to Taranaki.

The site also provides habitat for the 'Chronically Threatened' (Gradual Decline)' New Zealand pigeon (*Hemiphaga novaeseelandiae*). Other native forest bird species including tui (*Prosthemadera novaeseelandiae*), morepork (*Ninox novaeseelandiae*) grey warbler (*Gerygone igata*) and fantail (*Rhipidura fuliginosa*). The site is likely to be inhabited by copper skink (*Cyclodina aenea*).

Welbourn School Bush also provides protection to the habitat of threatened native fish within the adjacent Te Henui Stream. Native fish species include the 'Chronically Threatened (Gradual Decline)' giant kokopu (*Galaxias argenteus*), shortjaw kokopu (*Galaxias postvectis*) and long finned eel (*Anguilla dieffenbachia*). Lamprey (*Geotria australis*) which are classified as 'At Risk (Sparse)' is also present in the stream.

Ecological values

Ecological values	Rank	Comment
Rarity & distinctiveness	High	Regionally distinctive in that it contains the 'Chronically Threatened' gold stripe gecko, a species largely endemic to Taranaki and a rare orchid - <i>Nemtoceras rivularis</i> aff. <i>Te Henui</i> – which is restricted to the Te Henui. Also contain the regionally rare and 'Chronically Threatened' king fern. Also contains the 'Chronically Threatened' New Zealand pigeon
Representativeness	Medium	Contains a small area (1.2ha) of indigenous vegetation on F5.2b - an 'Acutely Threatened LENZ environment. Kohe kohe forest is of very restricted distribution nationally
Ecological context	Medium	Is close to and interconnected with other indigenous forest remnants that provide seed sources and corridors for dispersal of fauna and flora
Sustainability	Positive	Although relatively small site, key ecological processes still influence the site

Other values

Welbourn School bush has important educational and recreational values for pupils of Welbourn School and the public who use the Te Henui walkway respectively.

Management threats and response

Potential and actual threats to the sustainability of Welbourn School Bush ecological values are as follows:

Threats	Level of risk	Comment
Pest animals	High	Possum
	Low	Mustelids
	Medium	Rodents
	Low	Hedgehogs
Weeds	High	There are many weeds impinging on the values of this site including climbing asparagus (<i>Asparagus scandens</i>), old mans beard (<i>Clematis vitalba</i>), jasmine (<i>Jasmine polycanthum</i>), Japanese honeysuckle (<i>Lonicera japonica</i>), wild ginger (<i>Hedychium gardnerianum</i>) and wandering willy (<i>Tradescantia fluminensis</i>).
Habitat modification	Low-medium	Low for slopes, higher for the flat area at the top of the slope

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

Site protection	Yes/No	Description
A Public ownership or formal agreement	No	Site is owned by Ministry of Education. However, the Crown land is not managed for conservation purposes.
B Regulatory protection by local government	Yes	General regional and district rules might apply
C Active protection	Yes	Possum & mustelid control is conducted by New Plymouth District Council along the Te Henui walkway Some planting and weeding has been conducted in the past

