

# Allerby's Bush

## At a glance

TRC Reference: BD/9670	LENZ:	F5.2a Acutely threatened
Ecological District: Egmont	National:	Priority 1 – Threatened Land Environment
Land Tenure: Private		Priority 4 – Threatened Species
Area(ha): 6.3	Regional:	Key Native Ecosystem
GPS: 1708094X & 5669279Y	Regional Ecosystem Loss:	Chronically threatened 10-20% left
Habitat: Forest Remnant	Catchment:	Waiongana (394)
Bioclimatic Zone: Semi-Coastal		
Ecosystem Type: WF13: Tawa, kohekohe, rewarewa, hinau, podocarp forest		

## General Description

The Allerby's Bush site is located on privately owned land 5km northeast of Inglewood and lies in the Egmont Ecological District and Waiongana Stream catchment. The site is approximately 6.3ha in size and comprised of a cutover lowland tawa dominant forest remnant on hill slopes and stream terraces. The remnant is of a native forest type that is classified as 'Chronically Threatened' in Taranaki and falls within an 'Acutely Threatened' Land Environment (LENZ) F5.2a. Remnants such as this provide important habitat for rare and threatened species. Allerby's Bush also offers good connectivity to other nearby habitats, covenants and Key Native Ecosystems in the area such as the Everett Park Scenic Reserve KNE.

## Ecological Features

### Flora

The forest canopy is dominated by tawa with occasional individuals or small stands of miro, pukatea, kohekohe, pigeonwood and rimu (including a few large emergent rimu trees). The understory is dominated by kanono with a mix of other species including kawakawa, pate, pigeonwood, mahoe and tree ferns. Ground cover, climbers and epiphytes are common. Notable flora includes Kirk's tree daisy, kingfern, three species of threatened rata and the 'Regionally Distinctive' tawhirikaro.

### Fauna

Birds are generally in moderate to low numbers in the area and include kereru, tui, fantail, grey warbler, silvereye and morepork. A range of exotic species are also present. Good habitat exists for native reptiles including dense vegetation, epiphytes, loose bark, leaf litter, logs and ground cover. Native notable reptile species may be present such as the goldstripe gecko, forest gecko, striped skink and ornate skink. The habitat will contain a very diverse range of terrestrial invertebrates likely including notable species such as peripatus. A small stream is present which may contain notable native fish species such as kokopu and longfin eels.

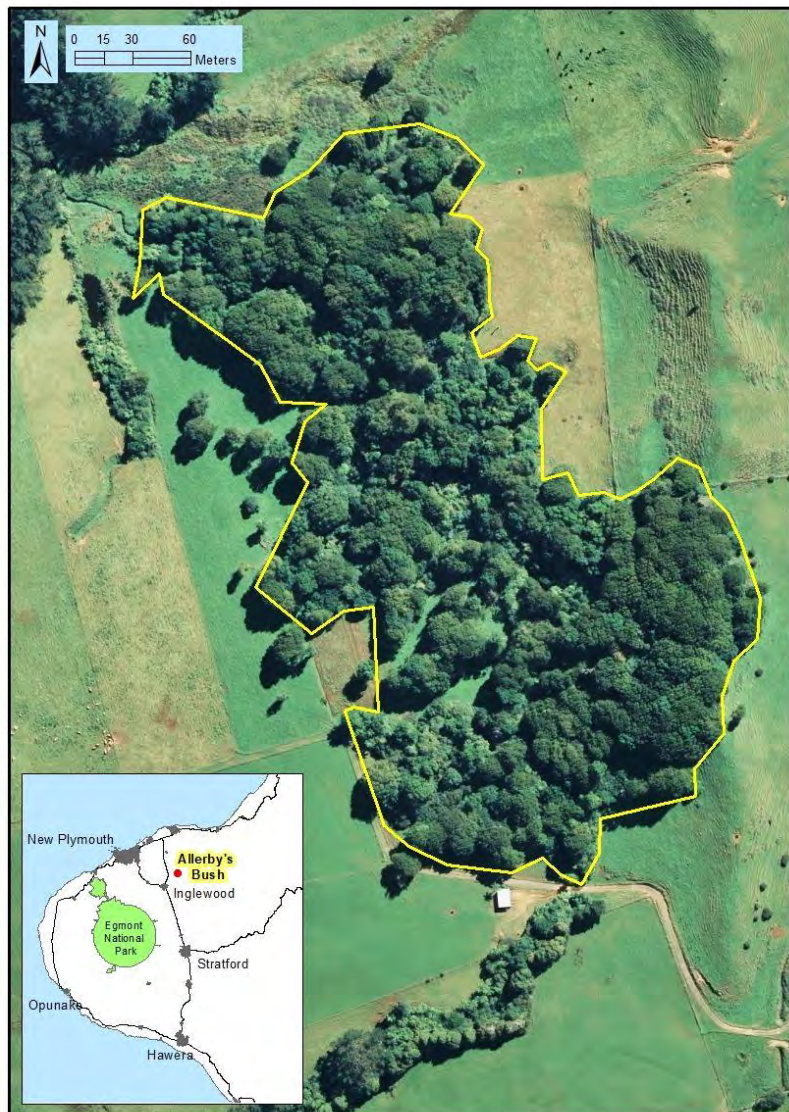
## Ecological Values

Ecological Context - Medium	Provides good connectivity to other nearby habitats, covenants and Key Native Ecosystems in the area such as the Everett Park Scenic Reserve KNE.
Rarity and Distinctiveness - High	Contains notable flora including Kirk's tree daisy, kingfern, three species of threatened rata and the 'Regionally Distinctive' tawhirikaro. Likely to contain notable fauna such as reptiles, invertebrates and native fish.

Representativeness - High	The remnant is an example of forest type WF13 (Tawa, kohekohe, rewarewa, hinau, podocarp forest) and is considered 'Chronically Threatened' with only 10 - 20% of this type of forest remaining in the region. The site also falls within the 'Acutely Threatened' Land Environment (LENZ), F5.2a.
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	Currently fenced and in good condition Potential risk from stock breach and human modification.
Herbivores - High	Potential high risk from browsing although mostly fenced and stock proof.
Possum Self-help	The property is within the possum self-help area and receives sustained possum control.
Predators - Medium	Predators including rodents, mustelids, possums, feral cats and hedgehogs will be having an impact on native species at the site.
Weeds - Medium	Invasive exotic species are present on the forest margins and weeds such as holly, gorse, cherry, tradescantia, barberry and African clubmoss occur in some places within the forest.



## Cornwall Park Bush Remnants

### At a glance

TRC Reference: BD/9665	LENZ:	F5.2a Acutely threatened
Ecological District: Egmont	National:	Priority 1 – Threatened Land Environment
Land Tenure: Private		Priority 4 – Threatened Species
Area(ha): 10.3	Regional:	Key Native Ecosystem
GPS: 1709812X & 5637057Y	Regional Ecosystem Loss:	At risk 20-30% left
Habitat: Forest Remnant	Protection Status:	QEII Covenant
Bioclimatic Zone: Lowland	Catchment:	Waingongoro (350)
Ecosystem Type: MF7.3: Tawa, pukatea, podocarp forest		

### General Description

The Cornwall Park Bush Remnants are located on privately owned land, approximately 3km North West of Eltham Township. The site is comprised of three forest remnants totalling 10.3ha (8.5 ha, 1ha and 0.8ha) and lies in the Waingongoro River catchment within the Egmont Ecological District. The forest historically was cutover, with the canopy now made up of mature tawa and emergent rewarewa. The understory is regenerating well where stock has been excluded, and is dominated by pigeonwood and mahoe. Two of the remnants are connected to riparian margins and provide important habitat in an agriculture dominated landscape.

### Ecological Features

#### Flora

The forest canopy is dominated by tawa and rewarewa. The understory is predominantly made up of pigeonwood and mahoe. Ground cover is mainly sparse through the grazed section, but is flourishing where stock cannot access, with a variety of seedlings and saplings. A mix of ferns, climbers and epiphytes are also fairly common. Recent myrtle rust threats have elevated potentially vulnerable native flora species to 'Threatened' status. Notably, three of these new threatened species are present at this site and include three species of climbing rata. A 'Threatened' species of poroporo is also present at the site.

#### Fauna

Native birds recorded at this site include kereru, tui, silvereye, grey warbler, fantail, kingfisher and harrier. Morepork are also likely to be present. Notably, the At Risk NZ pipit was also recorded at the site. Good habitat exists for a range of other notable native species including reptiles and invertebrates.

### Ecological Values

Sustainability - Positive	The two smaller remnants and a portion of the larger remnant, which are stockproof, are in good vegetative condition and regenerating well with prolific seedlings and saplings present. The other section which is occasionally grazed by drystock would improve dramatically if stock were fully excluded.
Representativeness - Medium	Contains vegetation on an 'Acutely Threatened' (F5.2a) land environment. Is a remnant of an ecosystem considered 'At Risk' (MF7.3: Tawa Pukatea, podocarp forest) from it's pre-european extent. Only 20-30% of this native forest ecosystem type remains in Taranaki. Native biodiversity in these environments has been much reduced, and habitats are seriously fragmented. Therefore the future

persistence of species dependent on habitats in these environments is already compromised. Further habitat loss will exacerbate threats and decrease the security of biodiversity associated with these environments.

Rarity and Distinctiveness - Medium

Provides habitat for and also likely to contain other notable fauna species including reptiles and invertebrates. Also contains three rata species which are newly listed as 'Threatened' flora due to potential vulnerability to myrtle rust. The 'Threatened' Poroporo is also present.

Ecological Context - Low

Extensive fenced riparian strips (both natural and planted) and shelterbelts are present in the area, but substantial mature forest is scarce. Protection and enhancement of this remnant would be valuable to increase native biodiversity in the area.

**Other Management Issues**

Habitat Modification - Medium

Other than the grazing of stock, there are no additional threats to the site.

Herbivores - Medium

Drystock currently have access to a section of the site and will be having an impact on regeneration of forest species.

Possum Self-help

The property falls within the Mountain Road Possum Self Help Area. Trapping and poisoning methods are used.

Predators - Medium

Predators including rodents, mustelids, possums, feral cats and hedgehogs will be having an impact on native species at the site.

Weed Control

Ongoing control of Old Man's Beard has been undertaken by the TRC on site as part of the Direct Control Project along the Waingongoro Stream.

Weeds - High

Weeds, particularly Old Man's Beard, are a current threat to the site. Other weed species including wandering willy, Himalayan honeysuckle and Japanese honeysuckle are also present.





## Fairy Forest

### At a glance

TRC Reference: BD/9687	LENZ:	F5.2a Acutely threatened F7.2a At risk F1.1b Not threatened
Ecological District: North Taranaki	National:	Priority 1 – Threatened Land Environment
Land Tenure: Private	Regional:	Key Native Ecosystem
Area(ha): 3.14	Regional Ecosystem Loss:	Chronically threatened 10-20% left
GPS: 1717331X & 5667068Y	Protection Status:	QEII Covenant
Habitat: Forest Remnant	Catchment:	Waitara (395)
Bioclimatic Zone: Lowland		
Ecosystem Type:		
		WF13: Tawa, kohekohe, rewarewa, hinau, podocarp forest

### General Description

Fairy Forest is located on privately owned land on Toe Toe Road, Tarata, 13km east of Inglewood. The 3.14 ha site is subject to a QEII Covenant and is comprised of a 1.9 ha remnant of lowland tawa, kohekohe, rewarewa, hinau, podocarp forest, the balance being recently retired from farming and planted in native vegetation. The site is bordered by an unnamed tributary to the Waitara River. The forest remnant provides good connectivity to other habitat in the local area, including; small pockets of native forest, wetlands and riparian areas on adjacent farmland and along the Waitara River; the nearby Tarata Conservation Area and Taramoukou Conservation Area, and; nearby KNE's: Ouapui Forest Sanctuary, Junction Road and Totara Mahanga.

### Ecological Features

#### Fauna

Good birdlife is present in the remnant including, kereru, grey warbler, bellbird, tui and fantail. A small stream passes along the foot of the remnant and provides good habitat for native freshwater fish and koura. Notable galaxiid species may be present. There is adequate habitat for terrestrial and arboreal reptile species, ranging from leaf tiller, logs on the forest floor, epiphytes in the canopy and abundant foliage. No reptile records are known for the site, although reptiles will be present and may include threatened or regionally distinctive species.

#### Flora

The canopy of the bush remnant is dominated by totara, tawa and rewarewa. A variety of native vines and epiphytes are present. The understorey is in recovering condition having only been fenced to exclude grazing livestock recently, and includes mahoe, pigeonwood, pate, Rhabdothamnus and numerous ground and tree ferns. The site contains various myrtaceous species (rata vines and manuka) which have been classified as being either 'Nationally Vulnerable' or 'At Risk', owing to the recent introduction of myrtle rust to New Zealand.

### Ecological Values

Ecological Context - Medium	Provides additional habitat and greater connectivity with other Key Native Ecosystems and Department of Conservation reserves in the area.
Rarity and Distinctiveness - Medium	The site contains the 'Nationally Vulnerable' climbing and white rata vines. Also contains the 'At Risk' manuka. Other notable

species may be present at the site that have not been detected during the limited surveys to date.

Representativeness - Medium

The ecosystem type is classified as WF13, Tawa kohekohe, rewarewa, hinau, podocarp forest, of which there is only 16% remaining in Taranaki. Contains a small amount of indigenous vegetation in an area classified as 'Acutely Threatened' (F5.2a, LENZ environment).

Sustainability - Positive

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

### Other Management Issues

Habitat Modification - Low

The site is securely fenced with stock excluded, and is subject to legal protection by conservation covenants. There may be impediments to fish passage lower in the stream catchment, solutions to which could be explored.

Herbivores - High

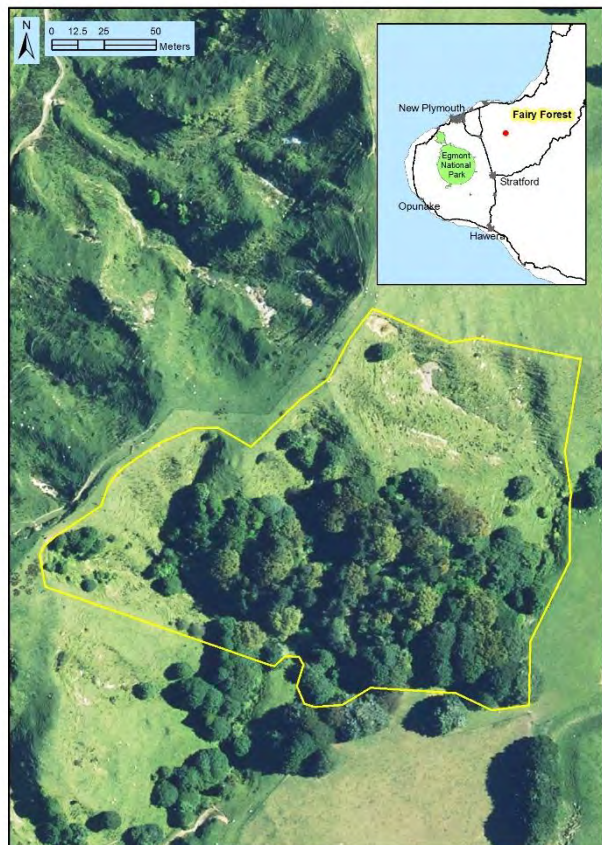
The site is located in the eastern hill country, outside the regional possum self-help area. Vegetation condition, regeneration and re-establishment would benefit by control of browsing pests.

Predators - High

Rodents, mustelids, feral cats and hedgehogs will be present within and around the site. Avifauna and herpetofauna would greatly benefit by routine control of predator species, and species competing for invertebrates, nectar, fruit, seed, buds and leaves.

Weeds - Low

There are numerous exotic species in recently retired/planted pastoral margins and on the forest periphery, although the density of these is currently low. Within the forest area the overall the incidence of pest plants that threaten biodiversity is currently low at the site.



# Fern Grove

## At a glance

TRC Reference: BD/9688	LENZ:	F5.2a Acutely threatened
Ecological District: North Taranaki		F1.1b Not threatened
Land Tenure: Private	Local:	Significant Natural Area
Area(ha): 20.5	National:	Priority 1 – Threatened Land Environment
GPS: 1720589X & 5681041Y		Priority 2 - Wetlands
		Priority 4 – Threatened Species
Habitat: Forest Remnants and wetland	Regional:	Key Native Ecosystem
Bioclimatic Zone: Semi-Coastal	Regional	Chronically threatened 10-20%
Ecosystem Type: WF13: Tawa, kohekohe, rewarewa, hinau, podocarp forest	Ecosystem Loss:	left
WF8: Kahikatea, pukatea forest	Protection Status:	QEII Covenant
	Catchment:	Onaero (398)

## General Description

The Fern Grove KNE is located on private land, approximately 1km south east of Urenui in North Taranaki. It lies in the Onaero River catchment within the North Taranaki Ecological District. The KNE consists of seven small, QEII covenanted, semi-coastal forest remnants and one covenanted wetland that together total 20.5ha. The remnants are examples of native forest types classified as 'Chronically Threatened' in Taranaki and fall within 'Acutely Threatened' Land Environment (LENZ) F5.2a. Remnants such as this provide important habitats for rare and threatened species. Fern Grove also offers good connectivity to other nearby habitats, covenants and Key Native Ecosystems in the area such as the Kaipikari Road Forest Remnants KNE.

## Ecological Features

### Flora

The remnants are made up of a variety of species typical of semi-coastal forests in this part of Taranaki. Drier slopes and terraces are dominated by tawa, rimu, miro, kohekohe, puriri, pigeonwood and tree ferns whereas the damp valley sites contain more swamp forest species, such as swamp maire, pukatea and kahikatea. Understory species include kanono, kawakawa, pate, pigeonwood, mahoe and tree ferns. Climbers and epiphytes are common. Several notable plant species are present including kingfern, swamp maire and two species of threatened rata. Other notable flora species will be present.

### Fauna

Birds are generally in moderate numbers in the area and include kereru, tui, fantail, grey warbler, silveryeye and morepork. A range of exotic species are also present. Good habitat exists for native reptiles including dense vegetation, epiphytes, loose bark, leaf litter, logs and ground cover. Native notable reptile species may be present such as the goldstripe gecko, forest gecko, striped skink and ornate skink. The habitat will contain a very diverse range of terrestrial invertebrates likely including notable species such as peripatus. Small streams are present, which contain notable native fish species, such as banded kokopu and longfin eels.

## Ecological Values

Ecological context - High

A well connected mosaic of habitats that also provide good connectivity to other nearby habitats, covenants and Key Native Ecosystems in the area such as the Kaipikari Road Forest Remnants KNE.

Rarity and Distinctiveness -  
Medium

Contains notable flora including kingfern, two species of threatened rata and the threatened and 'Regionally Distinctive' swamp maire. Also contains notable fauna such as banded kokopu and longfin eels, and also likely to contain other notable species such as reptiles and invertebrates.

Representativeness - High

The remnants are examples of forest types WF13 (Tawa, kohekohe, rewarewa, hinau, podocarp forest) and WF8 (Kahikatea, pukatea forest). They are considered 'Chronically Threatened' with only 10 - 20% of these types of forests remaining in the region. The site also falls within the 'Acutely Threatened' Land Environment (LENZ), F5.2a.

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

Currently fenced and in good condition. Potential risk from stock breach and human modification.

Herbivores - Medium

Potential high risk from stock browsing although mostly fenced and stock proof.

Predators - High

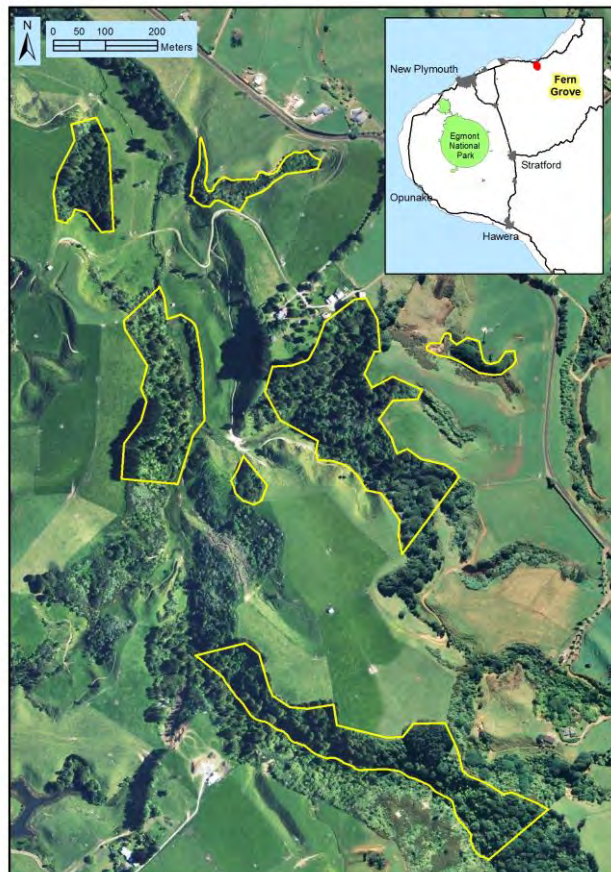
Predators including rodents, mustelids, possums, feral cats and hedgehogs will be having an impact on native species at the site.

Weeds - High

Invasive exotic species are present on the forest margins and within the forest such as Tradescantia and woolly nightshade.

Possum Self-help

Outside the possum self-help area, although receives occasional possum control.





# Fisher Family Bush

## At a glance

TRC Reference: BD/9669	LENZ:	F5.2a Acutely threatened
Ecological District: Egmont		F5.3b Not threatened
Land Tenure: Private	National:	Priority 1 – Threatened Land Environment
Area(ha): 4.5		Priority 2 – Sand Dunes and Wetlands
GPS: 1679940X & 5648313Y	Regional:	Key Native Ecosystem
Habitat: Forest Remnant/Wetland	Regional	Acutely Threatened <10% left
Bioclimatic Zone: Lowland	Ecosystem Loss:	Reduced 30-50% left Less Reduced >50% left
Ecosystem Type: MF7.2: Rata, tawa, kamahi, podocarp forest	Catchment:	Pungaereere (372)
MF8.3: Kahikatea, rimu, kamahi forest		

## General Description

The Fisher Family Bush forest remnants are located approximately 16 km north-east of Opunake off the upper Kahui Road. The site lies in the Egmont Ecological District and the Pungaereere Stream catchment. The 3 lowland bush remnants cover 4.5ha together and are currently fenced. The forest is in good condition with good understory and ground cover.

## Ecological Features

### Flora

The forest canopy and understory is in very good condition due to the site being fenced. Few emergent podocarps are present although the main canopy is dominated by a mix of equal sized rimu, kahikatea, miro, tawa, swamp maire, mahoe and pigeonwood and pukatea. The understory is dominated by kanono with a mix of other species present including pate, five finger, pigeonwood, mahoe, NZ fuchsia and tree ferns. Ground cover, climbers and epiphytes are common. The 'Regionally Distinctive' and Nationally Critical swamp maire is notable for the site and other notable flora species may be present.

### Fauna

Native fauna observed on the initial visit include kereru, tui, silvereye, grey warbler, Australasian harrier and fantail. Other native birds will also be present or use the forest in their foraging area including morepork and bellbird. A rather wet forest floor in Block 1 may provide suitable habitat for the 'At Risk' brown mudfish, and blocks 2 and 3 are bordered by the Pungaereere Stream, providing excellent habitat for other freshwater fish species. There is very good habitat for native reptiles and notable species may be present.

## Ecological Values

Ecological context - High	Part of a mosaic of small habitats in a unique area of lahar deposits on the western ring plain. Nearby priority habitats include the Kahui Road Wetland and Egmont National park and the original Fisher Family bush.
Representativeness - High	Contains vegetation on 'Acutely Threatened' (F5.2a) and 'Not Threatened' (F5.3b) land environments. Is a remnant of ecosystems considered 'Less Reduced' (MF7-2) and 'Reduced' (MF8-3) from their pre-European extent in Taranaki.

Rarity and Distinctiveness -  
Medium

Recent myrtle rust threats have elevated potentially vulnerable native flora species to 'Threatened' status. Notably, five of these new threatened species are present at this site including swamp maire, kanuka and three species of climbing rata. Provides habitat for and likely to contain other notable species including notable native fish and reptiles.

Sustainability - Positive

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

### Other Management Issues

Habitat Modification - Medium

Currently fenced and in good condition. Potential medium risk from stock breach and human modification.

Possum Self-help

Within the possum self-help area and part of the Egmont National park buffer zone.

Predators - Medium

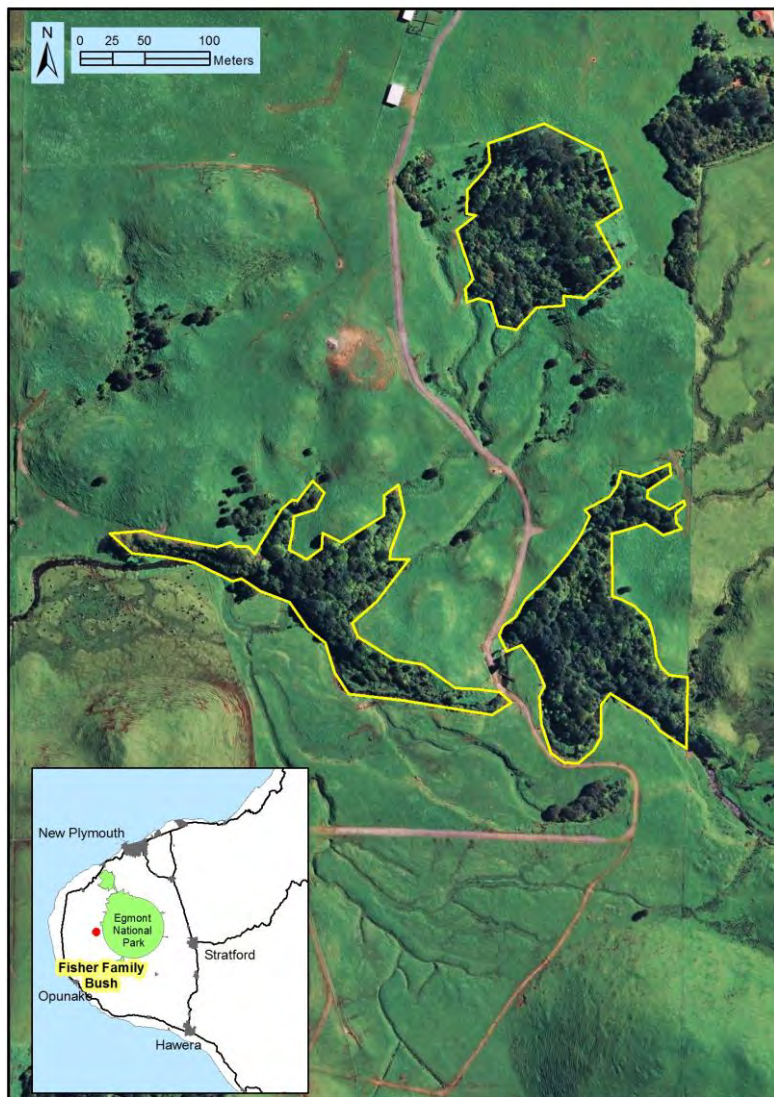
Predators including rodents, mustelids, possums, feral cats and hedgehogs will be having an impact on native species at the site. The site falls within the TPFT Programme.

Weeds - Low

Weed species observed include African clubmoss and blackberry near the edges.

Herbivores - Medium

Potential threat from cattle, only if fences were breached.



# George's Elephant

## At a glance

TRC Reference: BD/9683	LENZ:	F1.3b Not threatened
Ecological District: Matemateaonga	National:	Priority 4 – Threatened Species
Land Tenure: Private		
Area(ha): 57.9	Regional:	Key Native Ecosystem
GPS: 1743306X & 5615705Y	Regional Ecosystem Loss:	Less reduced >50% left

Habitat: Forest Remnant

Bioclimatic Zone: Lowland

Ecosystem Type: MF21: Tawa, kamahi, rimu, northern rata , black beech forest

## General Description

George's Elephant forest remnants are located within the Waitotara catchment, approximately 17kms north of Waverley, in South Taranaki. Four separate remnants make up a total of 57.9ha of well-established regenerating native forest. The site is directly connected to large areas of existing native forest and exotic forestry. It provides important ecological connectivity to other Key Native Ecosystems in this area including the Moeawatea, Nukuhau Lakes Catchment and Mt. Hiwi KNE's, along with DOC land and other private QEII covenants. The underlying geology is steep dissected sandstone typical of the Matemateaonga Ecological District.

## Ecological Features

### Flora

The majority of the forest block is well established regenerating native forest. The forest canopies are mixed and varied in places, with tawa, hinau, pigeonwood, kamahi, rewarewa, manuka and tree ferns. The understory is dominated mainly by unpalatable species such tree ferns, mingimingi and manuka. Notable flora species are present including five species of rata, which have recently been listed as 'threatened' due to recent myrtle rust threats.

### Fauna

Notable birdlife recorded includes the 'At Risk' North Island brown kiwi and North Island robin. Common native birds in the area include the fantail, tui, bellbird, grey warbler, pied tomtit, silvereye, New Zealand pigeon and morepork. Freshwater crayfish and the 'At Risk' redbfin bully are present. Other notable native fauna likely to be present include bats, additional fish, reptiles and invertebrates.

## Ecological Values

Ecological Context - Medium	Collectively, the remnants make up 57.9 ha and are connected to existing native habitats in the area. The site provides good connectivity to other Key Native Ecosystems and habitats in this area including the Nukuhau Lakes Catchment, Mt. Hiwi KNE, Private QEII covenants and Department of Conservation Areas
Rarity and Distinctiveness - Medium	Contains a range of notable fauna including the North Island brown kiwi and North Island robin. A range of other notable fauna will be present. Also contains notable flora species such as manuka, and five species of rata, which have recently been listed as 'Threatened' due to potential vulnerability to myrtle rust.



Representativeness - Low

Contains indigenous vegetation on a 'Less Reduced' LENZ environment and is a remnant of an ecosystem type that is still well represented in Taranaki (>50% remaining)

Sustainability - Positive

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

The forest is recovering well from previous land use in places despite browsing.

Herbivores - High

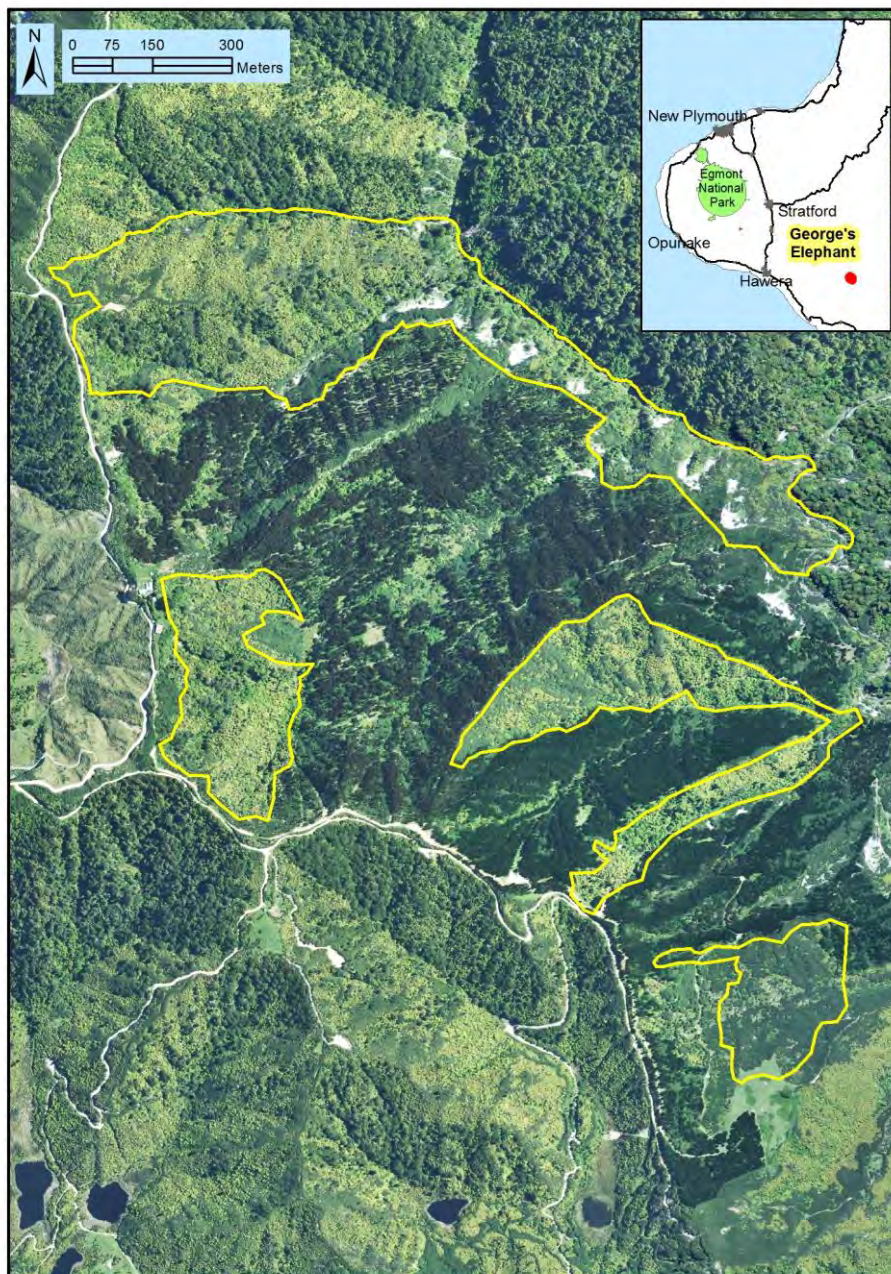
Potential high risk from browsers such as possums, goats and deer in this area on palatable flora species. Bait stations are in place for the control of possums at present.

Predators - High

Potential predator threats are high and include rodents, mustelids, possums, feral cats and hedgehogs.

Weeds - Low

Currently low impacts of weeds in this area.





## Green School

### At a glance

TRC Reference: BD/9673	LENZ:	F5.2b Acutely threatened
Ecological District: Egmont	Local:	Significant Natural Area
Land Tenure: Private	National:	Priority 4 – Threatened Species
Area(ha): 4.2		Priority 1 – Threatened Land Environment
GPS: 1685766X & 5668302Y	Regional:	Key Native Ecosystem
Habitat: Coastal/Forest Remnant	Regional Ecosystem Loss:	Chronically threatened 10-20% left
Bioclimatic Zone: Semi-Coastal	Protection Status:	Local Government
Ecosystem Type: WF13: Tawa, kohekohe, rewarewa, hinau, podocarp forest	Catchment:	Oakura (385) Tapuae (386)

### General Description

Green School KNE is made up of eight small remnants of semi coastal forest totalling 4.2ha and is located 3.4km from Oakura township, in North Taranaki. The site lies in both the Oakura and Tapuae catchments and falls within the Egmont Ecological District. Though the site has no formal protection under a covenant, it is listed as a Significant Natural Area under the New Plymouth District Council's District Plan. The remnants are in close proximity and provide connectivity to several other Key Native Ecosystems in the area, including Egmont National Park, Te Koru Pa, Rewarewa Bush, Pukiekie and McNeils.

### Ecological Features

#### Flora

The remnants are predominately semi-coastal tawa/kohekohe/rewarewa forest. Remnants like these are greatly reduced in Taranaki with less than 20% of this type of forest now remaining in the region. Other canopy trees include titoki, pukatea, black maire, white maire, kahikatea and puriri. A number of other plant species are also present in the sub canopy including karaka, mapou, mamaku, kawakawa, pigeonwood, various coprosmas, silver fern/ponga and mahoe. Climbing species include NZ jasmine, kohia, kiekie, supple jack and three species of threatened rata. The site also contains the Regionally Distinctive tawhirikaro, ngaio and green mistletoe.

#### Fauna

Native birdlife recorded in and around the site include kereru, tui, grey warbler, fantail, silvereye and sacred kingfisher. Good habitat exists for reptiles which may include notable species. Fish life in the Oakura river includes notable species such as giant kokopu, koaro, longfin eels and shortjaw kokopu. Other aquatic life includes the shortfin eel, freshwater crayfish and the introduced brown trout.

### Ecological Values

Ecological Context - Medium	Provides habitat and important linkages along the Oakura river and tributary to the Tapuae stream. The remnants are in close proximity to several other Key Native Ecosystems in the area, including Rewarewa, Pukiekie, Tapuae wetland, McNeil's and Egmont National Park.
Representativeness - High	Contains vegetation on a land environment classified as 'Acutely Threatened' (F5.2b) and is a remnant of a forest type that is chronically threatened in Taranaki.
Rarity and Distinctiveness - High	Provides habitat for notable plant species, including three species of climbing rata (recently listed as threatened due to threats posed

by Myrtle rust), and the regionally distinctive green mistletoe, ngaio and tawhirikaro. Threatened shortjaw kokopu and the At Risk longfin eel, giant kokopu and koaro are also present in the nearby Oakura river.

Sustainability - Positive

Key ecological processes still influence the site and with appropriate management, it can remain resilient to existing or potential threats. Green School will be carrying out extensive native revegetation linking existing remnants on the property. Green School's vision for the site is to provide a hub for environmental education to the wider community.

### Other Management Issues

Possum Self-help

Lies in the possum self-help area of Hurford.

Predator Control

Green school is currently carrying out predator control as part of the Towards Predator free programme and their own trapping network.

Weeds - High

There are weed issues at the various sites, including localised Kahili ginger wandering willy and African clubmoss/Selaginella.

Herbivores - Low

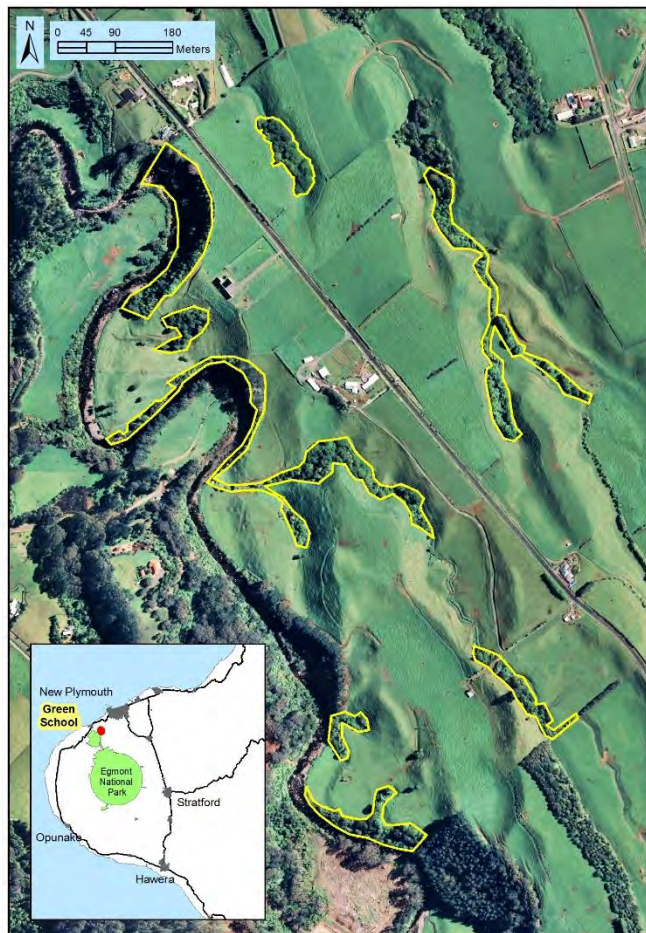
Apart from possums and a low risk of incursion by adjacent stock, there are no other herbivores in the area.

Predators - High

Possums, cats, rats, hedgehogs and mustelids.

Habitat Modification - Low

The remnant is adequately fenced to prevent stock incursion and it has not had stock present in the bush remnants for some time given seedling and young plant presence.



## Inaha stream (PKW Farm 7)

### At a glance

TRC Reference: BD/9685	LENZ:	F5.2c Acutely threatened
Ecological District: Egmont	National:	Priority 1 – Threatened Land Environment
Land Tenure: Private		Priority 4 – Threatened Species
Area(ha): 3.1	Regional:	Key Native Ecosystem
GPS: 1703479X & 5625995Y	Regional Ecosystem Loss:	At risk 20-30% left
Habitat: Forest Remnant	Protection Status:	Local Government
Bioclimatic Zone: Semi-Coastal	Catchment:	Inaha (351)
Ecosystem Type: MF7.3: Tawa, pukatea, podocarp forest		

### General Description

The PKW Farm 7 Inaha stream KNE is a 3.1 ha privately owned forest remnant, on the banks of the Inaha stream. It is located approximately 6kms north west of Normanby, in the Egmont Ecological District. The remnant provides some connectivity to other habitats in the vicinity with good riparian links along the stream margin. Forest remnants such as this, are now very rare in this area.

### Ecological Features

#### Flora

The site is a good example of tawa, pukatea podocarp forest. Less than 30% of this type of forest remains in Taranaki. The forest canopy consists of tawa, titoki, kahikatea, hinau and Northern rata. A good mix of other plant species are present in the sub canopy including karaka, rewarewa, kowhai, ti kouka/cabbage tree, makomako/wineberry, mahoe, mamaku and poporokaiwhiri/pigeonwood. The understorey is in good condition, following the exclusion of stock, and includes kawakawa, kanono, karamu, wheki, ponga, mapou, poroporo and abundant ground ferns. Climbing vines and epiphytes present at the site include kiekie, kareao/supplejack, two species of rata, kohia, puka and kakaha.

#### Fauna

Native birdlife recorded in and around the site include the riroriro, kereru, kotare, piwaiwaka, kahu, tauhou and pukeko. Freshwater species from past surveys in the area include kakahi, tuna (long & short fin eel), freshwater koura, redfin bully and galaxid species.

### Ecological Values

Rarity and Distinctiveness - High	The recent discovery of myrtle rust in New Zealand has led to all myrtle species being listed as Threatened or AT Risk. The site has two rata species, both of which are from the plant family Myrtaceae. Also contains the 'Regionally Distinctive' jointed fern.
Representativeness - High	The habitat has been identified as MF7-3: Tawa, pukatea, podocarp forest and the area is classified as an 'Acutely Threatened' land environment (F5.2c). Native vegetation in these areas is rare and important for species threatened by habitat loss.
Ecological Context - Low	Provides habitat for native species in an area of well-developed farmland and provides good connectivity with other Key Native Ecosystems in the wider area such as the McDonalds Glen and Team Tong Tiger KNE.



Sustainability - Positive

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

### Other Management Issues

Habitat Modification - Medium

Currently well fenced.

Weeds - High

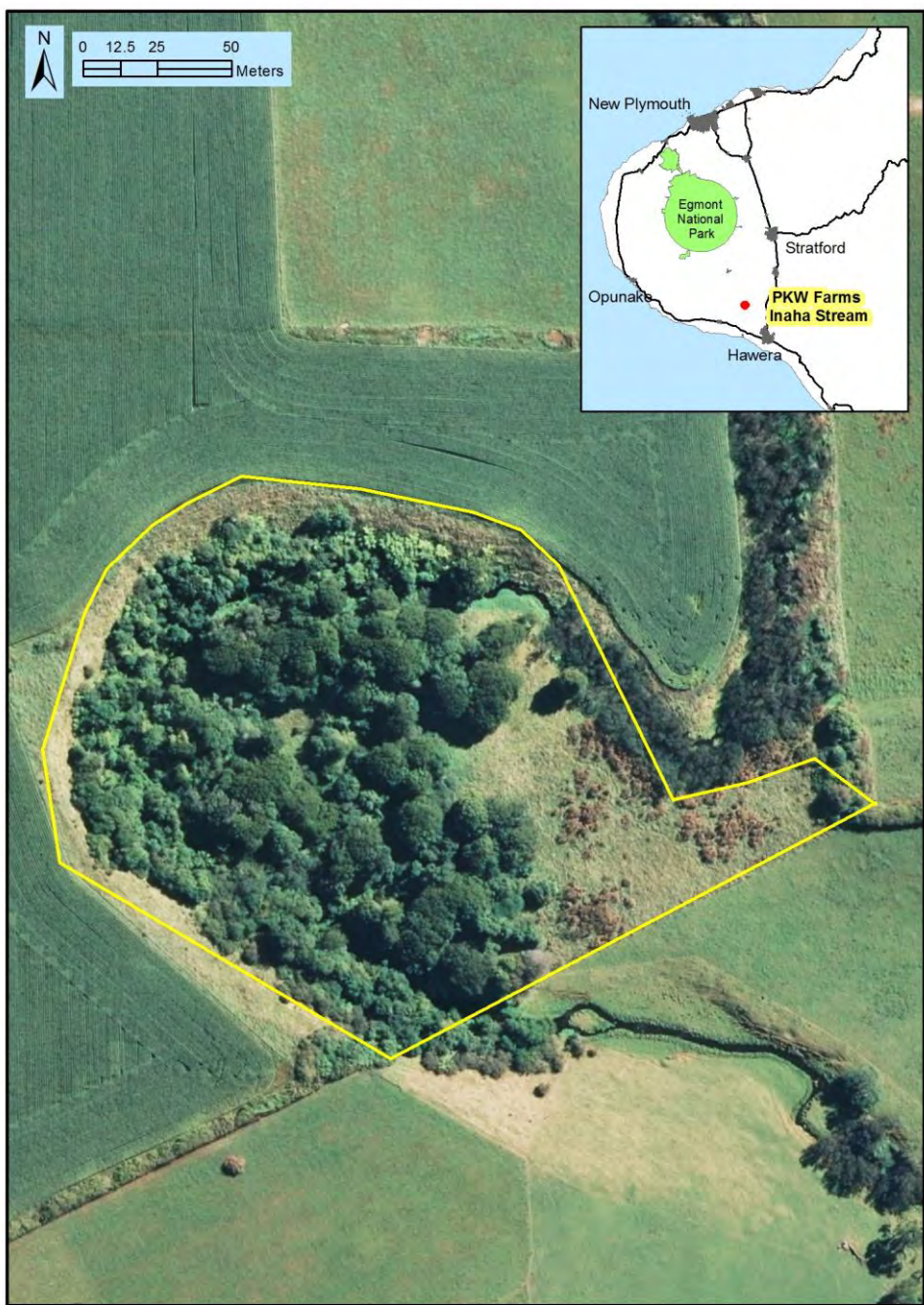
Moderate areas of old man's beard and gorse. Occasional areas of blackberry, pampas, willow and Tradescantia.

Possum Self-help

Property lies within Self Help possum control boundary.

Predators - High

Possoms, cats, mustelids, hedgehogs and rodents.





# McCull East Bush Block

## At a glance

TRC Reference: BD/9663	LENZ:	F1.3b Not threatened
Ecological District: Matemateaonga		F1.1c At risk
Land Tenure: Private		F1.3a At risk
Area(ha): 2737	National:	Priority 4 – Threatened Species
GPS: 1735441X & 5614073Y	Regional:	Close proximity to a representative ecosystem site
Habitat: Forest Remnant		Key Native Ecosystem
Bioclimatic Zone: Lowland	Regional Ecosystem Loss:	At risk 20-30% left
Ecosystem Type: MF21: Tawa, kamahi, rimu, northern rata, black beech forest	Catchment:	Less reduced >50% left
MF7.2: Rata, tawa, kamahi, podocarp forest		Patea (343)
		Whenuakura (342)

## General Description

The McCull East Bush Block is located approximately 15kms northeast of Patea in South Taranaki. The bush block is completely forested and large in area (2737 ha). It also has the benefit of being connected to very large area of contiguous native forest including the Rimunui Conservation Area (DOC estate) and other native forest on private land. The forest area is situated on steep sandstone topography of the Matemateaonga Ecological District and lies within the Patea River and Whenuakura River catchments.

## Ecological Features

### Flora

The forest block contains large areas of well regenerated native forest, large areas of old forest and smaller areas of younger regenerating native forest. The forest canopies are mixed and varied in places due to the range of habitats and include black beech, tawa, hinau, totara, northern rata, kamahi, miro, rimu, rewarewa, maire, kanuka, manuka and tree ferns. The understory is dominated mainly by unpalatable species such as tree ferns, mingimingi and manuka. Notable flora species are present.

### Fauna

Notable birdlife recorded includes the 'At Risk' New Zealand falcon, North Island brown kiwi, North Island robin and whitehead. Common native birds in the area include the fantail, tui, bellbird, grey warbler, pied tomtit, New Zealand pigeon and morepork. Other notable native fauna likely to be present include bats, fish, reptiles and invertebrates.

## Ecological Values

Ecological context - High	The site is large (2737 ha), connected to existing native habitats in the area and is close to priority ecosystems nearby. The site provides good connectivity to other Key Native Ecosystems and habitats in this area including the Tarere and Rimunui Conservation Areas.
Rarity and Distinctiveness - High	Contains a range of notable fauna including the New Zealand falcon, North Island brown kiwi, North Island robin and whitehead.
Representativeness - Medium	Contains over 30ha of indigenous vegetation on 'At Risk' LENZ environments (F1.1c & F1.3a) and is in close proximity to a priority representative ecosystem site.

Sustainability - Positive

In good vegetative condition and large in area. 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

Soil geology makes the area potentially more at risk from natural erosion. The forest is recovering from previous land use in places.

Herbivores - High

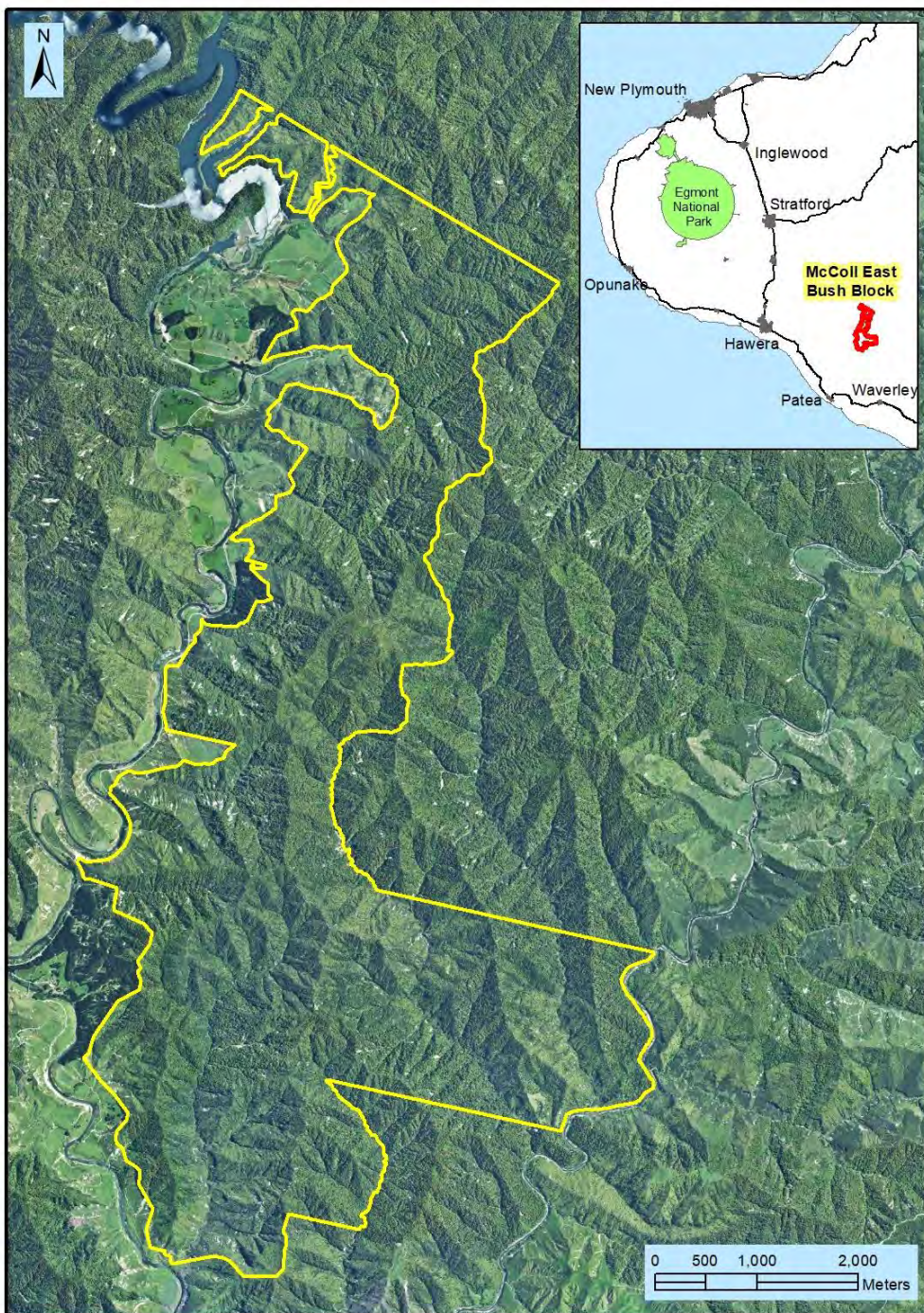
High risk from browsers such as possums, goats and deer in this area on palatable flora species.

Predators - High

Predators including rodents, mustelids, possums, feral cats and hedgehogs will be having an impact on native species at the site.

Weeds - Low

Currently low impacts of weeds in this area.





# McKenzie Wetland

## At a glance

TRC Reference: BD/9681	LENZ:	F5.2c Acutely threatened
Ecological District: Manawatu Plains	National:	Priority 1 – Threatened Land Environment
Land Tenure: Private		Priority 2 – Sand Dunes and Wetlands
Area(ha): 4.07		Priority 4 – Threatened Species
GPS: 1736355X & 5604770Y	Regional:	Representative ecosystem type
Habitat: Wetland		Key Native Ecosystem
Bioclimatic Zone: Lowland		Regionally Significant Wetland
Ecosystem Type: WL12: Manuka, tanglefern scrub/fermland	Regional Ecosystem Loss:	Acutely Threatened <10% left
WL13: Sphagnum moss field	Protection Status:	Local Government
	Catchment:	Whenuakura (342)

## General Description

The McKenzie Wetland (bog) is located on privately owned land, 7.5km northwest of Waverley. The site lies in a slump terrain basin of the Manawatu Plains Ecological District and Whenuakura River catchment. The bog is of moderate size (4.07ha) and is a very good example of a very rare wetland type (WL12: manuka, tanglefern, scrub/fermland & WL13: sphagnum moss field) classified as 'Acutely Threatened' (Leathwick). The site contains notable fauna (NZ dabchick, spotless crane) and is likely to contain other notable fauna and flora. The site provides connection to other priority and general native habitats in the area.

## Ecological Features

### Flora

The vegetation in the majority of the bog is typical for this rare ecosystem type, although varies in the very wet margins and open water areas. Manuka is the dominant higher canopy species, with a mix of mingimingi and occasional lancewood, kamahi, karamu and tree ferns. Other lower stature vegetation includes flax, carex and ferns with large areas of tangle fern and extensive sphagnum cushions. A diverse range of submerged and semi submerged aquatic vegetation is also present.

### Fauna

A good range of wetland birds are present including notable species such as the NZ dabchick and spotless crane. A few potential North Island fernbird single calls were heard although needs confirming. Other native birds include the grey duck, pukeko and grey warbler. A range of exotic birds were also present in and around the bog. There is also good habitat for reptiles and terrestrial invertebrates within the bog vegetation and notable species may be present. The bog may contain notable native fish species such as the brown mudfish. A diverse range of other aquatic fauna will also be present and introduced frogs and tadpoles were observed in abundance.

## Ecological Values

Ecological context - High	Provides connectivity to other habitats in the area. Provides core habitat for the North Island fernbird, spotless crane, New Zealand dabchick and other notable fauna and flora.
Rarity and Distinctiveness - High	Contains notable species including New Zealand dabchick, spotless crane and North Island fernbird and other notable flora and fauna species will be present.

Representativeness - High

Contains indigenous vegetation on 'Acutely Threatened' (F5.2c) LENZ environment. The bog is also a very good example of a very rare wetland type in the region (WL12: manuka, tangle fern, scrub/fernland, and WL13: sphagnum moss field). Wetlands are high priority ecosystems, both regionally and nationally.

Sustainability - Positive

In good condition. Key ecological processes still influence the site. Under appropriate management, the wetland can remain resilient to existing or potential threats.

### Other Management Issues

Habitat Modification - Medium

The natural buffer vegetation around this wetland is completely modified and is dominated by exotic pasture. There is a medium risk of modification to wetland area from drainage or extensive willow invasion.

Herbivores - Medium

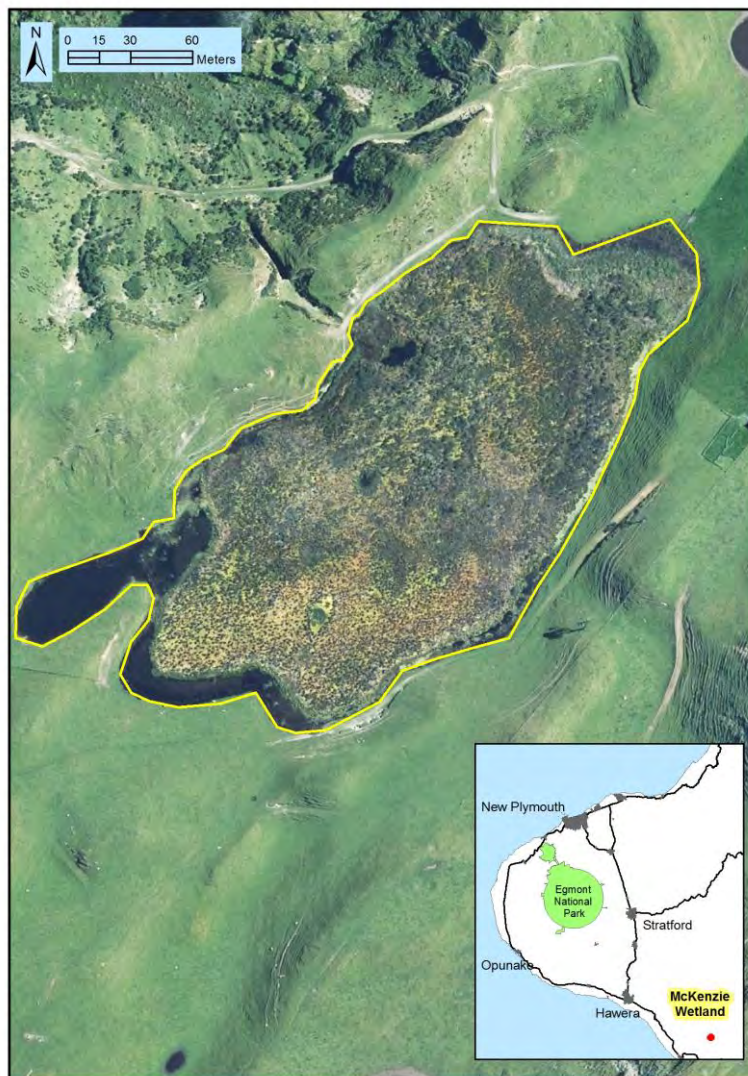
Browsing is restricted by deep water on most of the wetland margin, although some stock browse is evident on the north end.

Predators - Medium

Predators including rodents, mustelids, possums, feral cats and hedgehogs will be having an impact on native species at the site.

Weeds - Medium

A small number of willow are present that have potential to greatly change the bog.





# Orion's Belt

## At a glance

TRC Reference: BD/9684	LENZ:	F1.3b Not threatened
Ecological District: Matemateaonga	National:	Priority 4 – Threatened Species
Land Tenure: Private	Regional:	Key Native Ecosystem
Area(ha): 5.3	Regional Ecosystem Loss:	Less reduced >50% left
GPS: 1761528X & 5597685Y	Protection Status:	QEII Covenant
Habitat: Forest Remnant	Catchment:	Waitotara (339)
Bioclimatic Zone: Lowland		
Ecosystem Type: MF21: Tawa, kamahi, rimu, northern rata , black beech forest		

## General Description

The Orion's Belt KNE is made up of two small (5.3ha combined) QEII covenants located on privately owned land, 12kms northeast of Waitotara in south Taranaki. The site is within the Matemateaonga Ecological District and Waitotara River catchment. The forest canopy is mainly cutover lowland forest, dominated by tawa and pukatea with occasional rewarewa, hinau, northern rata and kamahi present. Nationally Threatened and At Risk species such as North Island robin, whitehead and poroporo are notable for the site and other priority species are likely to be present. The site provides connectivity to other nearby KNE's including Mangapuni, Skilton's Bush, Lake Waikato and Lake Waikare.

## Ecological Features

### Flora

The forest canopy is mainly original cutover lowland forest dominated by tawa and pukatea with occasional rewarewa, hinau, northern rata and kamahi being present. A sub canopy of mahoe and pigeonwood with extensive supplejack and other native climbers, including NZ passionfruit and NZ jasmine, is evident. Tree ferns and ground ferns such as gully fern and crape fern are particularly noticeable near the steep spring gullies. A nationally Threatened species of poroporo is present and is notable for the site. Other notable species may be present.

### Fauna

Notable birdlife recorded at this site includes the 'At Risk' North Island robin and whitehead. Common native birds in the area include the fantail, tui, bellbird, grey warbler, pied tomtit and New Zealand pigeon. The 'Threatened' native long-tailed bat and potentially the 'At Risk' North Island brown kiwi are likely to be present and may be confirmed with further survey. Other notable native fauna will also be present including reptiles and invertebrates.

## Ecological Values

Ecological Context - Medium	Provides greater connectivity to other KNE's and habitats in this area. Provides core habitat for 'Threatened' and 'At Risk' species.
Rarity and Distinctiveness - High	Contains the 'Threatened' poroporo and 'At Risk' North Island robin and whitehead. Very likely to contain other notable fauna species. Contains five species of rata, manuka and kanuka which have all been elevated to nationally 'At Risk' or 'Threatened' status due to the recent myrtle rust risk.
Representativeness - Low	Contains indigenous vegetation on F1.3b ('Less reduced, better protected') LENZ environment and is an ecosystem type that is still well represented in Taranaki.

Sustainability - Positive

In good vegetative condition and is large enough for key ecological processes to still influence the site. Under appropriate management, it can remain resilient to existing or potential threats.

### Other Management Issues

Habitat Modification - Low

Historical logging has modified some aspects of the forest canopy through the removal of large podocarps. Soil geology makes this site potentially more at risk from erosion.

Herbivores - High

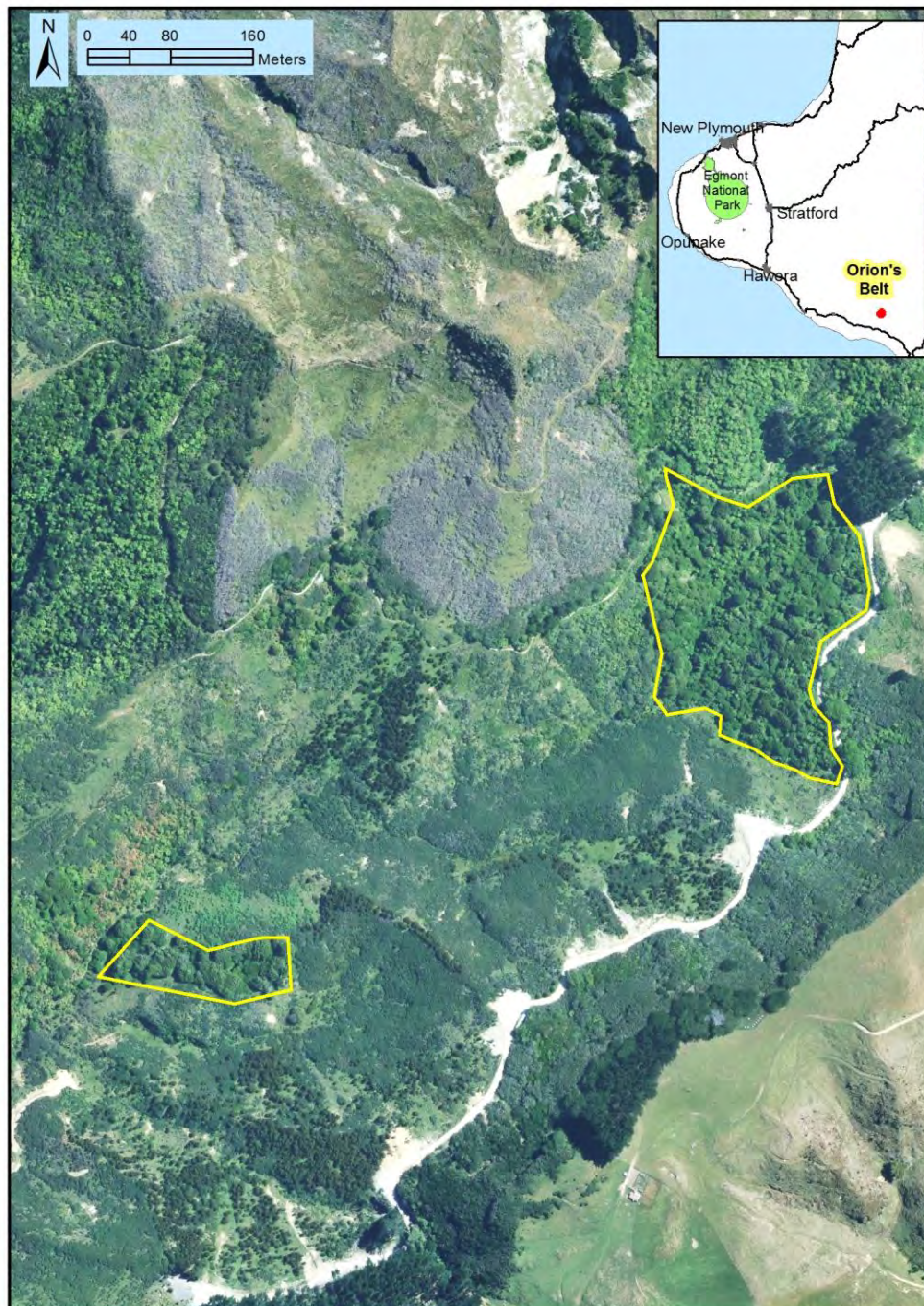
Potential high risk from browsers such as possums, goats and deer in this area.

Predators - Medium

Predators including rodents, mustelids, possums, feral cats and hedgehogs will be having an impact on native species at the site.

Weeds - Low

Currently, weeds threats and impacts are low in this area.



# Piraunui

## At a glance

TRC Reference: BD/9668	LENZ:	C2.1a Acutely threatened
Ecological District: Matemateaonga		F5.2c Acutely threatened
Land Tenure: Private		F1.3b Not threatened
Area(ha): 104.7	National:	Priority 4 – Threatened Species
GPS: 1759978X & 5607801Y	Regional:	Potential KNE
	Regional	Acutely Threatened <10% left
Habitat: Forest Remnant	Ecosystem Loss:	At risk 20-30% left
Bioclimatic Zone: Lowland	Protection Status:	Local Government
Ecosystem Type: MF21: Tawa, kamahi, rimu, northern rata , black beech forest	Catchment:	Waitotara (339)
MF7.3: Tawa, pukatea, podocarp forest		
WF8: Kahikatea, pukatea forest		

## General Description

Piraunui consists of three sites which are located on privately owned land 19kms northeast of Waitotara in South Taranaki. The site is within the Matemateaonga Ecological District.

Combined the three sites cover 104.7ha and are made up of a mix of original lowland forest and modified gorse/regenerating native forest typical of the south Taranaki area. Other nearby KNE's include Mangapuni, Skilton's Bush, Lake Waikato, Lake Waikare and the Waitotara Wharangi Block. The site is located within the Waitotara River catchment.

## Ecological Features

### Fauna

Notable birdlife recorded in the area includes the 'At Risk' New Zealand falcon, North Island brown kiwi, fernbird, mohoua whitehead and North Island robin. Common native birds in the area include the fantail, tui, bellbird, grey warbler, pied tomtit and New Zealand pigeon. Other notable native fauna present includes the 'Threatened' long-tailed bat and the 'At Risk' redfin bully, longfin eel and inanga. Other notable native fauna will also be present such as additional native fish, reptiles and invertebrates.

### Fauna

Canopy vegetation of the original forest area primarily consists of a mix of beech, hardwood, broadleaf and podocarp. The modified areas are dominated by manuka, kanuka with mahoe, rewarewa, hinau and young emergent black beech present in places. Notable species may be present including tawhirikaro and Kirk's kohuhu.

## Ecological Values

Ecological context - High	Close to and provides connectivity with Mangapuni, Skilton's Bush, Lake Waikato, Lake Waikare and the Waitotara Wharangi Block KNE's.
Rarity and Distinctiveness - High	Contains the 'Threatened' long tailed bat. Also contains the 'At Risk' New Zealand falcon, North Island brown kiwi, North Island robin, mohoua whitehead, fernbird, redfin bully, inanga and the 'Regionally Distinctive' black beech. Other threatened and notable species are also likely to be present.



Representativeness - High

Contains indigenous vegetation on F5.2c & C2.1a ('Acutely Threatened <10% indigenous cover remaining') LENZ environment.

Sustainability - Positive

In good and recovering vegetative condition and large in area. Key ecological processes still influence the site. Under appropriate management, it can remain resilient to existing or potential threats.

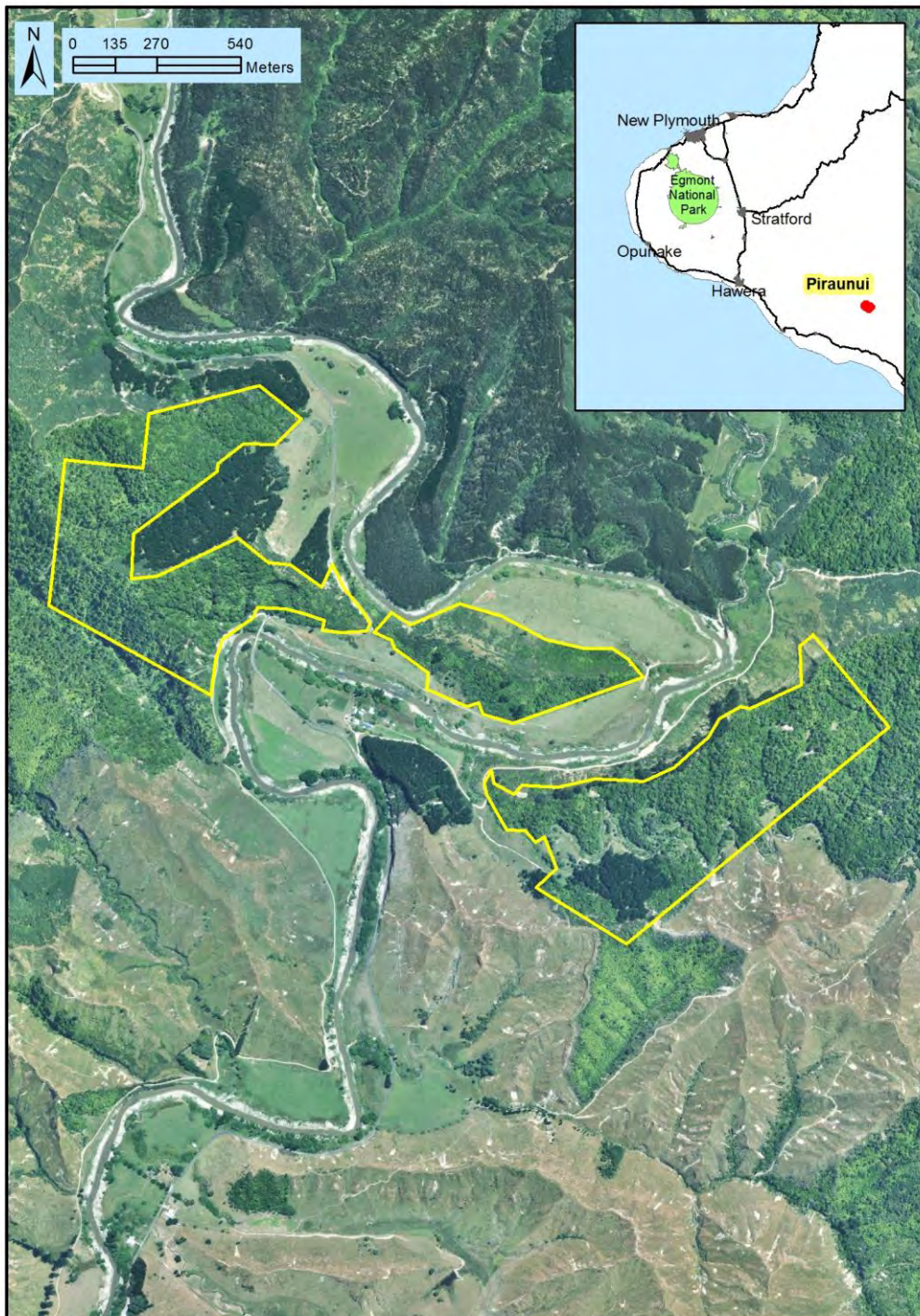
### Other Management Issues

Herbivores - High

Goats and deer are present.

Predators - High

Possums, stoats, rats and feral cats are present



## Te Kahu (PKW Farms, Ohangai)

### At a glance

TRC Reference: BD/9689	LENZ:	F5.2c Acutely threatened
Ecological District: Manawatu Plains	National:	Priority 1 – Threatened Land Environment
Land Tenure: Private		Priority 2 – Sand Dunes and Wetlands
Area(ha): 5.1		Priority 4 – Threatened Species
GPS: 1718870X & 5617493Y	Regional:	Key Native Ecosystem
Habitat: Forest Remnant/Wetland		Regionally Significant Wetland
Bioclimatic Zone: Lowland	Regional	At risk 20-30% left
Ecosystem Type: MF7.3: Tawa, pukatea, podocarp forest	Ecosystem Loss:	
	Protection Status:	Local Government
	Catchment:	Tangahoe (348)

### General Description

Te Kahu forest remnant is located on private land 8 kilometres east of Hawera off the Ohangai Road in South Taranaki. The remnant lies within the Manawatu Plains Ecological District and Tangahoe River catchment. The 5.1 hectare forest remnant is located in a steep South and East facing gully and gully sidelings, in an unnamed tributary of the Tangahoe River. The forested parts of the remnant consist of a mix of older cut over semi coastal / lowland forest with a dominant canopy of tawa, along with pukatea wetland forest on the gully floor. Down stream of the wetland forest, in more open areas, are raupo wetlands with cutty grass on better drained margins. Te Kahu forest remnant enhances connectivity between fragmented indigenous habitats in this area including the nearby Cotebrook Forest and Punarima Forest and Wetlands KNE.

### Ecological Features

#### Flora

The remnant consists of a mix of older cut over semi coastal / lowland forest with a dominant canopy of tawa, pukatea and karaka. The younger lower canopy is dominated by mahoe, pigeonwood, mapou and tree ferns. The ground cover is intact and is dominated by native ferns and large areas of parataniwha on the wet areas of the slopes and valley floor. Modified wetlands, now dominated by raupo and coastal cutty grass, are present downstream of the forested area. Notable species for the site include two species of threatened rata and the Regionally Distinctive Ngaio.

#### Fauna

Native birds present include kereru, tui, bellbird, silvereye, rioriro, piwakawaka, kotare, kahu and ruru. A small stream in the valley floor is very likely to contain notable freshwater fish such as banded kokopu. There is very good habitat for a range of other notable native species including reptiles and invertebrates.

### Ecological Values

Ecological Context - Medium	Part of a basic network of linear gully vegetation/habitat in the area
Sustainability - Positive	Mostly fenced to exclude stock but some areas of regenerating forest remain unfenced. Owners proven environmental performers and are kaitiaki of the land
Representativeness - High	This is an 'Acutely Threatened' land environment (LENZ) and 'At Risk' ecosystem type (Leathwick)



Rarity and Distinctiveness -  
Medium

A number of ngaio trees are present, which are classified as being 'Regionally Distinctive' owing to their scarcity in the region. Scarlet and white rata are also present, which are classified as being 'Nationally Vulnerable' owing to risks posed to myrtaceous species by the recent incursion of myrtle rust to New Zealand.

### Other Management Issues

Habitat Modification - Medium

The site has some un-fenced regenerating forest, that has been impacted upon over time by grazing and treading damage. Existing fencing is moderate to good.

Herbivores - High

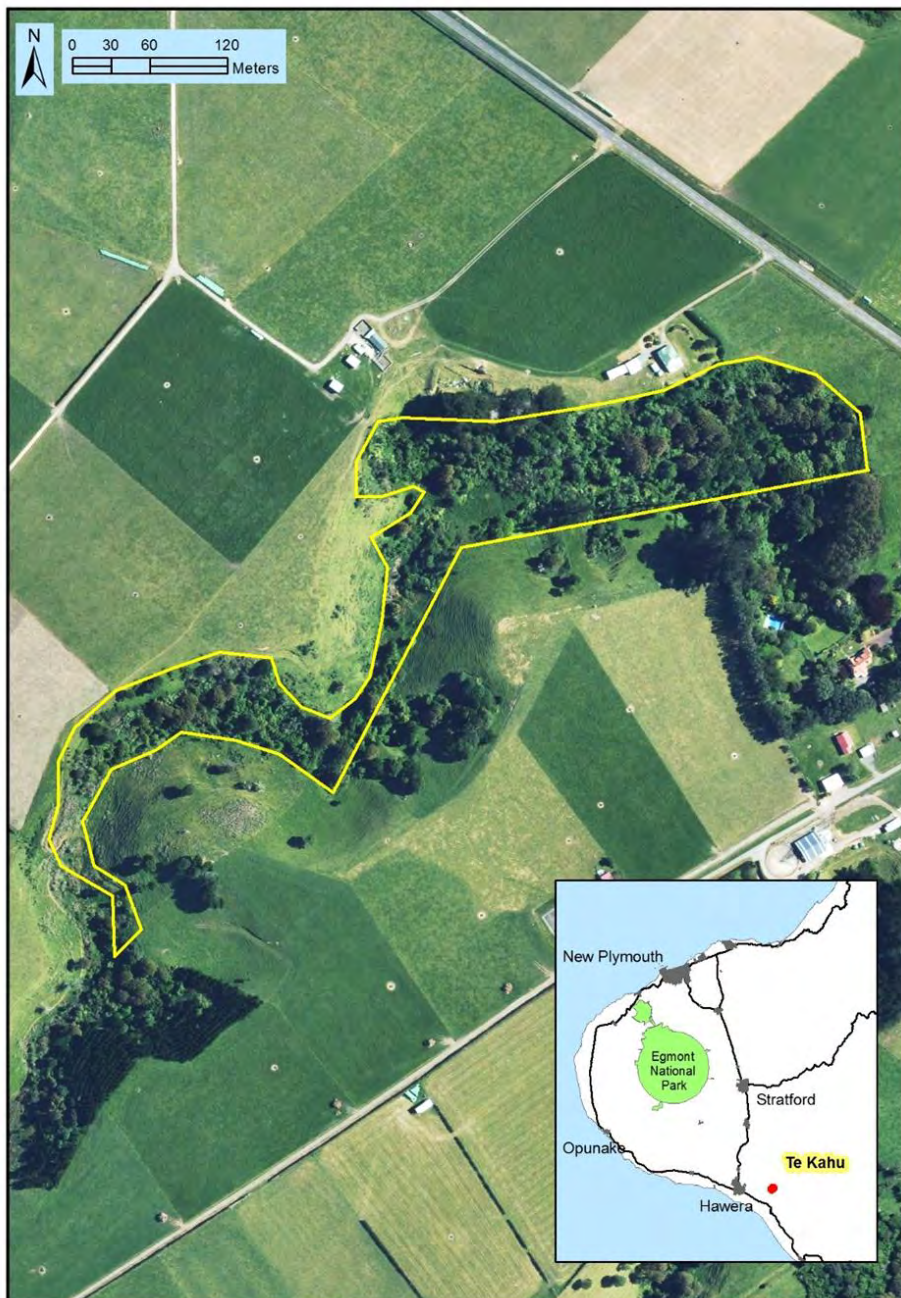
Outside regional Possum Self Help programme area

Predators - High

No rodent, mustelid or feral cat control at time of original CA

Weeds - High

Abundant vine and ground cover weeds. Some wilding tree weeds





# The Moeawatea

## At a glance

TRC Reference: BD/9662	LENZ:	F1.3b Not threatened
Ecological District: Matemateaonga	National:	Priority 4 – Threatened Species
Land Tenure: Private	Regional:	Key Native Ecosystem
Area(ha): 185	Regional Ecosystem Loss:	Less reduced >50% left
GPS: 1742048X & 5617226Y	Catchment:	Whenuakura (342)

Habitat: Forest Remnant

Bioclimatic Zone: Lowland

Ecosystem Type: MF21: Tawa, kamahi, rimu, northern rata, black beech forest

## General Description

The Moeawatea bush block is located approximately 20kms north of Waverley in South Taranaki. The bush block is completely forested and moderately large in area (185 ha). The site is directly connected to large areas of existing native forest in the area including large DOC reserves (Ahoroa Scenic Reserve, Kapara & Rimunui Conservation Area). The site also provides connectivity to other Key Native Ecosystems in this area including the Nukuhau Lakes Catchment and Mt. Hiwi KNE's. The forest area is situated on steep sandstone topography of the Matemateaonga Ecological District and lies within the Whenuakura River catchment.

## Ecological Features

### Flora

The majority of the forest block is cutover primary forest with a large area of well-established regenerating native forest at the western end. The forest canopies are mixed and varied in places due to the range of habitats and include black beech, tawa, hinau, totara, northern rata, kamahi, miro, rimu, rewarewa, kanuka, manuka and tree ferns. The understory is dominated mainly by unpalatable species such tree ferns, mingimingi and manuka. Notable flora species are present.

### Fauna

Notable birdlife recorded includes the 'At Risk' New Zealand falcon, North Island brown kiwi, North Island robin and whitehead. Common native birds in the area include the fantail, tui, bellbird, grey warbler, pied tomtit, New Zealand pigeon and morepork. Other notable native fauna likely to be present include bats, fish, reptiles and invertebrates.

## Ecological Values

Ecological Context - Medium	The site is moderately large (185 ha) and connected to existing native habitats in the area. The site provides good connectivity to other Key Native Ecosystems and habitats in this area including the Ahoroa Scenic Reserve, Kapara and Rimunui Conservation Areas, Nukuhau Lakes Catchment and Mt. Hiwi KNE.
Rarity and Distinctiveness - High	Contains a range of notable fauna including the New Zealand falcon, North Island brown kiwi, North Island robin and whitehead and a range of other notable fauna will be present. Also contains notable flora species.
Representativeness - Low	Contains indigenous vegetation on a 'Less Reduced' LENZ environment and is a remnant of an ecosystem type that is still well represented in Taranaki (>50% remaining)

Sustainability - Positive

In good vegetative condition and large in area. 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

Soil geology makes the area potentially more at risk from natural erosion. The forest is recovering well from previous land use in places.

Herbivores - Medium

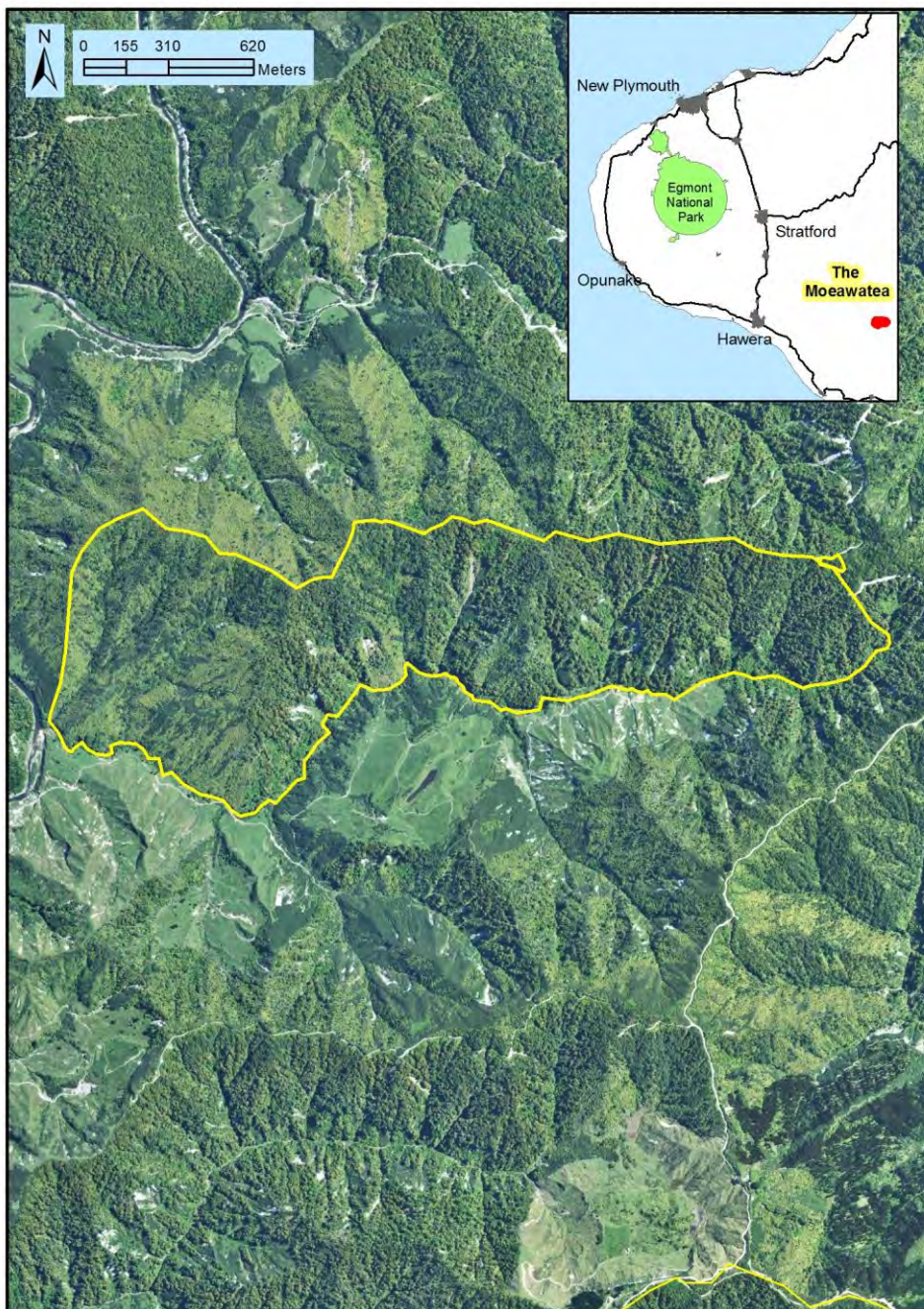
Potential high risk from browsers such as possums, goats and deer in this area on palatable flora species. The current control program will be assisting to reduce browsing pressure at the site.

Predators - High

Potential predator threats are high and include rodents, mustelids, possums, feral cats and hedgehogs. The current predator control program will be greatly reducing predator threat for this site.

Weeds - Low

Currently low impacts of weeds in this area.



# Vujcich Piakau Stream Forest

## At a glance

TRC Reference: BD/9698	LENZ:	F5.2a Acutely threatened
Ecological District: Egmont	National:	Priority 1 – Threatened Land Environment
Land Tenure: Private		Priority 4 – Threatened Species
Area(ha): 4.1	Regional:	Key Native Ecosystem
GPS: 1700082X & 5655348Y		Representative ecosystem type
Habitat: Forest Remnant	Regional Ecosystem Loss:	Less reduced >50% left
Bioclimatic Zone: Lowland	Protection Status:	QEII Covenant (Pending)
Ecosystem Type: MF8.2: Rimu, rata, kamahi forest		Local Government
	Catchment:	Waitara (395)

## General Description

The Vujcich Piakau Stream Forest is located at the end of Durham Road and is partly connected to Egmont National Park. It consists of approx. 4.1ha of cut over or well regenerated native bush on the margins and wider terraces of the Piakau Stream. The site has been identified as a priority for management as a good example of MF8-2: Rimu, rata, kamahi forest. Native forest remnants are rare on the volcanic ring plain and the area is classified 'Acutely Threatened' (LENZ F5.2a). Notable vegetation includes a number of 'Threatened' species such as swamp maire, and three species of threatened rata. The Piakau stream also provides habitat for notable fauna such as whio, shortjaw kokopu, koaro, redfin bully and longfin eel. The site provides very good connectivity between the Egmont National Park and Vujcich Kamahi Swamp Maire KNE.

## Ecological Features

### Flora

The dominant canopy of the forest along the Piakau stream is kamahi, with a mix of other species including rimu, miro, tawa, rewarewa, hinau, toro, kahikatea and swamp maire. Lower stature vegetation includes wineberry, marbleleaf, raukawa, hangehange, NZ fuchsia and kanono. Climbers and orchids are common with three species of threatened rata noted. Good ground cover is present including a variety of ferns, seedlings and saplings.

### Fauna

Birds found at the site include bellbird, grey warbler, tomtit, fantail, tui and kereru. Whio have also been recorded using the Piakau stream in this area, and are a notable species. There is adequate habitat for terrestrial and arboreal reptile species, ranging from deep leaf litter, logs on the forest floor, epiphytes in the canopy, and abundant foliage. No reptiles have been recorded for the site although will be present and may include threatened or regionally distinctive species. Notable native fish historically found at the site include shortjaw kokopu, koaro, longfin eels and redfin bullies. Aquatic invertebrate life will be diverse and abundant due to the high water quality of the stream.

## Ecological Values

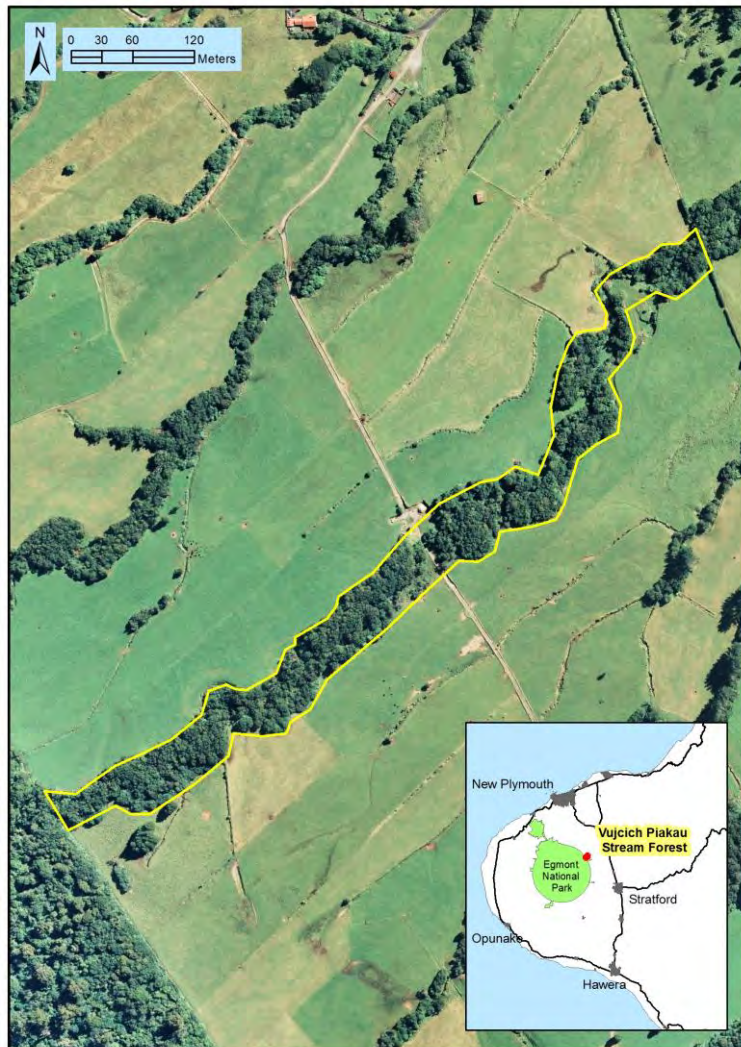
Ecological context - High	The site provides very good connectivity between Egmont National Park and Vujcich Kamahi Swamp Maire KNE. The site also provides core habitat for a variety of threatened species.
Rarity and Distinctiveness - High	The site provides habitat for a variety of notable threatened species including whio (blue duck), shortjawed kokopu, koaro, swamp maire and three species of threatened rata.



Representativeness - High	Contains vegetation associated with an 'Acutely Threatened' land environment (F5.2a). The remnant is a good example of MF8-2: Rimu, rata, kamahi forest, and has been identified as a priority representative site for management.
Sustainability - Positive	In relatively good vegetative condition. Key ecological processes still influence the site, and under appropriate management, it can remain resilient to existing or potential threats.

**Other Management Issues**

Habitat Modification - Low	The site is completely fenced and there is little risk of habitat modification.
Herbivores - Medium	Grazing will only be an issue in the event of a fence breach. Goats in the adjacent National Park, have almost been eradicated and are not a threat to this site.
Predator Free signed up: Yes	Part of the Towards Predator Free Taranaki stage two operation. Also has extensive additional predator control nearby, including another KNE area on the property.
Predators - Medium	Mustelids, rats, cats, hedgehogs and possums are present, although extensive ongoing control will be lessening the impact on the native ecosystem.
Weeds - Low	Weed threats are currently low at the site.
Possum Self-help	Within the self-help possum control area and receives sustained possum control. Possums are present at low densities.



## Waha o Tāne (Bird Chorus)

### At a glance

TRC Reference: BD/9671	LENZ:	F5.2b Acutely threatened
Ecological District: Egmont	National:	Priority 1 – Threatened Land Environment
Land Tenure: Private		Priority 4 – Threatened Species
Area(ha): 1.2	Regional:	Key Native Ecosystem
GPS: 1689595X & 5670859Y	Regional Ecosystem Loss:	Chronically threatened 10-20% left
Habitat: Forest Remnant	Protection Status:	QEII Covenant
Bioclimatic Zone: Semi-Coastal	Catchment:	Huatoki (389)
Ecosystem Type: WF13: Tawa, kohekohe, rewarewa, hinau, podocarp forest		

### General Description

Egarr's forest remnant is comprised of semi-coastal bush located along an unnamed tributary of the Mangaotuku Stream between Barrett and Cowling Roads in the Huatoki Catchment. The ecosystem type is classified as WF13, Tawa, kohekohe, rewarewa, hinau, podocarp forest. Although historically cutover, the remnant is a good example of this type of forest, with a reasonable canopy cover and regenerating undergrowth. The site provides good connectivity to other Key Native Ecosystems in the area including Ratapihipihi Scenic Reserve, Upper Mangaotuku KNE, Atkinson's Bush, Berridge Twin Bush, Ian and Jean Kurth KNE, 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. The site contains a good representation of semi coastal forest (classified as a 'Chronically Threatened indigenous vegetation type with less than 20% of original vegetation remaining').

Native biodiversity in these environments is greatly depleted and under threat from continued habitat fragmentation.

#### Fauna

Native birds such as tui, kereru, fantail, grey warbler, morepork and long tailed cuckoo 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, although impediments to fish passage lower in the catchment may impact this.

### Ecological Values

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.
Sustainability - Positive	Key ecological processes still influence the site and with appropriate management, it can remain resilient to existing or potential threats.
Rarity and Distinctiveness - Low	Recent myrtle rust threats have elevated potentially vulnerable native flora species to 'Threatened' status. Notably, two of these species (white rata,

and climbing rata) are present. Good habitat exists for terrestrial and arboreal reptile species at this site and notable species are likely to be present.

Ecological context - High

The sites provide good connectivity to other Key Native Ecosystems in the area including Ratapihipihi Scenic Reserve, Berridge Twin Bush, Omata Bush, Omata School Bush, Atkinson's Bush, Ian and Jean Kurth KNE and Upper Mangaotuku KNE.

### **Other Management Issues**

Herbivores - High

At present, stock have access to the site through the northern boundary. Herbivores pose a high risk to the site at present, through trampling and browsing of native flora species.

Possum Self-help

The site falls within the Self Help Possum area. Pestoff is currently being used.

Predators - High

Possum numbers are high, as indicated by abundant fresh sign. Cats, mustelids, hedgehogs and rats will also be having an impact on the site.

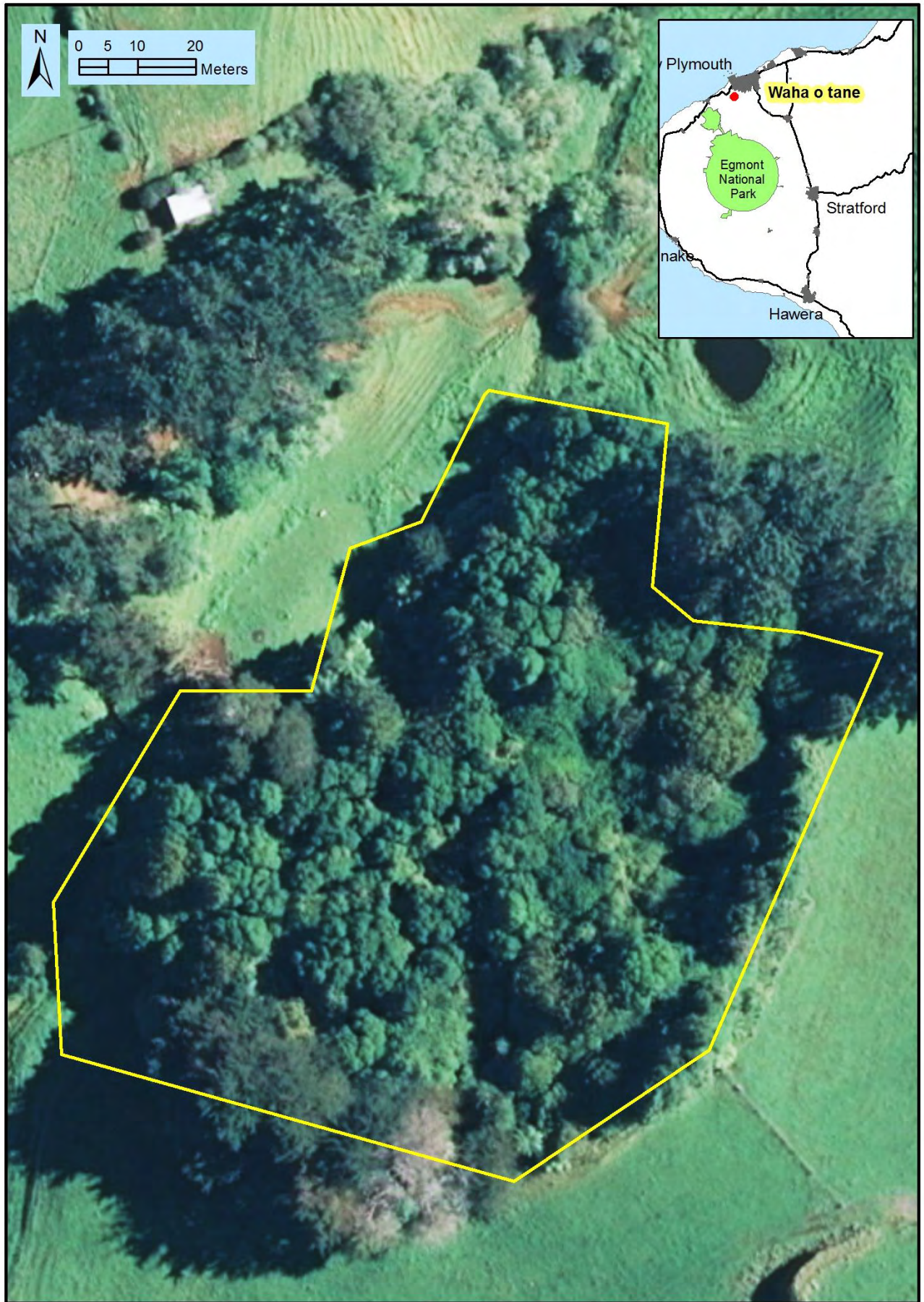
Weeds - Medium

A number of weed species were observed at the site in low numbers, except for climbing asparagus, which was found around the entire perimeter, and within the site.

Habitat Modification - Medium

A small spring fed stream is drained around the NE edge of the remnant. This may affect the regeneration of kahikatea and pukatea within the remnant in the future.





# Watatao

## At a glance

TRC Reference: BD/9682	LENZ:	F5.2b Acutely threatened
Ecological District: Egmont	National:	Priority 1 – Threatened Land Environment
Land Tenure: Private		Priority 4 – Threatened Species
Area(ha): 2.4	Regional:	Key Native Ecosystem
GPS: 1687769X & 5667924Y	Regional Ecosystem Loss:	Chronically Threatened < 20% left
Habitat: Forest Remnant		
Bioclimatic Zone: Semi-Coastal		
Ecosystem Type: WF13: Tawa, kohekohe, rewarewa, hinau, podocarp forest		

## General Description

Watatao potential KNE is located on privately owned land on Hurford road, 4km south of Omata. The site lies in the Egmont Ecological District and Tapuae Stream catchment. Watatao consists of a 2.4ha semi-coastal kohekohe, tawa forest remnant and is in close proximity to several existing KNEs; McNeil KNE, Woodside and Berridge Twin Bush, Ralph Arnold KNE and Atkinson's Bush.

## Ecological Features

### Flora

The covenanted area contains a good representation of semi coastal forest (classified as a 'Chronically Threatened indigenous vegetation type with less than 20% of original vegetation remaining). Native biodiversity in these environments has been severely reduced, and remaining habitats are sparsely distributed in the landscape. Risks to biodiversity from fragmentation have become severe, and the persistence of many species is threatened in these environments. The forest canopy predominantly consists of tawa, pukatea and kohekohe. Due to heavy stock browsing, the understory and groundcover are sparse, however recent stock exclusion has allowed coprosmas and ferns to regenerate. Climbers and epiphytes are present in canopy, and where stock have been excluded for longer.

### Fauna

Native birdlife recorded in and around the covenanted area include kereru, grey warbler, fantail, tui and kingfisher. Morepork are likely to be present. Good habitat exists for terrestrial and arboreal reptile species at this site and notable species are likely to be present. However, numbers are likely to be low due to predation from introduced mammals. Spring heads which feed an unnamed tributary of the Tapuae stream begin in the site, and may contain notable freshwater species.

## Ecological Values

Rarity and Distinctiveness - Medium	Contains several threatened and at risk plant species including scarlet rata and climbing rata. Good habitat exists for terrestrial and arboreal reptile species at this site and notable species are likely to be present.
Representativeness - High	Contains indigenous vegetation classified as 'Chronically Threatened' with <20% remaining.
Ecological context - High	Provides additional habitat and greater connectivity with other Key Native Ecosystems in this area such as the adjacent covenants; Ralph Arnold KNE, Ms & FA Morris Reserve and Atkinson's Bush.



Sustainability - Positive

Key ecological processes still influence the site and with appropriate management, it can remain resilient to existing or potential threats. The landowners are already taking steps to manage the site positively, and have initiated the formal protection process with the QEII Trust.

### Other Management Issues

Habitat Modification - Medium

Further habitat loss to forest types like this will disproportionately exacerbate risks to biodiversity, however there are no immediate threats at this site.

Herbivores - Low

Up until recently, stock have roamed freely under the forest canopy. The site is now fenced and stock proof. Currently under good possum control although vulnerable if possum numbers were high.

Possum Self-help

The site falls within the Hurford Self-Help area.

Predators - Medium

Predators including rodents, mustelids, possums, feral cats and hedgehogs will be having an impact on native species at the site.

Weeds - Medium

Small areas of African clubmoss, Himalayan honeysuckle, Japanese honeysuckle and blackberry. Larger patches of gorse, which are under management.

