

## Canaan Bush

### At a glance

TRC Reference: BD/9581	LENZ:	F5.2b Acutely threatened
Ecological District: Egmont	National:	Priority 1 - Threatened Land Environment
Land Tenure: Private		Priority 4 - Threatened Species
Area(ha): 2.7	Regional:	Potential KNE
GPS: 1696258X & 5674781Y	Regional Ecosystem Loss:	Chronically threatened 10-20% left
Bioclimatic Zone: Semi-Coastal	Catchment:	Waiwhakaiho (392)
Habitat: Forest Remnant		

Ecosystem Type    WF13: Tawa, kohekohe, rewarewa, hinau, podocarp forest

### General Description

The Canaan Bush KNE is a 2.7 ha remnant of semi-coastal forest adjacent to another 2.1 ha of NPDC owned reserve which borders the Waiwhakaiho river. The ecosystem type is classified as WF13, Tawa, kohekohe, rewarewa, hinau, podocarp forest. The remnant is an example of cutover forest with a reasonable canopy cover and regenerating undergrowth. The site provides good connectivity to other Key Native Ecosystems in the area including Umutekai bush, Welbourn school bush and Dorset road bush.

### Ecological Features

#### Flora

The main canopy of the remnant is dominated by pukatea, tawa, kohekohe, puriri and rewarewa. The lower canopy is dominated by mahoe, pigeonwood and tree ferns. A good mix of seedlings and saplings are present including kawakawa, mapou, pate and kanono. A variety of native ferns are also present in the groundcover, including large numbers of the 'regionally distinctive' jointed fern and the 'at risk' kingfern. The area is classified as an 'Acutely Threatened' land environment (F5.2b).

#### Fauna

Bird life in the remnant is fairly typical for the margin of the New Plymouth urban area. Native birds such as tui, kereru, fantail, and grey warbler are present. Good habitat exists for native reptiles including epiphytes, loose bark, abundant foliage, leaf litter and forest ground cover. The site will contain a diverse range of invertebrates which may include notable species such as Peripatus.

### Ecological Values

Sustainability - Positive	Key ecological processes still influence the site and with appropriate management, it can remain resilient to existing or potential threats. The site has the additional benefit of being formally protected.
Ecological context - High	Provides habitat for regionally distinctive species and is an important link in a corridor of native vegetation along the sides of the Waiwhakaiho river.
Representativeness - High	The ecosystem type is WF13, Tawa, kohekohe, rewarewa, hinau, podocarp forest which is classified as 'Chronically threatened'. There is approximately 16% of this type of ecosystem left in the Taranaki region.

Rarity and Distinctiveness - High

Provides habitat for the 'regionally distinctive' jointed fern and the 'at risk' kingfern.

### Other Management Issues

Habitat Modification - Low

The site is protected by a QEII covenant.

Possum Self-help

Possums are controlled in conjunction with the self help possum control program.

Herbivores - Low

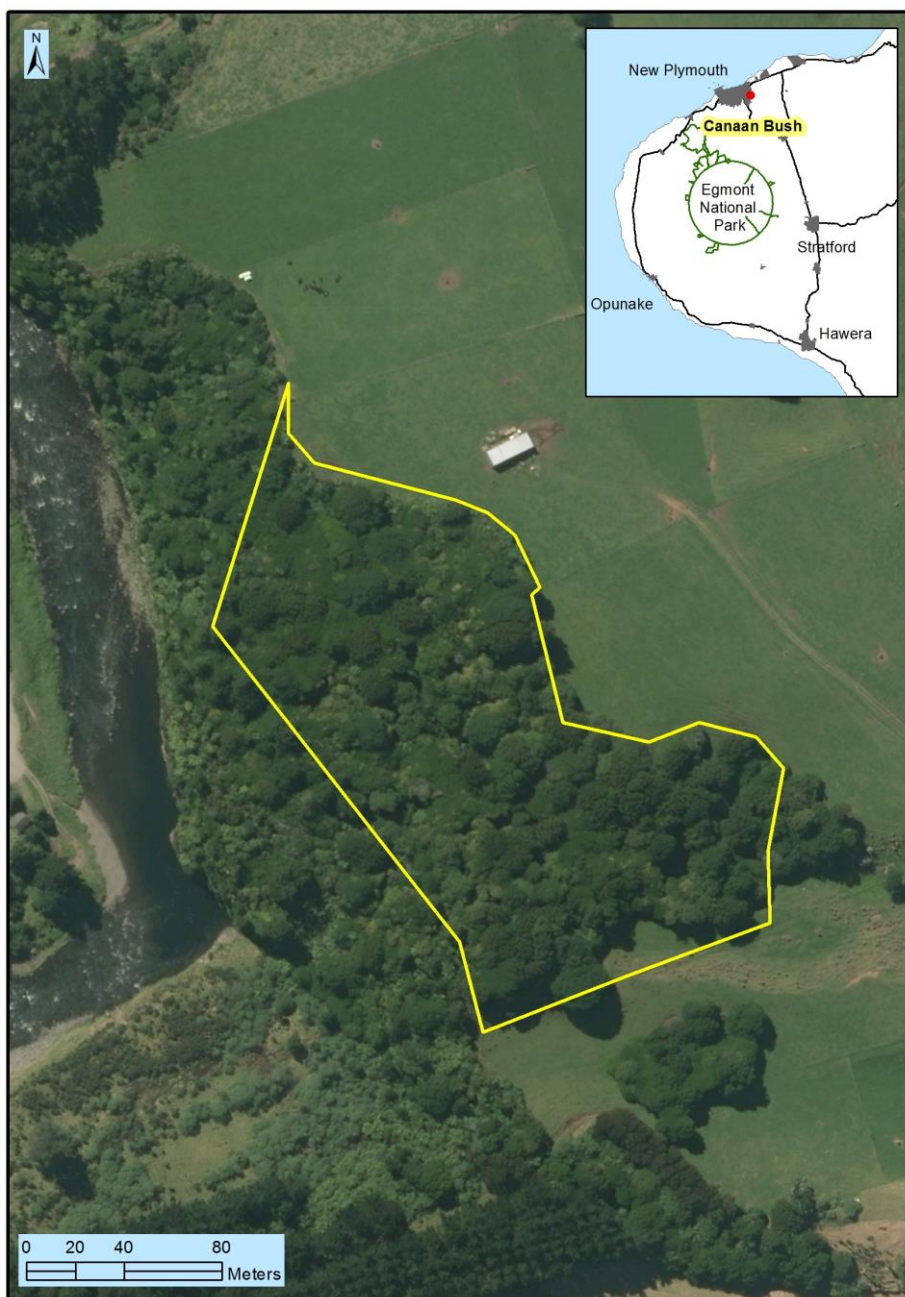
The site is securely fenced.

Predators - High

Cats, mustelids, hedgehogs and rats.

Weeds - Medium

Small numbers of ginger, woolly nightshade and cherry trees around the edges. Other pest plant species are found in the adjacent NPDC owned remnant.



## Dobbs Family Trust

### At a glance

TRC Reference: BD/9585	LENZ:	F5.2b Acutely threatened
Ecological District: Egmont	National:	Priority 1 - Threatened Land Environment
Land Tenure: Private	Regional:	Potential KNE
Area(ha): 2.5	Regional Ecosystem Loss:	Chronically threatened 10-20% left
GPS: 1703280X & 5671600Y	Protection Status:	QEII Covenant
Bioclimatic Zone: Semi-coastal/lowland	Catchment:	Waiongana (394)
Habitat: Forest Remnant		

Ecosystem Type    WF13: Tawa, kohekohe, rewarewa, hinau, podocarp forest

### General Description

The Dobbs Family Trust KNE is a 2.5 ha remnant of semi-coastal forest located on Hursthouse road, approximately 5km south of Lepperton. The ecosystem type is classified as WF13, Tawa, kohekohe, rewarewa, hinau, podocarp forest. The canopy is dominated by kohekohe and the undergrowth is healthy due to the exclusion of stock. The Dobbs Family Trust KNE is in the Egmont ecological district and provides connectivity to the Te Wairoa and Tarurutangi Swamp KNE's.

### Ecological Features

#### Flora

The canopy is dominated by kohekohe and tawa with pukatea in the wetter areas. The understory is in good condition and contains a range of shrub and fern species.

#### Fauna

The site provides good habitat for native bird species including tui and kereru. Other native birds recorded from the site include kingfisher and shining cuckoo.

### Ecological Values

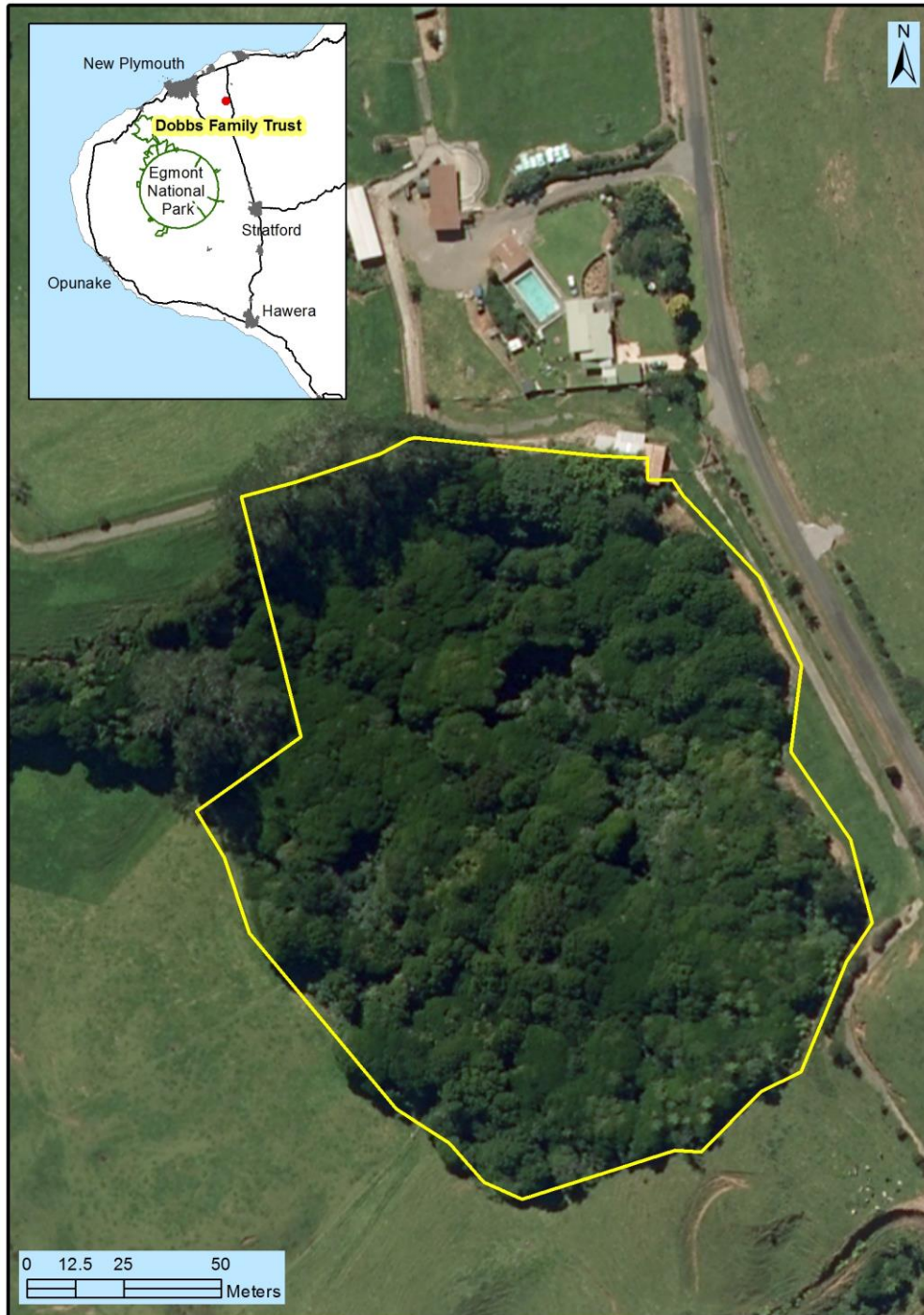
Sustainability - Positive	In good and improving vegetative condition. Key ecological processes still influence the site. Under appropriate management, it can remain resilient to existing or potential threats.
Ecological context - High	Provides important habitat and good connectivity with other Key Native Ecosystems in the area.
Representativeness - High	The ecosystem type is WF13, Tawa, kohekohe, rewarewa, hinau, podocarp forest which is classified as 'Chronically threatened'. There is approximately 16% of this type of ecosystem left in the Taranaki region.
Rarity and Distinctiveness - Low	No threatened or at risk species have been recorded from the site.

### Other Management Issues

Habitat Modification - Low	The site is protected with a QEII covenant.
Weeds - Medium	Weeds at the site include Tradescantia, bamboo, and blackberry.

Predators - High

Possums are controlled in conjunction with the self help possum control program. The native fauna at the site would benefit from a predator control program. Other predators include cats, mustelids, hedgehogs and rats.



## Howell's Bush

### At a glance

TRC Reference: BD/9588	LENZ:	F7.2a At risk
Ecological District: North Taranaki		F5.2a Acutely threatened
Land Tenure: Private	National:	Priority 1 - Threatened Land Environment
Area(ha): 7.3		Priority 4 - Threatened Species
GPS: 1731192X & 5693223Y	Regional:	Potential KNE
Bioclimate Zone: Semi-Coastal	Regional Ecosystem Loss:	Chronically threatened 10-20% left
Habitat: Coastal/Forest Remnant	Protection Status:	QEII Covenant
	Catchment:	Waikaramarama (934)
Ecosystem Type	WF13: Tawa, kohekohe, rewarewa, hinau, podocarp forest	

### General Description

Howell's Bush is located on privately owned land 15km North East of Urenui near the end of Pukearuhe Road in North Taranaki. The terrain of the bush remnant is mainly a steep gully and gully sidling of the Waikaramarama stream and stream tributary. The site is located adjacent and partly connected to the Pukearuhe Scenic Reserve and also includes an area of steep hillside vegetation to the east. The area is in the North Taranaki Ecological District.

### Ecological Features

#### Flora

The canopy of the forest in the lower main gully area is a mix of puriri, kohekohe, tawa, rewarewa, mahoe and tree ferns etc. The lower canopy is dominated by mahoe, pigeonwood, kawakawa, hangehange and tree ferns. The upper area basin canopy is dominated by mahoe and nikau with a scattering of rewarewa and karaka. The area is partly classified as and 'Acutely Threatened' (F5.2a) and 'At Risk' (F7.2a) land environments.

#### Fauna

The proposed covenant area provides a small forest habitat for native birds such as tui, kereru, fantail, grey warbler, shining cuckoo and bellbird. Good habitat exists for native reptiles and invertebrates which will include notable species. The Waikaramarama stream in the lower valley provides habitat for, and will contain, notable freshwater fish species such as the 'Regionally Distinctive' banded kokopu.

### Ecological Values

Ecological context - High	Provides additional connectivity of priority habitats in the area including the Pukearuhe Scenic Reserve. Provides habitat for 'At Risk' species such as kingfern and likely to contain other priority species such as notable freshwater fish and reptiles.
Rarity and Distinctiveness - Medium	Contains the 'At Risk' kingfern and likely to contain other notable values such as reptiles and freshwater fish.
Representativeness - Medium	Contains indigenous vegetation on 'Acutely Threatened' (F5.2a) and 'At Risk' (F7.2a) LENZ land environments and is a remnant of a Chronically Threatened ecosystem type in Taranaki (WF13: Tawa, kohekohe, rewarewa, hinau, podocarp forest).

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.

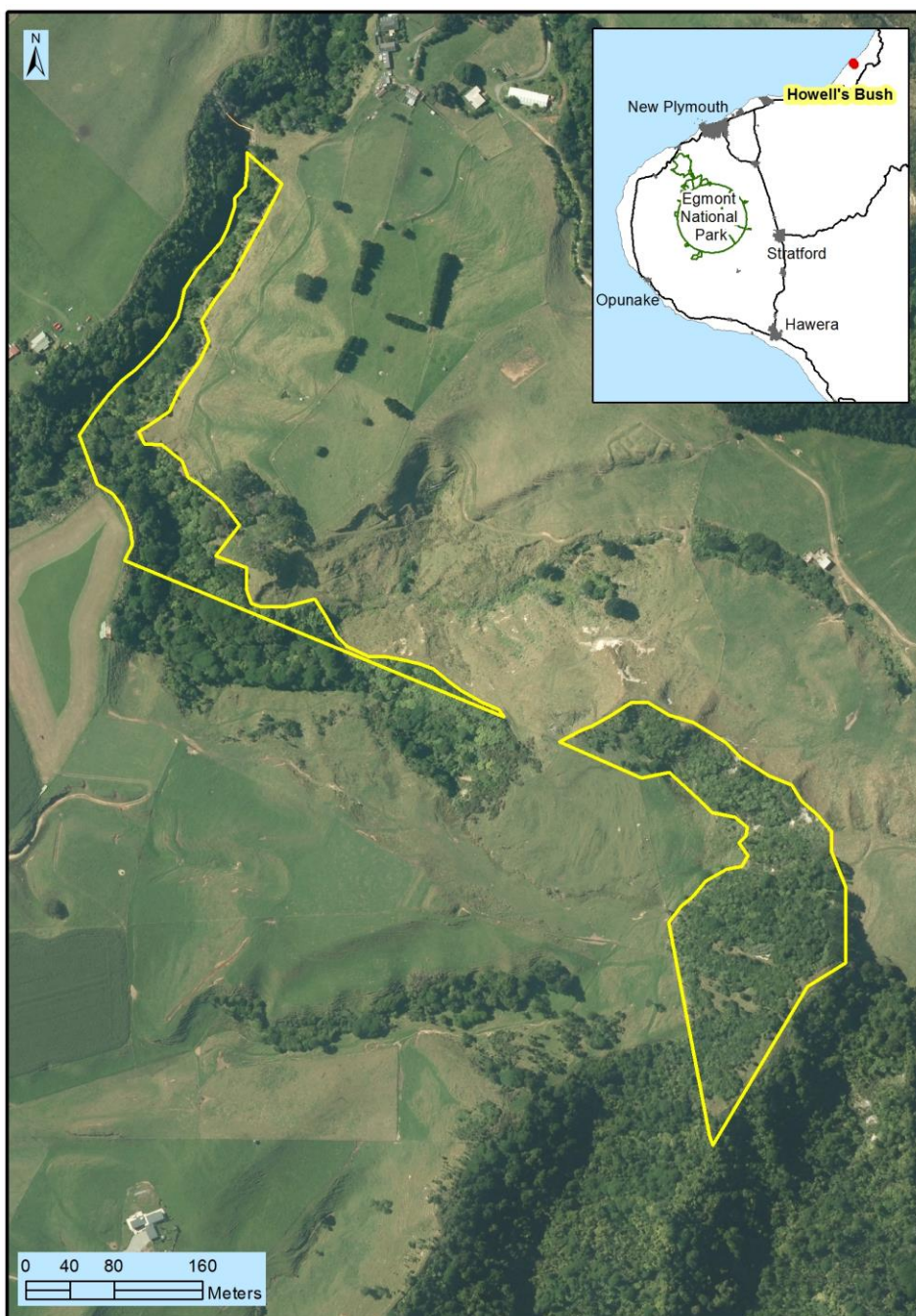
### Other Management Issues

Habitat Modification - Medium Modified in some areas where stock have grazed although mainly intact.

Herbivores - Medium Stock currently have access to the gorge margin although will be excluded in future if covenanted and fenced. Possum sign was common and will be having some impact on forest canopy health.

Predators - Medium Rodents, mustelids, possums, cats and hedgehogs will be impacting on flora and fauna values at the site.

Weeds - Medium Occasional patches and individual weeds such as pampas, inkweed, gorse, wattle etc.



## Ian and Jean Kurth

### At a glance

TRC Reference: BD/9586	LENZ:	F5.2b Acutely threatened
Ecological District: Egmont	National:	Priority 1 - Threatened Land Environment
Land Tenure: Private	Regional:	Potential KNE
Area(ha): 3.8	Regional Ecosystem Loss:	Chronically threatened 10-20% left
GPS: 1688960X & 5671593Y	Catchment:	Herekawe (388)
Bioclimatic zone: Semi-Coastal		
Habitat: Forest Remnant		

Ecosystem Type    WF13: Tawa, kohekohe, rewarewa, hinau, podocarp forest

### General Description

The Ian and Jean Kurth KNE is comprised of one existing QEII trust covenanted area and two pending QEII trust covenant areas of semi-coastal bush located along the Mangahererangi stream between Barrett and Sealy roads in the Herekawe stream catchment. The ecosystem type is classified as WF13, Tawa, kohekohe, rewarewa, hinau, podocarp forest. The remnants are examples of cutover forest with a reasonable canopy cover and regenerating undergrowth. The sites provide good connectivity to other Key Native Ecosystems in the area including Ratapihipihi Scenic reserve, Berridge twin bush, Omata bush and Omata school bush.

### Ecological Features

#### Flora

The main canopy of the remnants is dominated by pukatea, kahikatea, tawa, kohekohe, puriri and rewarewa. The lower canopy is dominated by mahoe, pigeonwood and tree ferns. A good mix of seedlings and saplings are present including kawakawa, mapou, pate and kanono. A variety of native ferns are also present in the groundcover, including the 'regionally distinctive' jointed fern. The area is classified as an 'Acutely Threatened' land environment (F5.2b).

#### Fauna

Bird life in the remnant is fairly typical for the margin of the New Plymouth urban area. Native birds such as Tui, kereru, fantail, and grey warbler are present. Good habitat exists for native reptiles including epiphytes, loose bark, abundant foliage, leaf litter and forest ground cover. The small stream may be suitable for the regionally distinctive banded kokopu or other native fish species.

### Ecological Values

Ecological context - High	The sites provide good connectivity to other Key Native Ecosystems in the area including Ratapihipihi scenic reserve, Berridge twin bush and Omata School bush.
Rarity and Distinctiveness - Medium	Contains the 'regionally distinctive' jointed fern.
Sustainability - Positive	Key ecological processes still influence the site and with appropriate management, it can remain resilient to existing or potential threats.
Representativeness - High	The ecosystem type is WF13, Tawa, kohekohe, rewarewa, hinau,

podocarp forest which is classified as 'Chronically threatened'. There is approximately 16% of this type of ecosystem left in the Taranaki region.

### Other Management Issues

Habitat Modification - Medium

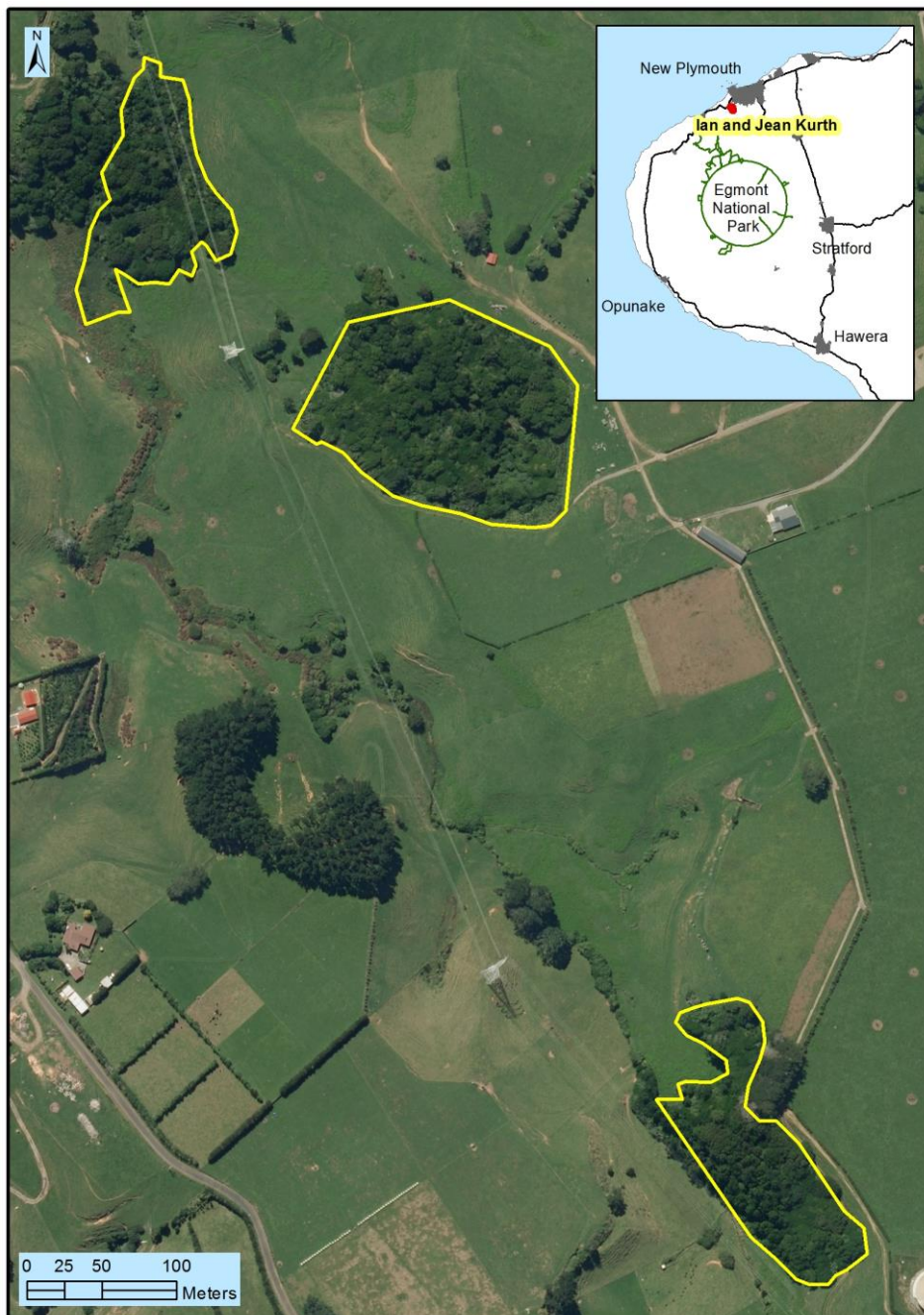
Once covenants are established on all three areas the potential for habitat modification will be greatly reduced.

Predators - High

Possums, cats, mustelids, hedgehogs and rats.

Weeds - High

A large old mans beard infestation in the established QEII covenant area is the main weed threat. Other weed species include woolly nightshade, ginger, and Japanese honeysuckle found along the edges of the remnants.





# Kaihuahua

## At a glance

TRC Reference: BD/9587	LENZ:	F5.2a Acutely threatened
Ecological District: North Taranaki	National:	Priority 1 - Threatened Land Environment
Land Tenure: Private		Priority 4 - Threatened Species
Area(ha): 2.4	Regional:	Potential KNE
GPS: 1729273X & 5689542Y	Regional Ecosystem Loss:	Chronically threatened 10-20% left
Bioclimatic Zone: Semi-Coastal	Protection Status:	QEII Covenant
Habitat: Coastal/Forest Remnant	Catchment:	Waiiti (401)
Ecosystem Type	WF13: Tawa, kohekohe, rewarewa, hinau, podocarp forest	

## General Description

Kaihuahua is located approximately ten kilometres northeast of Urenui in North Taranaki. The terrain of the small 2.4ha semi coastal bush remnant is mainly a gully and gully sidling of an unnamed tributary of the Waiiti stream and includes a small mounded hill top pa site. The site is located close to larger areas of habitat and the Pukatea KNE is within 1.5km of this site. The area is in the North Taranaki Ecological District.

## Ecological Features

### Flora

The canopy of the forest remnant is a mix of puriri, kohekohe, tawa, rewarewa, titoki, pukatea, mahoe and tree ferns. The lower canopy is dominated by mahoe, pigeonwood, kawakawa and hangehange. Groundcover is abundant in areas and includes the 'At Risk' kingfern and 'Regionally Distinctive' fern *Deparia petersenii*. The area is classified as an 'Acutely Threatened' (F5.2a) land environment.

### Fauna

The proposed covenant area provides a small forest habitat for native birds such as tui, kereru, fantail, grey warbler and bellbird. Good habitat exists for native reptiles and invertebrates which will include notable species. The Waiiti stream tributary flowing through the forest provides habitat for, and will contain, notable freshwater fish species such as the 'Regionally Distinctive' banded kokopu.

## Ecological Values

Ecological context - High	Provides additional connectivity of priority habitats in the area including the Pukatea KNE. Provides habitat for 'At Risk' species such as kingfern and likely to contain other priority species such as notable freshwater fish and reptiles.
Rarity and Distinctiveness - Medium	Contains the 'At Risk' kingfern and likely to contain other notable values such as reptiles and freshwater fish.
Representativeness - High	Contains indigenous vegetation on 'Acutely Threatened' (F5.2a) LENZ land environment and is a remnant of a Chronically Threatened ecosystem type in Taranaki (WF13: Tawa, kohekohe, rewarewa, hinau, podocarp forest).
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 Management Issues

Habitat Modification - Low	Modified in some areas with very old historic pa site earthworks.
Herbivores - Medium	Possum sign was common and will be having some impact on forest canopy health.
Predators - Medium	Rodents, mustelids, possums, cats and hedgehogs will be impacting on flora and fauna values at the site.
Weeds - Medium	Occasional patches and individual weeds such as woolly nightshade, inkweed and gorse.



## Pukekura Park

### At a glance

<b>TRC Reference:</b> BD/9578	<b>LENZ:</b>	F5.2b Acutely threatened
<b>Ecological District:</b> Egmont	<b>National:</b>	Priority 4 – Threatened Species
<b>Land Tenure:</b> District		Priority 1 – Threatened Land Environment
<b>Area(ha):</b> 46.1		Priority 2 – Sand Dunes and Wetlands
<b>GPS:</b> 1693579X & 5675126Y	<b>Regional:</b>	Potential KNE
<b>Bioclimatic Zone:</b> Semi-Coastal		State of Environment Site
<b>Habitat:</b> Forest Remnant/Wetland	<b>Regional Ecosystem Loss:</b>	Chronically threatened 10-20% left
	<b>Protection Status:</b>	Local Government
	<b>Catchment:</b>	Huatoki (389)

**Ecosystem Type**    WF13: Tawa, kohekohe, rewarewa, hinau, podocarp forest

### General Description

Pukekura Park is an iconic and well utilised green space located within the urban heart of New Plymouth. It is owned and managed by the New Plymouth District Council. The park consists of both planted and natural native trees and shrubs along with many exotic specimens and includes healthy remnants of mature semi-coastal forest with abundant understorey in places. Modified waterways, wetlands and man-made lakes are present along the length of the park and provide habitat for a variety of bird and fish species.

### Ecological Features

#### Flora

The long history of the park can make it difficult to know which established native trees were remnants of the original forest and which were planted. The most extensive native dominated remnant occurs at the Brooklands end with mature kohekohe, puriri and tawa dominating. Large groves of the At Risk and regionally distinctive king fern are present throughout the park as is an impressive diversity of other ferns and fern allies.

#### Fauna

Tui are the most noticeable native bird within the park although kereru, piwakawaka, kotare, riorio, ruru and pukeko are also present. Little shags, little black shags and black swans are commonly seen in the modified pond areas. The Threatened North Island kaka is a seasonal visitor. The At Risk and Regionally Distinctive goldstripe gecko is present in Pukekura Park and would benefit from predator control. Diverse and extensive habitat also exists for other native reptiles. Three species of introduced Litoria frogs have been recorded within the park and although not native are indicators of environment quality. Native freshwater crayfish/koura, banded kokopu and longfin eels are present in the streams and lakes.

## **Ecological Values**

Sustainability - Positive	Key ecological processes still influence this site. Under appropriate management it can remain resilient to existing or potential threats
Rarity and Distinctiveness - High	The Park is home to many Threatened, At Risk and Regionally Distinctive plant and animal species including the goldstripe gecko, little black shag, longfin eel, king fern and jointed fern.
Representativeness - High	Several habitats are represented within the park including wetlands, lakes, streams and mature remnants of native semi-coastal forest. The land environment is classified as Acutely Threatened (F5.2b) making the site particularly important for threatened biodiversity. At an ecosystem level there is less than 20% of this type of semi-coastal forest left in Taranaki.
Ecological context - High	New Plymouth has around 8.2% indigenous vegetation remaining within its urban area. This is the highest percentage of all New Zealand cities. Pukekura Park contributes a significant part of this and provides an important ecological link to other reserves and forested catchments within the city.

## **Other Management Issues**

Possum Self-help	The Park is part of the Urban Possum Control programme.
Habitat Modification - Medium	Parts of the Park have been extensively modified through the damming of natural streams to create the main lakes. An extensive track network and mature planting (>100years) of both natives and exotics are also part of the Parks modifications. That said there are still sizable areas of mature natural semi-coastal forest and in general, the native and exotic plantings compliment these remnants.
Herbivores - Low	The Park has little to no issues with herbivores. Possums are controlled and no stock, goats, deer or pigs have access to the site.
Predators - High	Although some control is currently undertaken by NPDC, predators are still evident within the Park. Both Norway rats and ship rats are present in the bush and along the stream and lake margins and numerous cats from the surrounding residential houses frequent the area. Stoats, weasels and hedgehogs are also likely to be present. Aggressive exotic bird species such as rosella and myna will also be having an impact on native bird populations.
Weeds - Medium	Weed invasion is patchy in the park with some areas more heavily infested than others. Some of the main problem weeds include Tradescantia, wild ginger, climbing asparagus and selaginella. Giant gunnera is present on the dam along the nearby Straun Walk. Oxygen weed is a problem in the main lakes.



# Pukemiro

## At a glance

TRC Reference: BD/9574	LENZ:	F5.2a Acutely threatened
Ecological District: North Taranaki		C1.2a Acutely threatened
Land Tenure: Private		D2.1b Chronically threatened
Area(ha): 2.72	Regional:	Potential KNE
GPS: 1718097X & 5682863Y	Protection Status:	DOC Covenant
Bioclimate Zone: Coastal	Catchment:	Onaero (398)
<b>Habitat: Coastal/Forest Remnant</b>		

## Ecosystem Type

- DN2: Spinifex, pingao grassland/ sedgeland
- WF13: Tawa, kohekohe, rewarewa, hinau, podocarp forest
- WF8: Kahikatea, pukatea forest

## General Description

The Pukemiro Historic Reserve is administered by Te Runanaga O Ngati Mutunga and is located approximately 2km West of Urenui in the North Taranaki Ecological District. The site is a small (2.7ha) coastal forest next to Onaero river mouth and state highway 3. The site contains two waahi tapu Pukemiro and Puketapu with associated urupa. The site also adjoins the Onaero River Scenic Reserve (9.1ha) which is administered by Department of Conservation.

## Ecological Features

### Flora

A large portion of the site is located on a land environment classified as 'Acutely Threatened' (less than 10% of this type of indigenous vegetation left remaining in Taranaki). The main canopy is a mix of Kohekohe, Pukatea, Mahoe, Titoki, Kowhai, Rewarewa, Lacebark, and is generally in good condition. The understory and ground cover is in good condition and is made up of a wide number of shrub species Kawakawa, Kanono, Rangiora, Red Mapou, Hangehange along with a wide range of ferns including Mamaku. Of note is the presence of the regionally distinctive Tawhirikaro (*Pittosporum cornifolium*) and Waiwaka (*Syzygium maire*).

### Fauna

Native birdlife recorded in and around the site includes the New Zealand pigeon, Grey warbler, Fantail, Silvereye, Tui and Sacred kingfisher.

## Ecological Values

Representativeness - High	Contains indigenous vegetation that is underrepresented in Taranaki, upon a land environment classified as 'Acutely Threatened' and 'Chronically Threatened' (F5.2a, C1.2a, D2.1b LENZ)
Ecological Context - Medium	Provides additional habitat and greater connectivity with other Key Native Ecosystems in this area such as Okoki pa, Kaipikari Leov and Kaipikari Luxtons.
Rarity and Distinctiveness - High	This site provides core habitat for the 'At Risk' Northern blue

penguin. Also contains 'Regionally Distinctive' Tawhirikaro (*Pittosporum cornifolium*) and Swamp Maire Waiwaka (*Syzygium maire*).

Sustainability - Positive

Key ecological processes still influence the site and with appropriate management, it can remain resilient to existing or potential threats.

### Other Management Issues

Herbivore Control

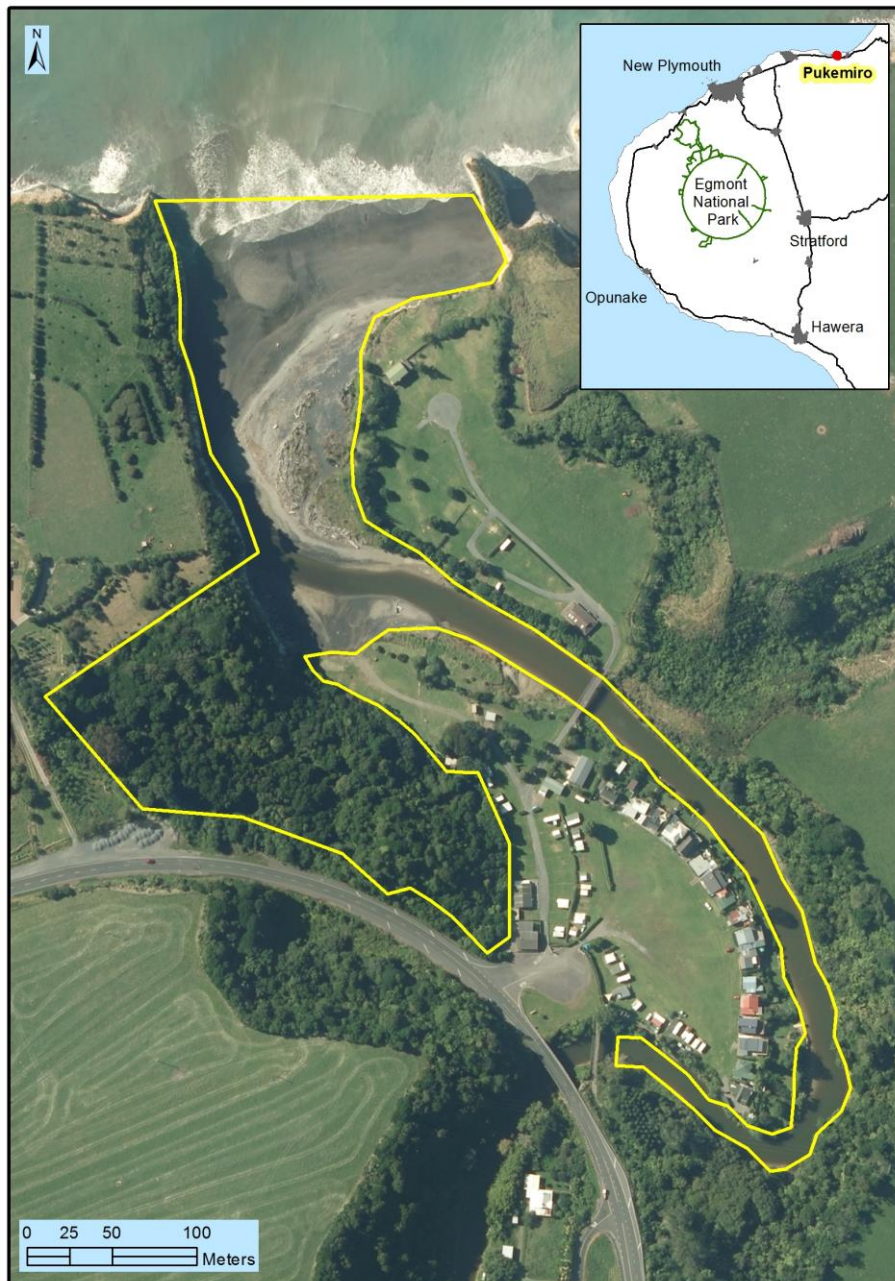
Property lies outside of possum self help programme. Possum control had been carried out in the past by DOC.

Weeds - High

Weed control required on the following: Tradescantia, climbing asparagus, kahili ginger, Woolly nightshade and pampas

Predators - High

Possum, cats, rats, hedgehogs and mustelids. No current predator control.



## Punarima Bush and Wetland

### At a glance

<b>TRC Reference:</b> BD/9567	<b>LENZ:</b>	F5.2c Acutely threatened
<b>Ecological District:</b> Manawatu Plains	<b>National:</b>	Priority 2 – Sand Dunes and Wetlands
<b>Land Tenure:</b> Private		Priority 1 – Threatened Land Environment
<b>Area(ha):</b> 10.1ha total (0.8 + 4.5 + 4.8)	<b>Regional:</b>	Potential KNE
<b>GPS:</b> 1718846X & 5616286Y		State of Environment Site
<b>Bioclimatic Zone:</b> Lowland	<b>Regional Ecosystem Loss:</b>	At risk 20-30% left
<b>Habitat:</b> Forest Remnant/Wetland	<b>Catchment:</b>	Tangahoe (348)

**Ecosystem Type** MF7.3: Tawa, pukatea, podocarp forest  
WL19: Raupo reedland

### General Description

Punarima Bush and Wetland is located approximately 8km East of Hawera off Meremere Road in South Taranaki and lies within the Manawatu Plains Ecological District. The site is made up of remnant native vegetation in the upper reaches of three unnamed tributaries of the Tangahoe river and includes two lowland bush remnants and a raupo and carex dominated swamp.

### Ecological Features

#### Flora

The bush remnants are dominated by tawa and rewarewa with mahoe and mamaku in the subcanopy. A variety of ferns and seedlings are present on the forest floor with patches of parataniwha in the damp areas. Mature specimens of red beech and mangeao not native to this area have been planted in the larger of the two bush remnants along with some eucalyptus. The wetland, although likely to have originally been covered with more swamp forest species, is now dominated by raupo and carex.

#### Fauna

Common native bird species observed in the area include tui, wood pigeon/kereru, grey warbler/riroriro, Australasian harrier/kahu and fantail/piwakawaka. Freshwater fish species such as longfin eel/tuna may be present in the wetland areas.

### Ecological Values

Rarity and Distinctiveness - Low	No threatened or at risk species have been recorded from the remnants although a couple of scattered individual trees of the regionally distinctive ngaio are present in the farmland between the two bush remnants.
Ecological Context - Medium	Provides additional habitat and greater connectivity with other Key Native Ecosystems in the area such as Scott Bush and Tarere Forest extension.



Representativeness - High

The land environment is classified as Acutely Threatened (F5.2c). Indigenous vegetation at sites like these is underrepresented in Taranaki, and especially within the Manawatu Plains Ecological District. At an ecosystem level there is less than 30% of this type of forest left in the region and wetlands are at less than 10% of their former extent.

Sustainability - Positive

Key ecological processes still influence this site. Under appropriate management it can remain resilient to existing or potential threats.

### Other Management Issues

Herbivores - Medium

The property lies outside of the Possum Self Help area. Stock have had internment access to all the remnant areas although improved fencing should reduce the frequency of this.

Weeds - Medium

Weed issues appear to be limited to localised areas. The main weed in the bush areas is banana passionfruit and crack willow in the wetland.

Predators - High

Rats, cats, hedgehogs, possums and mustelids will be present. Currently there is no predator control at the site.



## Upper Mangaotuku

### At a glance

TRC Reference: BD/9573	LENZ:	F5.2b Acutely threatened
Ecological District: Egmont	National:	Priority 1 - Threatened Land Environment
Land Tenure: Private	Regional:	Potential KNE
Area(ha): 8.2	Regional Ecosystem Loss:	Chronically threatened 10-20% left
GPS: 1690807X & 5670312Y	Catchment:	Huatoki (389)
Bioclimatic Zone: Semi coastal		
Habitat: Forest Remnant		

Ecosystem Type    WF13: Tawa, kohekohe, rewarewa, hinau, podocarp forest

### General Description

The Upper Mangaotuku covers 8.2 ha of semi-coastal forest in the Huatoki catchment between Barrett and Frankley roads. The ecosystem type is classified as WF13, Tawa, kohekohe, rewarewa, hinau, podocarp forest. The remnant is part of a larger area of indigenous and exotic forest that is contiguous with the Ratapihipihi scenic reserve. The remnant is an example of cutover old forest with a reasonable canopy cover and regenerating undergrowth. The site provides good connectivity to other Key Native Ecosystems in the area including Omata school bush, Berridge twin bush, Omata Bush, Barret lagoon and the Ratapihipihi Scenic Reserve.

### Ecological Features

#### Flora

The main canopy of the remnant is dominated by pukatea, tawa, kohekohe, puriri and rewarewa. The lower canopy is dominated by mahoe, pigeonwood, tree ferns and young nikau. A good mix of seedlings and saplings are present including kawakawa, mapou, pigeonwood and coprosmas. A variety of native ferns are also present in the groundcover. The area is classified as an 'Acutely Threatened' land environment (F5.2b). Native vegetation in these areas is rare and important for species threatened by habitat loss.

#### Fauna

Bird life in the remnant is fairly typical for the margin of the New Plymouth urban area. Tui are common and other native birds are present such as kereru, fantail, and grey warbler. Good habitat exists for native reptiles including epiphytes, loose bark, abundant foliage, leaf litter and forest ground cover.

### Ecological Values

Sustainability - Positive	Key ecological processes still influence the site and with appropriate management, it can remain resilient to existing or potential threats.
Ecological context - High	The site provides important connectivity with other KNE's in the area and is part of the largest block of tall stature native vegetation on the western outskirts of New Plymouth.
Representativeness - High	The ecosystem type is WF13, Tawa, kohekohe, rewarewa, hinau, podocarp forest which is classified as 'Chronically threatened'. There is approximately 16% of this type of ecosystem left in the Taranaki region.

Rarity and Distinctiveness -  
Medium

No 'threatened' or 'at risk' species have been recorded from the site. It is likely that the Mangaotuku steam would provide habitat for the 'regionally distinctive' banded kokopu.

### Other Management Issues

Habitat Modification - Low

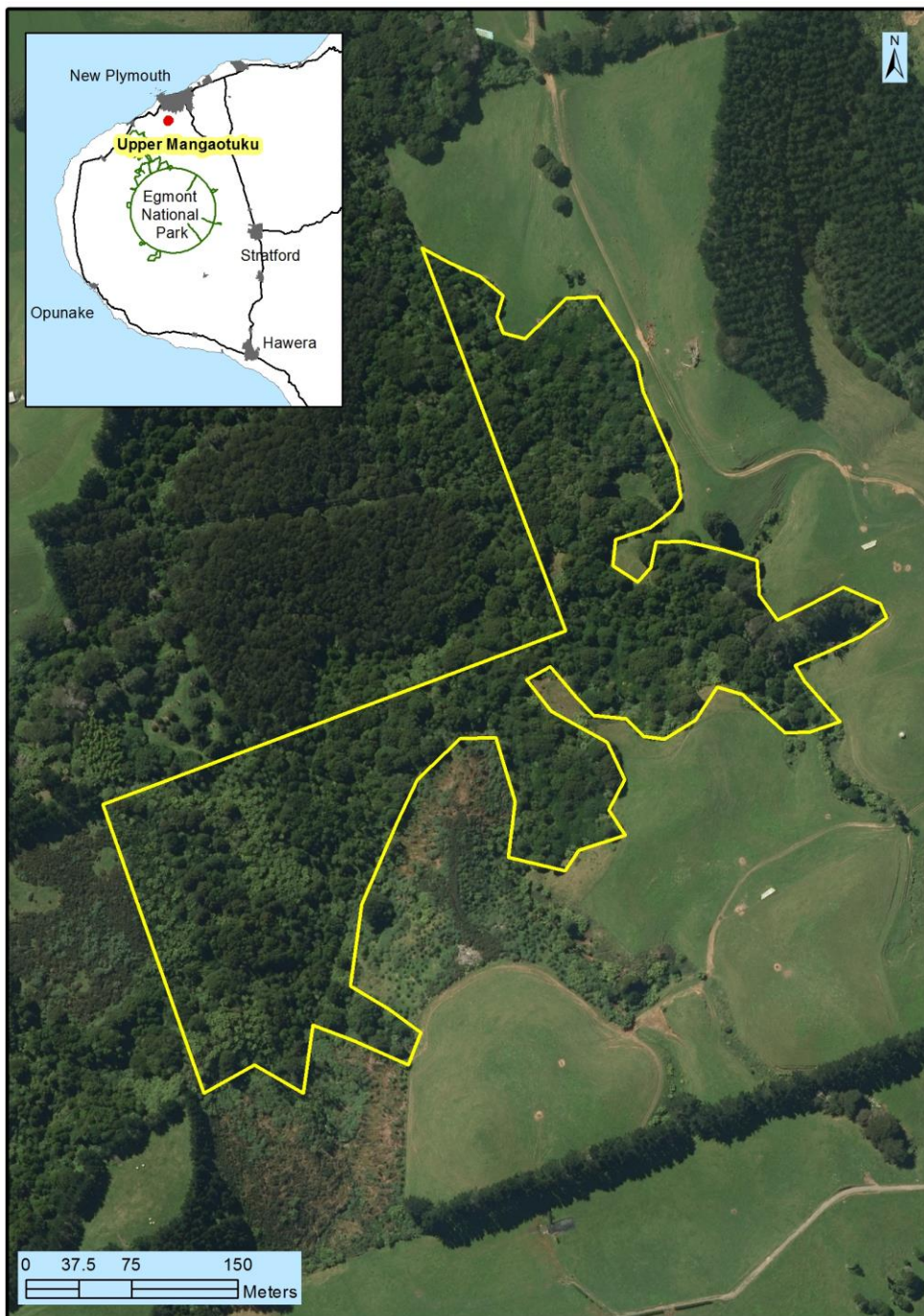
The landowner is working with the QEII trust to establish a covenant on the site.

Predators - High

Possums, cats, mustelids, hedgehogs and rats.

Weeds - High

There are very few weed issues in the more mature areas of the remnant. There are challenging weeds present in the regenerating areas. Weeds include wandering willy, woolly nightshade, gorse and holly.



## Woodside

### At a glance

TRC Reference: BD/7011	LENZ:	F5.2b Acutely threatened
Ecological District: Egmont	National:	Priority 1 - Threatened Land Environment
Land Tenure: Private		Priority 2 - Sand Dunes and Wetlands
Area(ha): 2.55		Priority 4 - Threatened Species
GPS: 1687319X & 5670997Y	Regional:	Potential KNE
Bioclimatic Zone: Semi-coastal	Regional Ecosystem Loss:	Chronically threatened 10-20% left
Habitat: Coastal/Forest Remnant	Protection Status:	QEII Covenant
	Catchment:	Tapuae (386)
Ecosystem Type	WF13: Tawa, kohekohe, rewarewa, hinau, podocarp forest	

### General Description

Woodside is located on private land approximately 3km south west of New Plymouth in North Taranaki. Woodside consists of a small semi coastal forest remnant and wetland on the slopes of a small hill and gully system in the Tapuae Stream catchment. The remnant provides good connectivity with other Key Native Ecosystems nearby such as Twin Bush KNE and Omata School Bush and is located in the Egmont Ecological District.

### Ecological Features

#### Flora

The Woodside KNE contains a very good example of semi coastal forest. The forest canopy consists of tawa, miro, pukatea, kahikatea, rewarewa, puriri and kohekohe. Also present are some excellent examples of the 'Regionally Distinctive' waiwaka, jointed fern and tawhirikaro. The area is classified as an 'Acutely Threatened' land environment (F5.2b). Native vegetation in these areas is rare and important for species threatened by habitat loss.

#### Fauna

Native birdlife recorded in and around Woodside include the New Zealand pigeon/kereru, grey warbler/riroriro, fantail/piwakawaka, tui and morepork/ruru. Notable freshwater species are present in the small tributary of the Tapuae Stream within the forest including 'At Risk' species such as longfin eel. The site is likely to contain other notable species such as the banded kokopu and notable native reptiles and invertebrates.

### Ecological Values

Ecological context - High	Enhances connectivity between fragmented indigenous habitats and KNE's in the area such as Berridge Twin Bush, Tapuae Wetland etc.
Rarity and Distinctiveness - High	Contains the 'At Risk' longfin eel and 'Regionally Distinctive' banded kokopu, jointed fern, swamp maire/waiwaka and Tawhirikaro.
Representativeness - High	Contains vegetation on an 'Acutely Threatened' land environment (F5.2b) and is a remnant of a regionally threatened ecosystem

(WF13: Tawa, kohekohe, rewarewa, hinau, podocarp forest).

Sustainability - Positive

In very good vegetative condition and likely to remain resilient to existing or potential threats.

### Other Management Issues

Habitat Modification - Low

Protected by QEII covenant conditions.

Herbivores - High

Currently fenced and stock proof although vulnerable to stock browsing if fences were breached. Currently under good possum control although vulnerable if possum numbers were high.

Possum Self-help

The site is within the possum self help area.

Predators - Medium

Current predator control will be helping reduce the risk from predators such as rats, mustelids, possums, feral cats and hedgehogs.

Weeds - High

High risk although currently under a successful long running weed control programme. Small localised areas of holly, blackberry and African clubmoss.

