

Campbells Bush

At a glance

TRC Reference: BD/9576	LENZ:	C1.1a Chronically threatened
Ecological District: Matemateaonga	National:	Priority 1 - Threatened Land Environment
Land Tenure: District	Regional:	Key Native Ecosystem
Area(ha): 1.4	Regional Ecosystem Loss:	At risk 20-30% left
GPS: 1720227X & 5633703Y	Protection Status:	Local Government
Bioclimate Zone: Lowland	Catchment:	Tangahoe (348)
Habitat: Forest Remnant		

Ecosystem Type MF7.3: Tawa, pukatea, podocarp forest

General Description

Campbell's Bush is located on Sangster Road, Rawhitiroa, approximately 8kms east of Eltham in central Taranaki. The forest remnant is located within the Matemateaonga Ecological District and lies in the Tangahoe River catchment.

Campbell's Bush is a small (1.4ha) lowland forest remnant owned by the South Taranaki District Council as a Scenic Reserve. The bush remnant is only 900 metres west of the Rotokare Scenic Reserve and is within the Rotokare Reserve Trust 'halo' management area.

Ecological Features

Flora

The high canopy at Campbell's Bush is dominated by pukatea, tawa and swamp maire with occasional rewarewa and titoki. The understory is recovering well including species such as kawakawa, kanono, pigeonwood, mahoe and turepo and has become dense in places. Native ferns are well established in places and are establishing wider including shining spleenwort, sickle spleenwort, hen and chicken fern etc. Swamp maire (Regionally Distinctive) is present in good numbers and is notable for this site.

Fauna

The reserve will definitely be receiving spill over from the predator fenced Lake Rotokare Scenic Reserve and also benefiting from the halo pest animal control programme in this area. Tui were generally in numbers higher than usual for a small site. Bats are present at the Lake Rotokare reserve and may use this area in their wider foraging. Potential roost trees are also present. Good habitat exists for native reptiles and native freshwater fish which may include notable species. The habitat will contain a very diverse range of terrestrial invertebrates likely including notable species such as peripatus.

Ecological Values

Ecological context - High	The bush remnant provides good connectivity to other priority biodiversity projects in this area as it is only 900 metres west of the Rotokare Scenic Reserve and is within the Rotokare Reserve Trust 'halo' management area.
Rarity and Distinctiveness - Medium	Contains the 'Regionally Distinctive' swamp maire which is present in good numbers in the reserve.
Representativeness - High	Contains indigenous vegetation on a 'Chronically Threatened' LENZ environment (C1.1a) and is a remnant of an ecosystem type

(MF7-3 Tawa, pukatea, podocarp forest) that is considered At Risk as less than 30% remains in the region.

Sustainability - Positive

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

Other Management Issues

Habitat Modification - Low

Edge effects and human activity are potential threats.

Herbivores - Medium

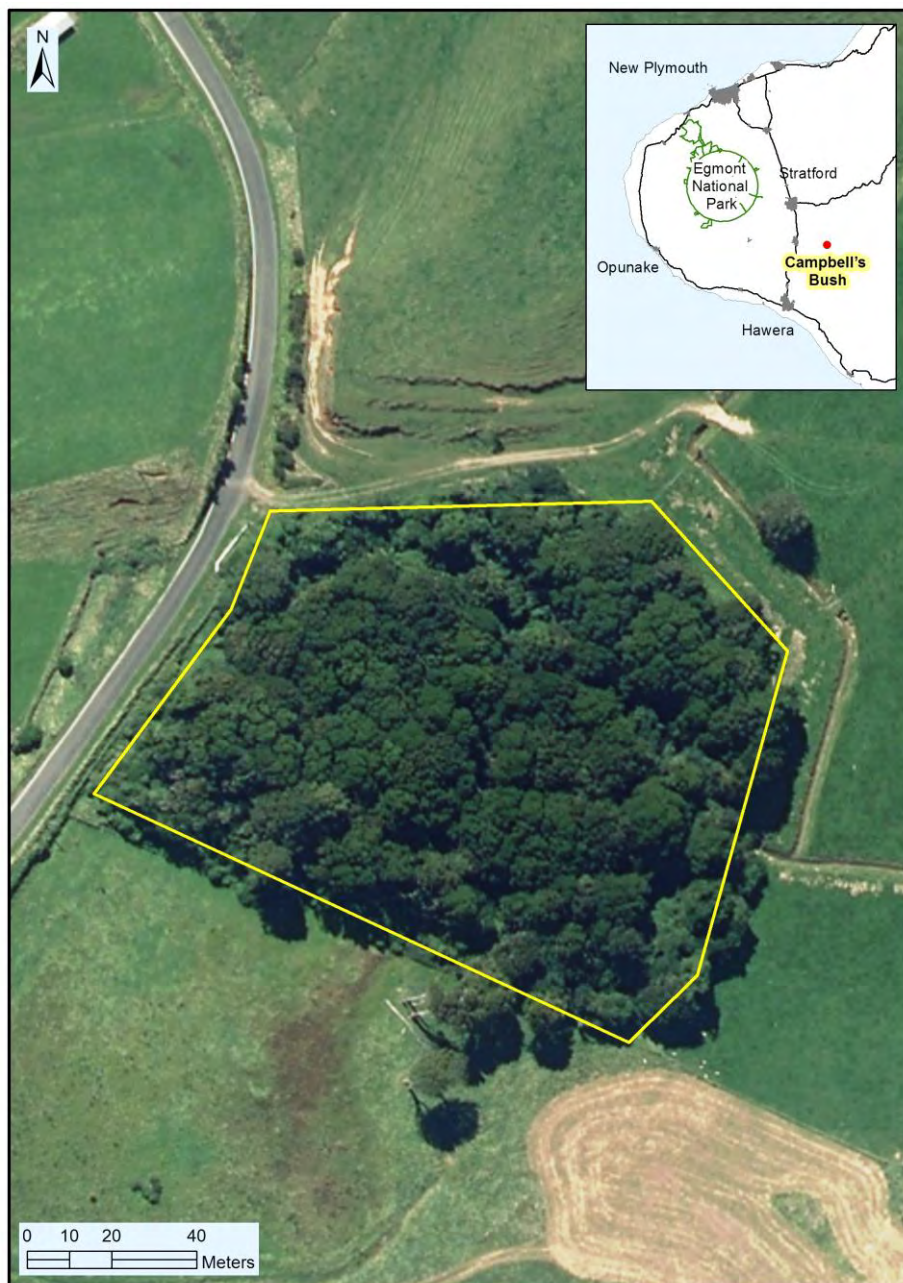
Potential risk although currently well fenced and with on going possum control.

Predators - Medium

Potential threat from rodents, mustelids, possums, hedgehogs and cats although currently managed as part of the Rotokare 'Halo' area.

Weeds - High

Potential high risk although currently low numbers and confined to the forest margins.



Fisher Family Bush

At a glance

TRC Reference: BD/9593	LENZ:	F5.2a Acutely threatened
Ecological District: Egmont		F5.3b Not threatened
Land Tenure: Private	National:	Priority 1 - Threatened Land Environment
Area(ha): 3.84	Regional:	Key Native Ecosystem
GPS: 1679783X & 5647891Y	Regional	Reduced 30-50% left
Bioclimate Zone: Lowland	Ecosystem Loss:	Less reduced >50% left
Habitat: Forest Remnant	Catchment:	Pungaereere (372)
Ecosystem Type	MF7.2: Rata, tawa, kamahi, podocarp forest	
	MF8.3: Kahikatea, rimu, kamahi forest	

General Description

The Fisher Family Bush forest remnant is 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 lowland bush remnant covers 3.8ha and is currently fenced. The forest is in good condition with very good understory and ground cover.

Ecological Features

Flora

The forest canopy and understory is in very good condition due to the site being fenced. No large emergent podocarps are present although the main canopy is dominated by a mix of roughly equal sized rimu, kahikatea, miro, tawa, swamp maire, mahoe and pigeonwood. The understory is dominated by kanono with a mix of other species present including pate, five finger, pigeonwood, mahoe and tree ferns. Ground cover, climbers and epiphytes are common. The 'Regionally Distinctive' swamp maire is notable for the site and other notable flora species may be present.

Fauna

Native fauna observed on the initial visit include silvereye, grey warbler and fantail. Other native birds will also be present or use the forest in their foraging area including tui, kereru and bellbird. A small stream in the forest will contain freshwater crayfish and may contain notable freshwater fish such as banded kokopu. There is very good habitat for native reptiles and notable species may be present.

Ecological Values

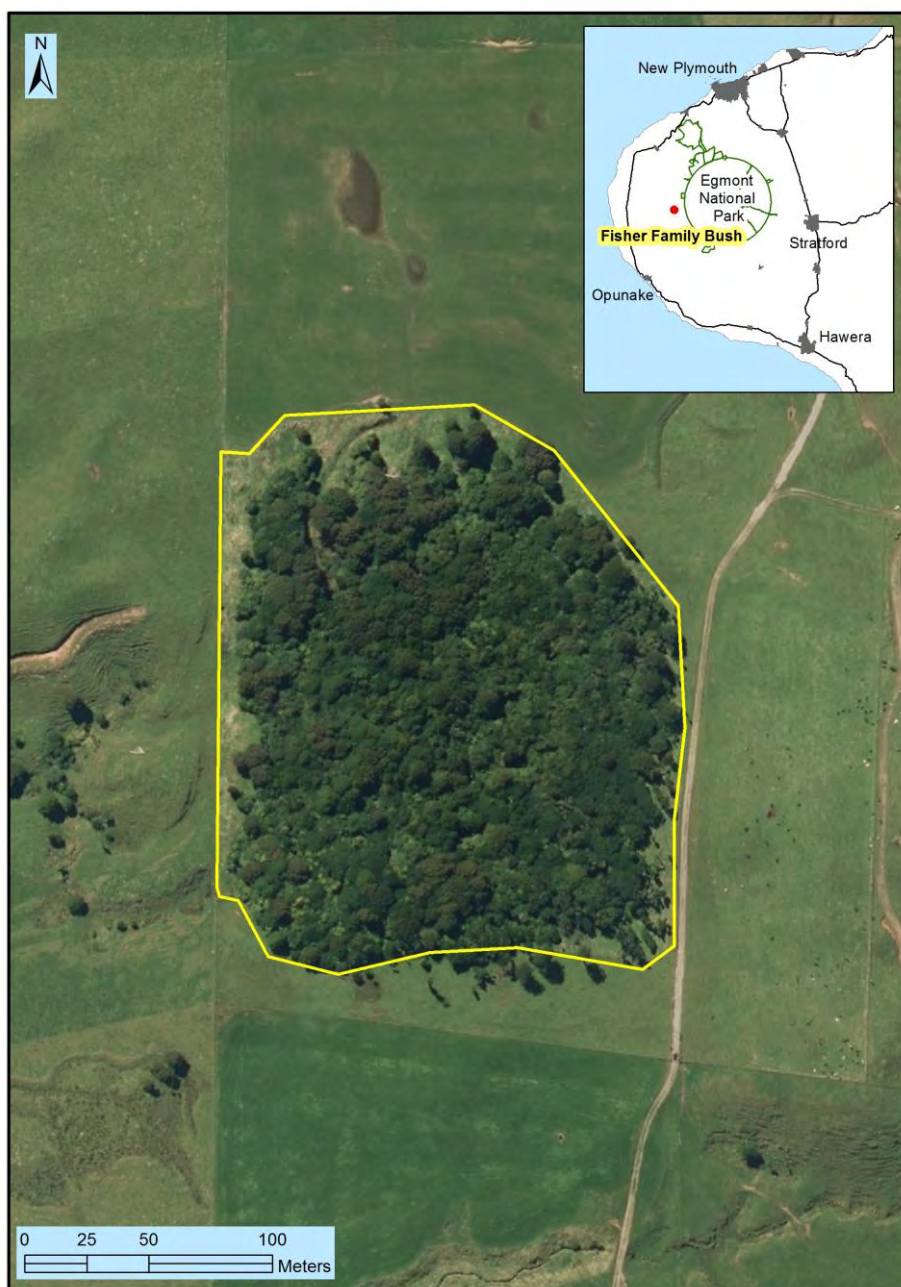
Ecological context - High	Part of a mosaic of small habitats in a unique area of lahar deposits on the western ring plain. Nearby priority habitats include the Kahui Road Wetland and Egmont National park. Surrounded by top priority representative ecosystems and likely to have been accidentally overlooked.
Rarity and Distinctiveness - Medium	Contains the 'Regionally Distinctive' swamp maire. Provides habitat for and likely to contain other notable species including notable native fish and reptiles.
Representativeness - High	Contains vegetation on 'Acutely Threatened' (F5.2a) and 'Not Threatened' (F5.3b) land environments. Is a remnant of 'Less Reduced' (MF7-2) and 'Reduced' (MF8-3) ecosystem type.

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.
Herbivores - High	Potential threat from cattle if fences were breached although currently a low threat.
Possum Self-help	Within the possum self 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.
Weeds - Medium	Weed species observed include African clubmoss, black berry and wild cherry tree. Weed threats are currently medium to low although control may be needed in future.



Harlow Fern

At a glance

TRC Reference: BD/9601	LENZ:	F7.2a At risk
Ecological District: North Taranaki	Regional:	Key Native Ecosystem
Land Tenure: Private	Regional	At risk 20-30% left
Area(ha): 6	Ecosystem Loss:	
GPS: 1719654X & 5650833Y	Catchment:	Waitara (395)
Bioclimate Zone: Lowland		
Habitat: Forest Remnant		

Ecosystem Type MF7.3: Tawa, pukatea, podocarp forest

General Description

The Harlow Fern forest remnant is located on private land approximately 10km north east of Stratford in central Taranaki in the North Taranaki Ecological District. The area consists of a 6.0 hectare mainly east facing hill slope and gully of cutover tawa dominant native forest. The site is in close proximity to other QEII covenants and Key Native Ecosystems including the Waiwiri Wetlands and other habitats in the area and lies within the Waitara River catchment.

Ecological Features

Flora

The forest canopy is mainly intact and is dominated by tawa with a mix of rimu, pukatea, rewarewa, miro, pigeonwood and mahoe present in places. The understory and ground cover is currently sparse for the majority of the site due to stock access although has good potential for recovery. The area contains indigenous vegetation associated with an 'At Risk' habitat under LENZ environment F7.2a. Remnants of indigenous habitats in At Risk environments are rare and are important refuges for native species.

Fauna

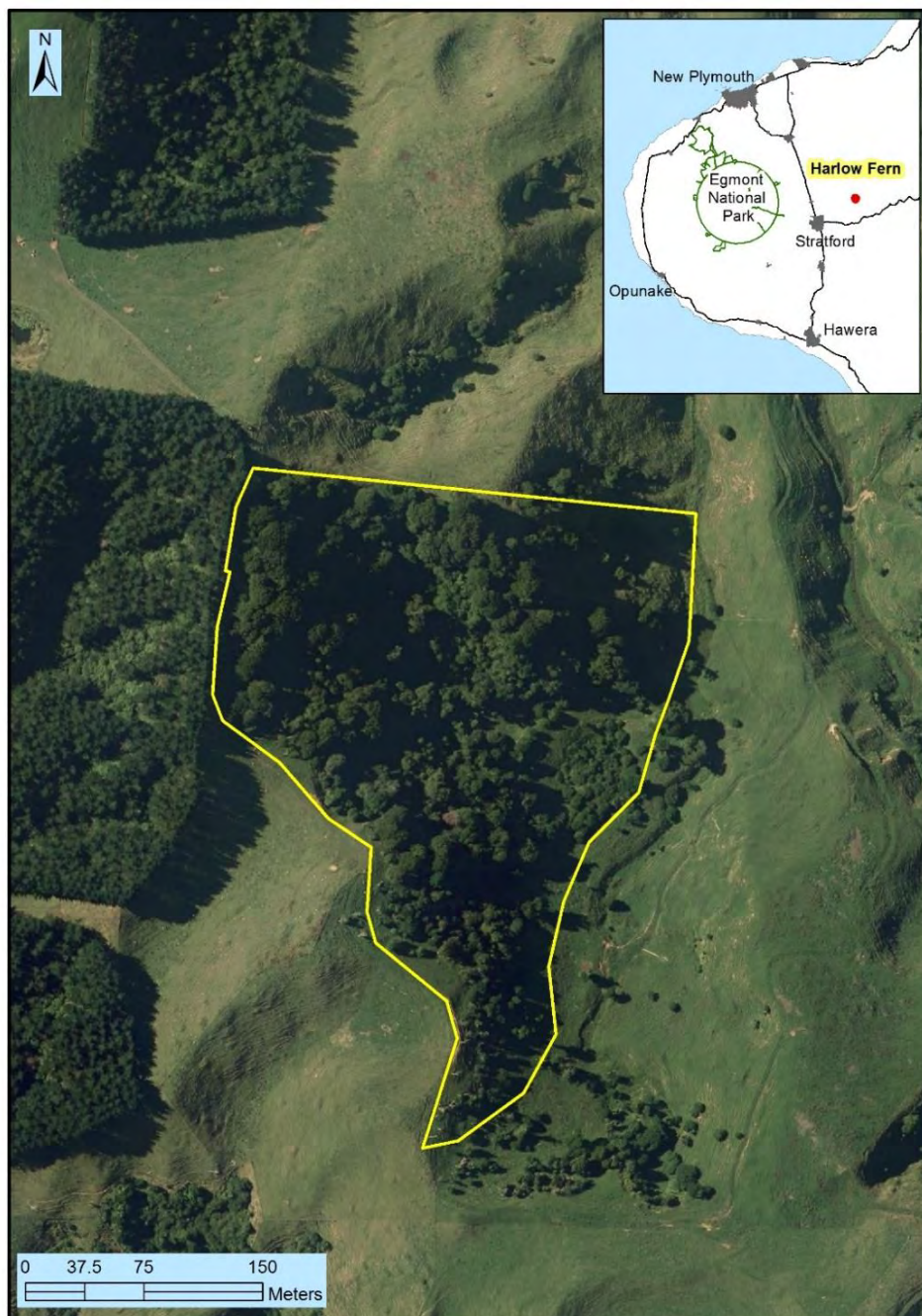
Native birds present include New Zealand falcon, kereru, tui, bellbird, silvereve, shining cuckoo, grey warbler, fantail, kingfisher and morepork. A very small stream in the forest will likely contain freshwater crayfish although is likely to be too small to contain notable freshwater fish. There is very good habitat for a range of other notable native species including reptiles, bats and invertebrates.

Ecological Values

Sustainability - Positive	In good vegetative condition and likely to recover well from existing threats when fenced.
Rarity and Distinctiveness - Medium	Provides habitat for the 'Threatened' New Zealand falcon and likely to contain other notable species including reptiles, invertebrates and potentially native bats.
Representativeness - Medium	Contains vegetation on 'At Risk' land environment (F7.2a) and is a remnant of an ecosystem type (MF7-3: Tawa, pukatea, podocarp forest) considered 'At Risk' as less than 20 - 30% remains in the region.
Ecological context - High	Enhances connectivity between fragmented indigenous habitats in this area including QEII covenants 5/06/276 and other nearby KNE's such as Ancell Farms, Waiwiri Wetlands and the John Whittington Stanley Road site.

Other Management Issues

Weeds - Low	Currently a low threat at this site with occasional Himalayan honeysuckle and barberry.
Predators - Medium	Predators including rodents, mustelids, possums, feral cats and hedgehogs will be having an impact on native species at the site.
Possum Self-help	The site is outside the current possum self-help program boundary although receives possum control by the landowner. High possum numbers have the potential to impact on forest health.
Herbivores - High	Stock and occasional feral goats have had an impact on areas of the forest understory and ground cover although the site would recover well if fenced and the goats were eradicated.
Habitat Modification - Medium	The habitat is vulnerable to modification although there are no immediate threats other than stock.



Huiroa Reserve

At a glance

TRC Reference: BD/9600	LENZ:	H3.1b Acutely threatened
Ecological District: Matemateaonga		F7.2a At risk
Land Tenure: District		F5.2a Acutely threatened
Area(ha): 1.7	National:	Priority 1 - Threatened Land Environment
GPS: 1726384X & 5654391Y		Priority 4 - Threatened Species
Bioclimate Zone: Lowland	Regional:	Key Native Ecosystem
Habitat: Forest Remnant	Regional Ecosystem Loss:	At risk 20-30% left Acutely Threatened <10% left
	Protection Status:	Local Government
	Catchment:	Patea (343)
Ecosystem Type	MF7.3: Tawa, pukatea, podocarp forest	
	WF8: Kahikatea, pukatea forest	

General Description

The Huiroa Reserve forest remnant is part of the Stratford District Council owned Huiroa Domain and is located near Huiroa approximately 17kms north east of Stratford in central Taranaki. The 1.7ha forest remnant lies in the Matemateaonga Ecological District and Patea River catchment. The forest is situated on a small low hill top and slopes just above the main valley floor and generally runs from north to south from Makuri road. The forest canopy is dominated by tawa. A good understory and ground cover is present due to the exclusion of ground browsers for many years.

Ecological Features

Flora

The reserve contains a good example of cutover lowland forest (classified as an 'Acutely Threatened' environment under LENZ environment F5.2a & H3.1b). The forest canopy is dominated almost completely by tawa with a small mix of rimu, miro, rewarewa, titoki and matai. The understory and ground cover is intact and reasonably diverse and reflects the long period of stock exclusion from the area. Plantation species (blackwoods) are present on the western and northern forest margins and provide additional wind protection to the forest.

Fauna

Native birdlife recorded in and around the covenants include the kereru, grey warbler, fantail, tui, kingfisher and shining cuckoo. Notable 'At Risk' bird species using the remnant as part of their wider habitat include the New Zealand falcon and long-tailed cuckoo. There is good habitat throughout the remnants for other notable native fauna such as reptiles, invertebrates and potentially native bats.

Ecological Values

Ecological Context - Medium	Enhances connectivity between fragmented indigenous habitats in the area.
Rarity and Distinctiveness - Medium	Provides habitat for 'At Risk' species such as the New Zealand falcon and long-tailed cuckoo. Likely to contain other notable native fauna such as reptiles, invertebrates and potentially native bats.

Representativeness - High

Contains vegetation on 'Acutely Threatened' (H3.1b & F5.2a) and 'At Risk' (F7.2a) land environments. Is a remnant of an ecosystem type (MF7.3: Tawa, pukatea, podocarp forest) considered 'At Risk' as less than 30% remains in the region. Also contains a small area of an ecosystem type (WF8: Kahikatea, pukatea forest) considered 'Acutely Threatened' as less than 10% remains in the region.

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

Habitat Modification - Low

Classified as a recreation reserve. Likely to have lost emergent podocarps in very early years of land clearance in the area.

Herbivores - High

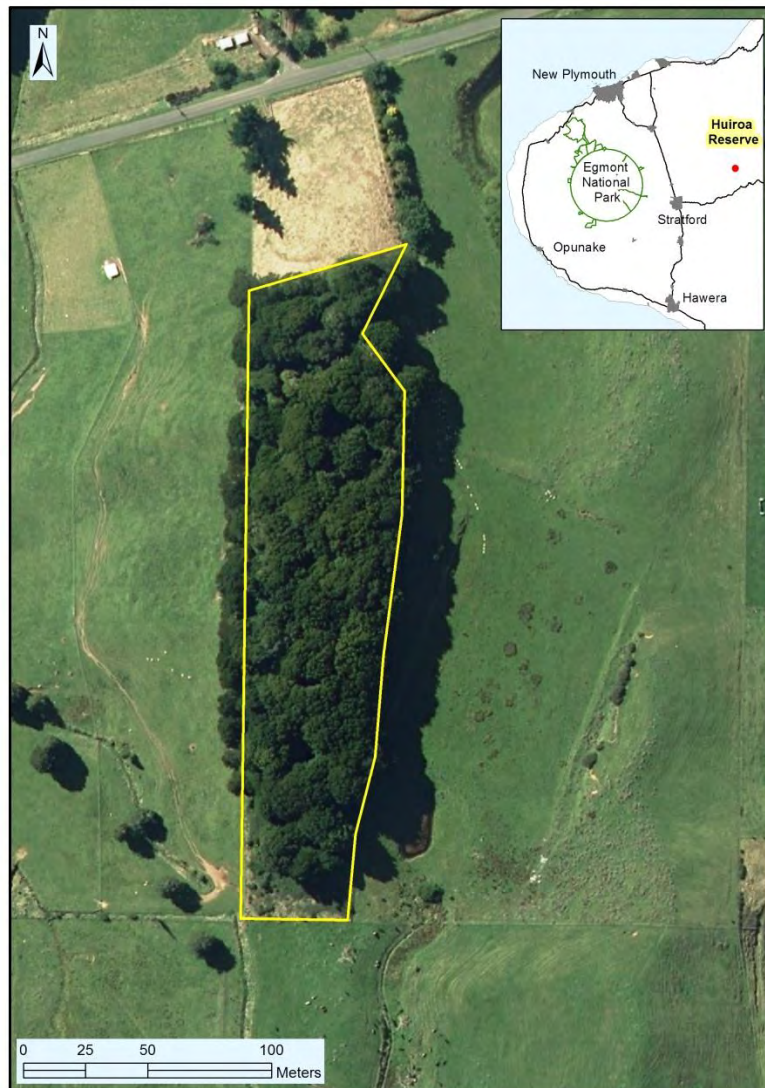
Potential risk to the forest understory and ground cover from ground browsers. Potential risk to the forest canopy if possum numbers reach high levels over a long period.

Predators - Medium

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

Weeds - High

Weeds that are present (especially ivy) have high potential to impact on the site. The current spread of weeds is containable and mainly confined to the forest margins.



Jupp Covenant (*Bean Dogs Bush*)

At a glance

TRC Reference: BD/9598	LENZ:	F1.1b Not threatened
Ecological District: North Taranaki		F5.2a Acutely threatened
Land Tenure: Private	Regional:	Key Native Ecosystem
Area(ha): 12	Regional	Chronically threatened 10-20%
GPS: 1713218X & 5673740Y	Ecosystem Loss:	left
Bioclimate Zone: Semi-Coastal	Catchment:	Waitara (395)
Habitat: Forest Remnant		

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

General Description

Bean Dogs Bush is located on privately owned land on Otaraoa road, 10km south of Waitara. The site is a 12 ha remnant of semi-coastal tawa, kohekohe, rewarewa, hinau, podocarp forest on a slope bordered by a small stream on one side and the Waitara river on the other. The forest remnant provides good connectivity to other habitats in the nearby area including the Bushy Park and Mangahewa KNE's.

Ecological Features

Flora

The canopy of the bush remnant is dominated by rewarewa, pukatea, tawa and rimu. A variety of native vines and epiphytes are present. The understory is in reasonable condition and contains mahoe, pigeonwood, hangehange, nikau, pate, parataniwha and numerous ground and tree ferns. The site contains the 'regionally distinctive' fern *Deparia* (*Deparia petersenii* subsp. *congrua*).

Fauna

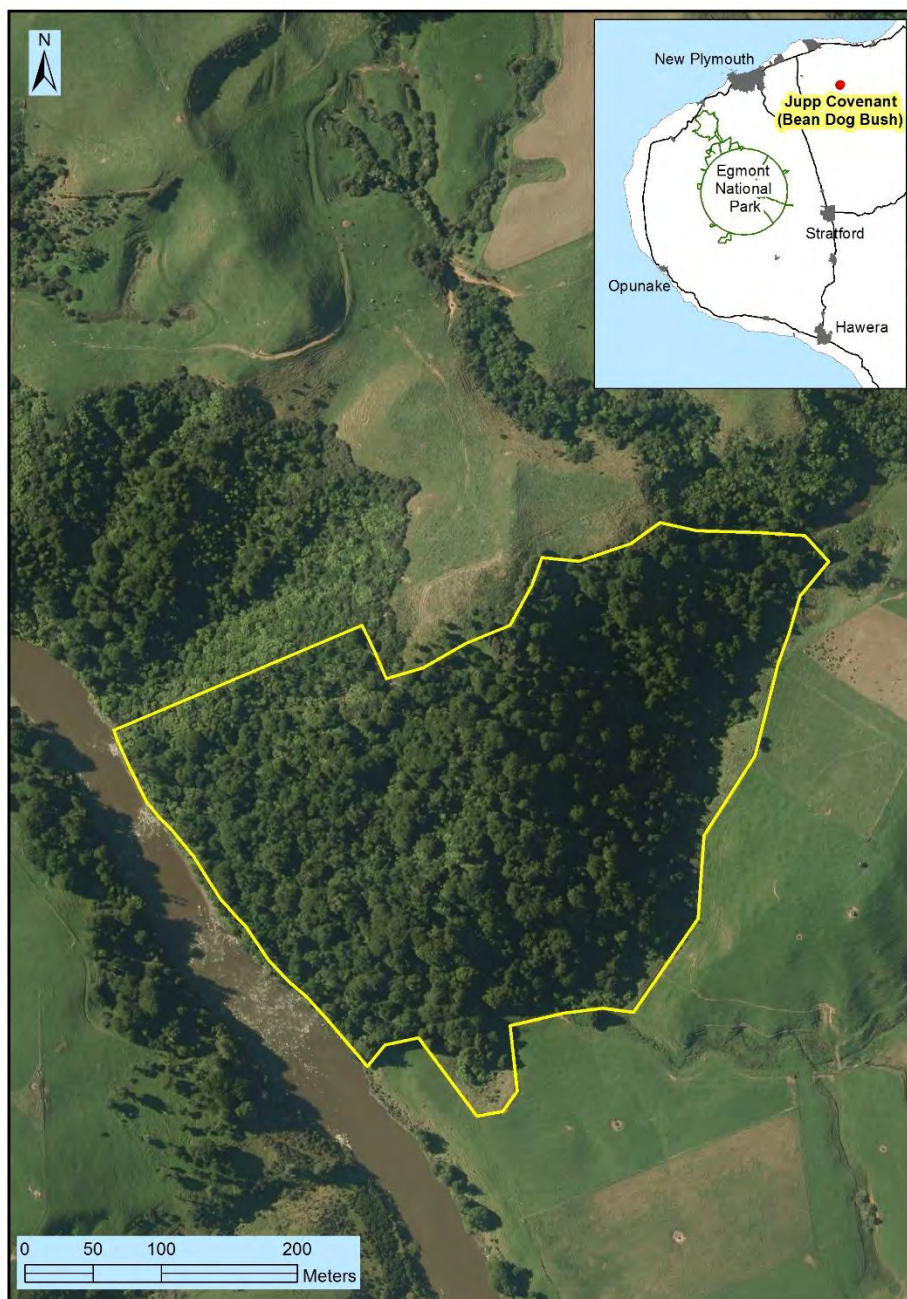
Good birdlife is present in the remnant including, kereru, grey warbler, bellbird, tui and fantail. The remnant provides good habitat for native freshwater fish and it is likely that notable species would be present. There is adequate habitat for terrestrial and arboreal reptile species ranging from deep leaf litter, logs on the forest floor, epiphytes in the canopy and abundant foliage. No reptile records are known for the site although reptiles will be present and may include threatened or regionally distinctive species.

Ecological Values

Ecological Context - Medium	Provides additional habitat and greater connectivity with other Key Native Ecosystems in this area such as the Bushy Park KNE, Mangahewa KNE and Tikorangi Whitehead KNE.
Sustainability - Positive	Key ecological processes still influence the site. Under appropriate management, it can remain resilient to existing or potential threats.
Rarity and Distinctiveness - Medium	The site contains the 'regionally distinctive' fern <i>Deparia</i> (<i>Deparia petersenii</i> subsp. <i>congrua</i>).
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 classified as an 'Acutely Threatened' (F5.2a) LENZ environment.

Other Management Issues

Weeds - Medium	One large infestation of Japanese honeysuckle is the priority for control. Some scattered areas of Tradescantia (wandering willy) and woolly nightshade is also present.
Predators - High	The landowner does possum control but a more comprehensive predator control network would greatly benefit the bush remnant.
Herbivores - High	Goats have been recorded from the site and controlled by the landowner in the past. The site would greatly benefit from secure fencing and permanent stock exclusion.
Habitat Modification - Medium	The land owner is working with the QEII trust to protect the remnant through a covenant.



Mangamingi Bush Reserve

At a glance

TRC Reference: BD/9577	LENZ:	F7.2a At risk
Ecological District: Matemateaonga	Regional:	Key Native Ecosystem
Land Tenure: District	Regional Ecosystem Loss:	At risk 20-30% left
Area(ha): 5.7	Protection Status:	Local Government
GPS: 1725285X & 5636166Y	Catchment:	Patea (343)
Bioclimate Zone: Lowland		
Habitat: Forest Remnant		

Ecosystem Type MF7: Tawa, kamahi, podocarp forest

General Description

The Mangamingi Bush Reserve is located 13.5kms east of Eltham in central Taranaki and is owned by the South Taranaki District Council. The reserve is a 5.7ha lowland bush remnant on a north facing slope and is located within the Matemateaonga Ecological District in the Patea River catchment.

Ecological Features

Flora

The old forest area of the Mangamingi Bush Reserve canopy is dominated by tawa with occasional matai, rimu, rewarewa and titoki. The understory is recovering and includes kawakawa, kanono, pigeonwood, mahoe, turepo and tree ferns. Native jasmine is particularly abundant and is scrambling on the ground and into the lower canopy. Native ferns are well established and dominate the ground cover. The planted margins of the reserve are a mix of well established natives such as koromiko, karamu, corokia, lacebark, kohuhu, marble leaf, lemonwood, broadleaf and wineberry. Rank grass dominates the groundcover in the open areas and native ferns are establishing under the plantings.

Fauna

A moderate number of native birds were observed including tui, kereru, bellbird, grey warbler, shining cuckoo and fantail. A single morepork was disturbed from a day roost on the day and others will be present. Native bats are present in the area and potential roost trees are also present. Good habitat exists for native reptiles including dense vegetation, epiphytes, loose bark, leaf litter, logs and ground cover and notable native reptiles are known in the area. The habitat will contain a diverse range of terrestrial invertebrates likely including notable species such as peripatus.

Ecological Values

Ecological context - High	The bush remnant provides important connectivity in a highly fragmented landscape to nearby priority biodiversity sites (2.5kms north east from the Totara's Block and 4kms north east from the Lake Rotokare Scenic Reserve).
Rarity and Distinctiveness - Medium	Contains good habitat for notable priority species such as native reptiles and invertebrates.
Sustainability - Positive	In relatively good vegetative condition. Key ecological processes still influence the site. Under appropriate management it can remain resilient to existing or potential threats.
Representativeness - Medium	Contains vegetation on 'At Risk' LENZ environment (F7.2a) and is a remnant of a regionally At Risk ecosystem type (MF7.3 Tawa,

kamahi, podocarp forest).

Other Management Issues

Habitat Modification - Medium	Damage evident from earlier vegetation clearance mainly confined to the front margin although planting has been undertaken for mitigation.
Herbivores - Medium	Potential risk although currently well fenced and possum sign appeared to be low.
Predators - Medium	Potential threat from rodents, mustelids, possums, hedgehogs and cats.
Weeds - Medium	Potential high risk although currently low numbers of invasive species mostly confined to the forest margins.



QEII Covenants 5/06/011 & 5/06/031

At a glance

TRC Reference: BD/7035	LENZ:	F5.2a Acutely threatened
Ecological District: Egmont	National:	Priority 1 - Threatened Land Environment
Land Tenure: Private		Priority 4 - Threatened Species
Area(ha): 6.53	Regional:	Key Native Ecosystem
GPS: 1693006X & 5668166Y	Regional Ecosystem Loss:	Chronically threatened 10-20% left
Bioclimate Zone: Semi-Coastal	Protection Status:	QEII Covenant
Habitat: Forest Remnant	Catchment:	Te Henui (391)
Ecosystem Type	WF13: Tawa, kohekohe, rewarewa, hinau, podocarp forest	

General Description

QEII covenants 5/06/011 & 5/06/031 cover five separate forest remnants and are located near Hurworth approximately 4kms south of New Plymouth. The covenants are located in the Egmont Ecological District and lie in the Te Henui Stream catchment. The five tawa dominant semi coastal / lowland forest remnants range from 0.7ha to 2.16ha in size with a total area of 6.53ha. The covenants are in close proximity to each other and the three streamside remnants are connected by well established riparian vegetation.

Ecological Features

Flora

The five covenants contain very good examples of semi coastal / lowland forest (classified as an 'Acutely Threatened' forest ecosystem under LENZ environment F5.2a). The forest canopies are dominated by tawa with a mix of rimu, miro, pukatea, rewarewa, puriri, titoki, and kohekohe. The understory and ground cover is intact and diverse and reflects the long period of stock exclusion from these areas. Two of the five forest remnants contain some excellent examples of the 'At Risk' and spectacular kingfern.

Fauna

Native birdlife recorded in and around the covenants include the kereru, grey warbler, fantail, tui, kingfisher and shining cuckoo. Notable freshwater species are present in the small tributary and main stem of the Te Henui Stream including banded kokopu, shortjaw kokopu, koaro, longfin eel and redfin bully. Giant kokopu and inanga may also be present. There is good habitat throughout the remnants for other notable native fauna such as reptiles and invertebrates.

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 core habitat for 'Threatened', 'At Risk' and 'Regionally Distinctive' flora and fauna. Provides additional habitat and greater connectivity with other Key Native Ecosystems in this area such as the MS & FA Morris Reserve and Upper Mangaotuku covenants.
Representativeness - High	Contains vegetation on 'Acutely Threatened' land environment

(F5.2a) and is a remnant of an ecosystem type (WF13: Tawa, kohekohe, rewarewa, hinau, podocarp forest) considered 'Chronically Threatened' as less than 20% remains in the region.

Rarity and Distinctiveness - High

Contains the 'Threatened' shortjaw kokopu and 'At Risk' koaro, redfin bully, longfin eel and kingfern. Also contains the 'Regionally Distinctive' banded kokopu and other notable species may be present.

Other Management Issues

Habitat Modification - Low

Protected by QEII covenant conditions.

Herbivores - High

All remnants are currently fenced and stock proof although vulnerable to stock browsing if fences were breached. The forest canopy would be vulnerable to possum browse if possum numbers were high.

Possum Self-help

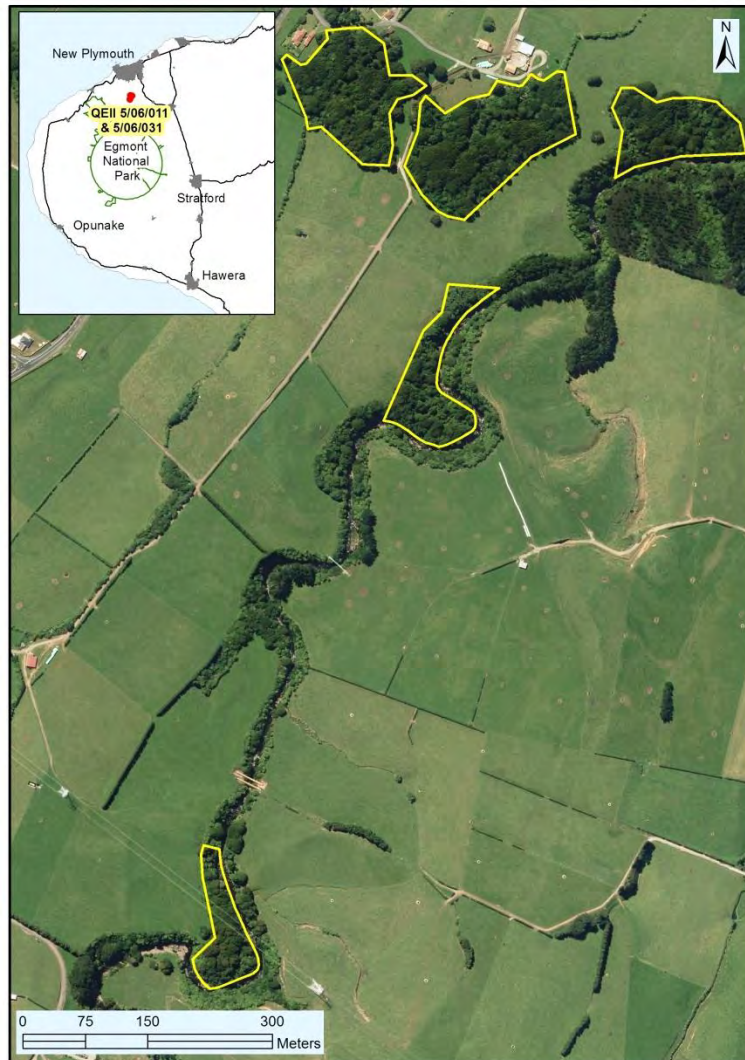
The site is within the possum self help area.

Predators - Medium

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

Weeds - High

Weeds that are present have good potential to impact on the site. High risk species present include wandering willy, woolly nightshade, ivy, bamboo, cherry etc. The current spread of weeds is containable for these forest remnants.



Rukumoana Reserve

At a glance

TRC Reference: BD/9599	LENZ:	F1.1b Not threatened
Ecological District: Matemateaonga	Regional:	Key Native Ecosystem
Land Tenure: District		Close proximity to a representative ecosystem site
Area(ha): 5.56	Regional Ecosystem Loss:	At risk 20-30% left
GPS: 1727180X & 5636044Y	Protection Status:	Local Government
Bioclimate Zone: Lowland	Catchment:	Patea (343)
Habitat: Forest Remnant		

Ecosystem Type MF7.3: Tawa, pukatea, podocarp forest

General Description

The Rukumoana Reserve is located 15kms east of Eltham near Mangamingi in central east Taranaki. The KNE component of the reserve is made up of two forest remnants on opposing banks of the top end of Lake Rotorangi with a total size of 5.56ha. The southern remnant is located on a peninsula of the lake which has restricted access to larger browsers for many years. The peninsula is mainly tawa dominant old forest and the northern block is dominated by younger regenerating native forest amongst exotic plantation species. The reserve lies in the Matemateaonga Ecological District and Patea River catchment.

Ecological Features

Flora

The reserve contains a very good example of lowland forest for this area. The canopy of the old forest peninsula is dominated by tawa with a mix of rimu, miro, matai, maire, pukatea, rewarewa, titoki etc. The understory and ground cover of the peninsula is intact and diverse and reflects a long period of ground browser exclusion (potentially dating back to the formation of the lake in 1984). The northern forest remnant is mainly regenerating native mixed with an area of plantation forest.

Fauna

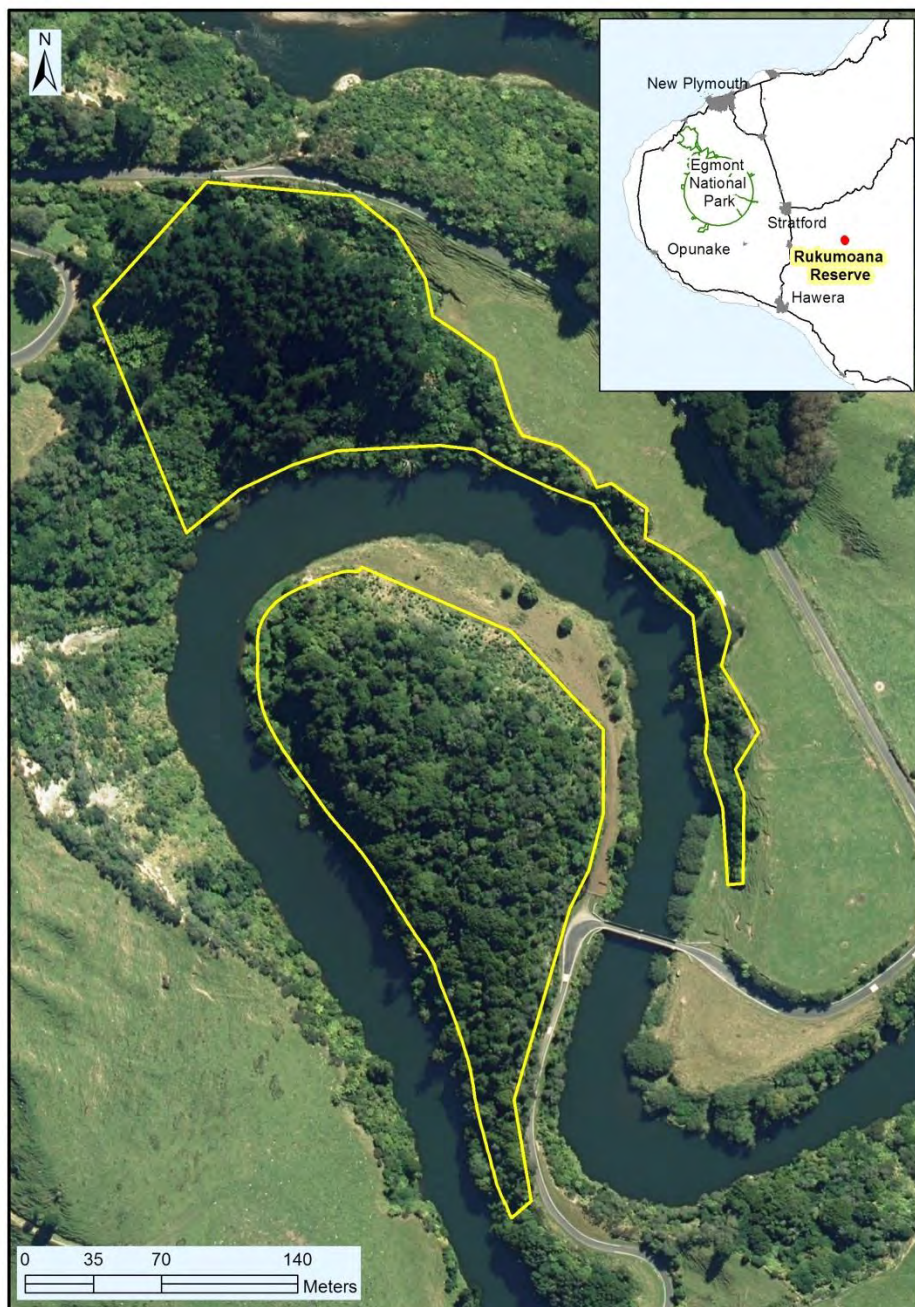
Native birdlife recorded in and around the reserve include kereru, grey warbler, fantail, tui, bellbird, kingfisher and silvereye. There is good habitat throughout the remnants for other notable native fauna such as reptiles and invertebrates. The small portion of Lake Rotorangi between the two forest remnants is excluded from the KNE boundary.

Ecological Values

Ecological context - High	Provides greater connectivity to nearby priority habitats including the Mangamingi Bush Reserve and Omoana Bush. Connected to a representative ecosystem site.
Representativeness - Medium	Contains vegetation on a 'Not Threatened' (F1.1b) land environment. Is a remnant of an ecosystem considered 'At Risk' (MF7-3) in Taranaki. Less than 30% of the pre-European extent of this ecosystem type remains in the region.
Sustainability - Positive	In very good vegetative condition and likely to remain resilient to existing or potential threats.
Rarity and Distinctiveness - Medium	Provides habitat for and likely to contain notable species including native birds, bats, reptiles and invertebrates.

Other Management Issues

Habitat Modification - Medium	Potential habitat modification if exotic forest was harvested on the northern remnant.
Herbivores - High	The remnants are currently fenced where needed or are adjacent to the lake margin which is excluding stock and feral browsers. The site potentially remains vulnerable to ground browsers. The forest canopy would be vulnerable to possum browse if possum numbers were very high.
Predators - Medium	Predators including rodents, mustelids, possums, feral cats and hedgehogs will be having an impact on native species at the site.
Weeds - High	Weeds that are present have potential to impact on the site. High risk species present include old mans beard, wandering willy and cherry etc. The current spread of weeds is containable for these forest remnants.



The Two Sisters

At a glance

TRC Reference: BD/9596	LENZ:	F5.2a Acutely threatened
Ecological District: North Taranaki	Local:	Significant Natural Area
Land Tenure: Private	National:	Priority 1 - Threatened Land Environment
Area(ha): 2.5	Regional:	Key Native Ecosystem
GPS: 1714808X & 5673547Y	Regional Ecosystem Loss:	Chronically threatened 10-20% left
Bioclimate Zone: Semi-Coastal	Catchment:	Onaero (398)
Habitat: Forest Remnant		

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

General Description

The Two Sisters forest remnant is located off Otaraoa Road approximately 5 kilometres southeast of Tikorangi in North Taranaki. The remnant lies in the North Taranaki Ecological District and Onaero River catchment. The small (2.5ha) forest remnant is made up of a mainly north east facing hill slope of semi coastal / lowland forest with a dominant canopy of tawa.

Ecological Features

Flora

The forest canopy dominated by tawa with occasional miro, pukatea, rewarewa, pigeonwood and emergent rimu. Puriri and kohekohe are also present although only very occasionally. The understory is dominated by kanono with a mix of other species present including pate, pigeonwood, mahoe and tree ferns. Ground cover, climbers and epiphytes are common. Notable flora species may be present including Tawhirikaro.

Fauna

Native birds present include kereru, tui, bellbird, silvereye, shining cuckoo, grey warbler, fantail, kingfisher and morepork. A small stream in the forest contains freshwater crayfish and may contain notable freshwater fish such as banded kokopu. There is very good habitat for a range of other notable native species including reptiles, bats and invertebrates.

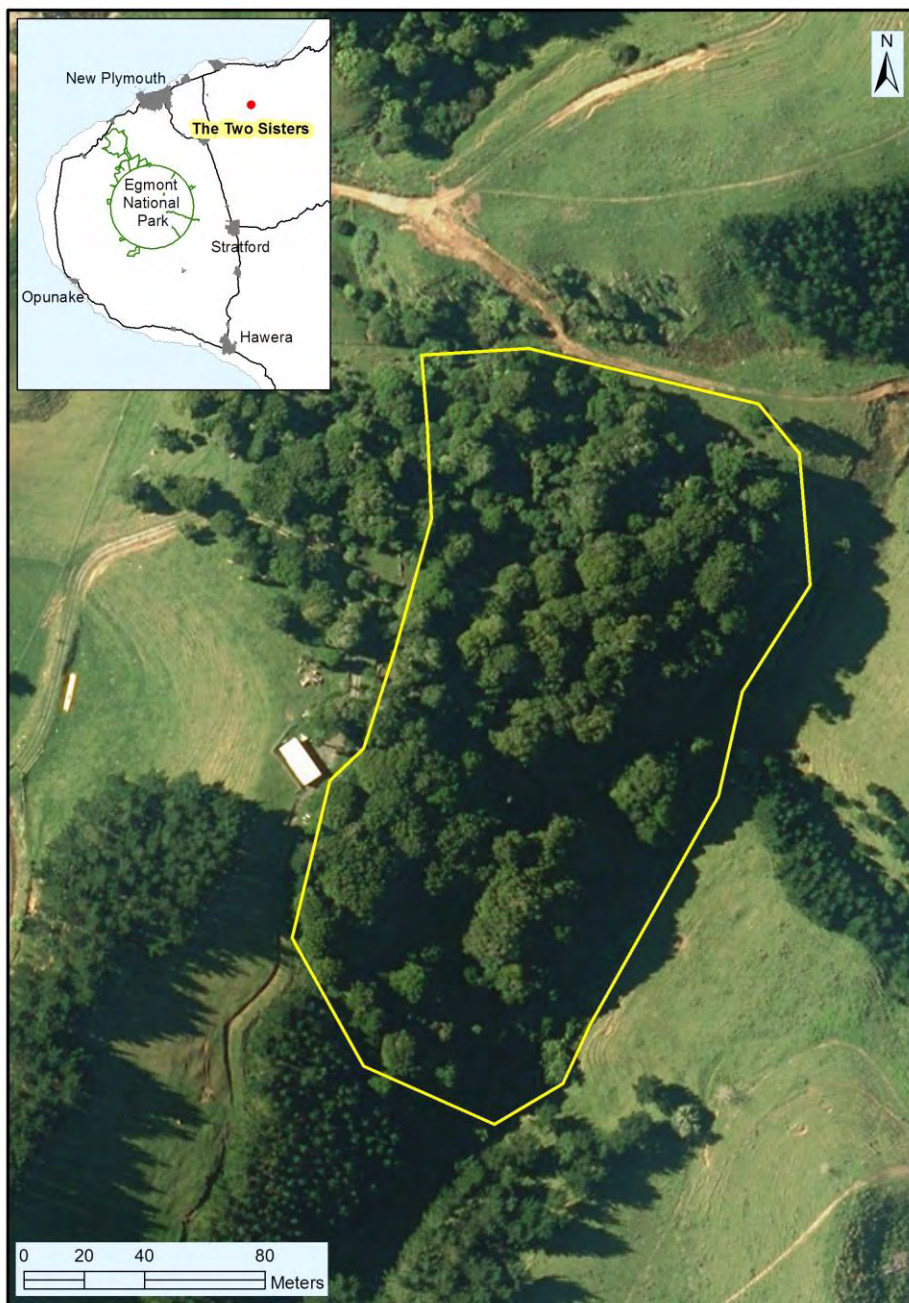
Ecological Values

Ecological context - High	Enhances connectivity between fragmented indigenous habitats in this area including Bushy Park QEII's, Mangahewa, Taramoukou and the Taramoukou Conservation Area.
Rarity and Distinctiveness - Medium	Provides habitat for and likely to contain 'Threatened', 'At Risk' or 'Regionally Distinctive' species including notable reptiles, freshwater fish and potentially native bats.
Representativeness - High	Contains vegetation on 'Acutely Threatened' land environment (F5.2a) and is a remnant of an ecosystem type (WF13: Tawa, kohekohe, rewarewa, hinau, podocarp forest) considered 'Chronically Threatened' as less than 20% remains in the region.
Sustainability - Positive	In good vegetative condition and likely to recover well from

existing threats when fenced.

Other Management Issues

Habitat Modification - Medium	The habitat is vulnerable to modification although there are no immediate threats other than stock.
Herbivores - High	Stock have had an impact on some areas of the forest remnant although the site would recover well when fenced in the future.
Possum Self-help	The site is outside the current possum self-help program boundary although receives occasional possum control by the landowners. High possum numbers have the potential to impact on forest health.
Predators - Medium	Predators including rodents, mustelids, possums, feral cats and hedgehogs will be having an impact on native species at the site.
Weeds - Medium	Currently a low to medium threat at this site although potential to be a greater problem if established.



Vujcich kamahi swamp maire forest

At a glance

TRC Reference: BD/9592	National:	Priority 2 – Sand Dunes and Wetlands
Ecological District: Egmont		Priority 4 – Threatened Species
Land Tenure: Private	Regional:	Key Native Ecosystem
Area(ha): 15	Regional Ecosystem Loss:	Reduced 30-50% left
GPS: 1700477X & 5654827Y	Catchment:	Waitara (395)
Bioclimate Zone: Lowland		
Habitat: Forest Remnant/Wetland		

Ecosystem Type MF8.2: Rimu, rata, kamahi forest
MF8.3: Kahikatea, rimu, kamahi forest

General Description

Forest remnant/swamp forest located at the end of Durham road bordering Egmont National Park. Approx. 15ha of cut over forest with a high proportion of wetland forest containing a significant number of swamp maire trees. The site borders the Maketawa stream to the south which provides habitat for Whio (Blue duck). The site provides connectivity between the national park and additional forest habitat along the Maketawa stream.

Ecological Features

Flora

The forest remnant has a canopy made up of kamahi, rimu, tawa, rewarewa and hinau with significant numbers of 'regionally distinctive' swamp maire trees in the wetter areas. There are emergent northern rata, most of which are now dead due to previous damage caused by possums. The disturbed edges of the remnant are dominated by tree fuchsia and wineberry. The 'at risk' and 'regionally distinctive' kirks daisy (*Brachyglottis kirkii* var. *kirkii*) is present.

Fauna

Birds found at the site include tui, bellbird, grey warbler, tomtit, fantail, and kereru. The Maketawa stream which boards the site to the south provides habitat to Whio (blue duck) and has been a known breeding site in the past. Whio are classified as 'Threatened - Nationally Vulnerable'. The site is also visited by the 'regionally distinctive' New Zealand Falcon. 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 records are known for the site although reptiles will be present and may include threatened or regionally distinctive species. Recent surveys appear to have located long-tailed bats in the national park and there is good habitat for bats at this site. Native fish found at the site include shortjaw kokopu, koaro, long fin eels and possibly red finned bullies.

Ecological Values

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
Ecological Context - Medium	Is in close proximity to Egmont National Park. Provides additional habitat for fauna species outside the national park and connectivity along the Maketawa stream.

Rarity and Distinctiveness - High

The site provides nesting habitat for the 'Threatened - Nationally Vulnerable' Whio (blue duck) along the Maketawa stream and has a significant number of the 'regionally distinctive' swamp maire trees. The 'regionally distinctive' kirks tree daisy is also present.

Representativeness - Medium

Contains vegetation associated with land environment H4.1a. The ecosystem type represented here (MF8-3, Kahikatea, rimu, kamahi forest) is considered 'Reduced' from its former extent in Taranaki with only around 35% remaining.

Other Management Issues

Predators - High

Mustelids, rats, cats, hedgehogs and possums will be present.

Weeds - Low

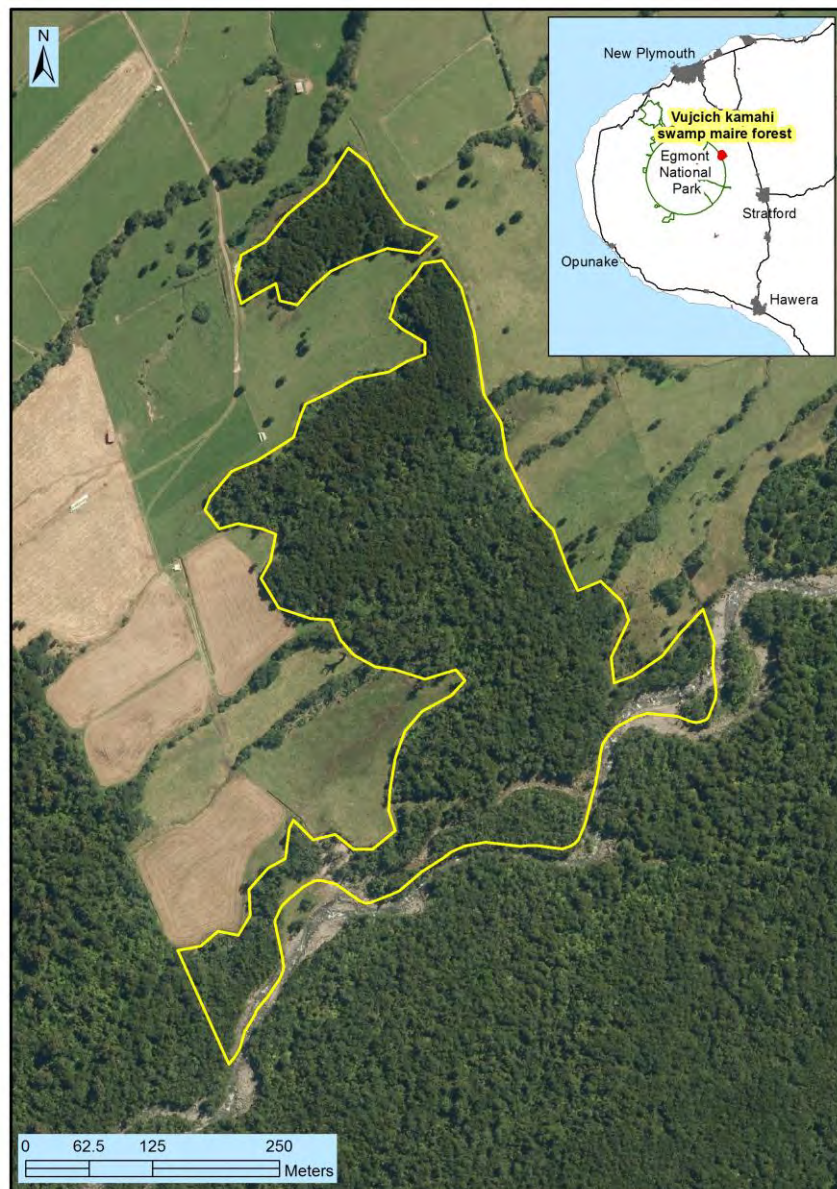
Few weeds are present, weeds are only affecting the bush edge and regenerating areas.

Herbivores - Medium

Possums are present at low to medium densities.

Habitat Modification - Medium

The site is unfenced. Grazing by wandering livestock causes damage to the understory and seedlings, particularly around the margins.



Whakamara

At a glance

TRC Reference: BD/9595	LENZ:	F5.2c Acutely threatened
Ecological District: Manawatu Plains	National:	Priority 1 - Threatened Land Environment
Land Tenure: Private	Regional:	Key Native Ecosystem
Area(ha): 8.4	Regional	At risk 20-30% left
GPS: 1719503X & 5612751Y	Ecosystem Loss:	Chronically threatened 10-20% left
Bioclimate Zone: Semi-Coastal		
Habitat: Forest Remnant	Catchment:	Manawapou (347)

Ecosystem Type MF7.3: Tawa, pukatea, podocarp forest
 WF13: Tawa, kohekohe, rewarewa, hinau, podocarp forest

General Description

The Whakamara forest remnant is located on private land 9.5 kilometers south east of Hawera off the Whakamara Road. The remnant lies within the Manawatu Plains Ecological District and Manawapou Stream catchment. The 8.4 hectare forest remnant is made up of a steep south west facing gully and gully sidlings of an unnamed tributary of the nearby Otoki Stream. The remnant consists of a mix of older semi coastal / lowland forest with a dominant canopy of tawa and younger mixed regenerating native dominated by mahoe, tree ferns etc.

Ecological Features

Flora

The forest canopy of the older forest areas is dominated by tawa with occasional miro, maire, rewarewa, pigeonwood, karaka and titoki. The understory is dominated by kawakawa with a mix of other species present including pate, pigeonwood, mahoe and tree ferns. Ground cover is present through most of the remnant dominated by a mix of ferns and parataniwha in the wetter areas. The 'Regionally Distinctive' ngaio is present and notable for the site. Other notable flora species may also be present. Introduced plantation trees are also present particularly on the western margin and south west spurs of the gully.

Fauna

Native birds present include kereru, tui, bellbird, silvereye, shining cuckoo, grey warbler, fantail and kingfisher. Morepork are likely to be present. 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	Provides connectivity to other nearby habitats and other notable KNE in the area including Scott Bush and the Tarere Forest Extension.
Rarity and Distinctiveness - Medium	Contains the 'Regionally Distinctive' ngaio and provides habitat for other priority native fauna such as native fish and reptiles.
Representativeness - High	Contains vegetation on an 'Acutely Threatened' land environment (F5.2c) and is a remnant of ecosystems that are considered

'Chronically Threatened' (WF13: Tawa, kohekohe, rewarewa, hinau, podocarp forest) and 'At Risk' (MF7-3 Tawa, pukatea, podocarp forest) in Taranaki.

Sustainability - Positive

In good vegetative condition and likely to recover well from existing threats when completely fenced.

Other Management Issues

Habitat Modification - Medium

The habitat is vulnerable to modification and slumping from the road is evident.

Herbivores - Medium

Stock have had an impact on small accessible areas of the forest remnant although fenced and steep areas are intact.

Possum Self-help

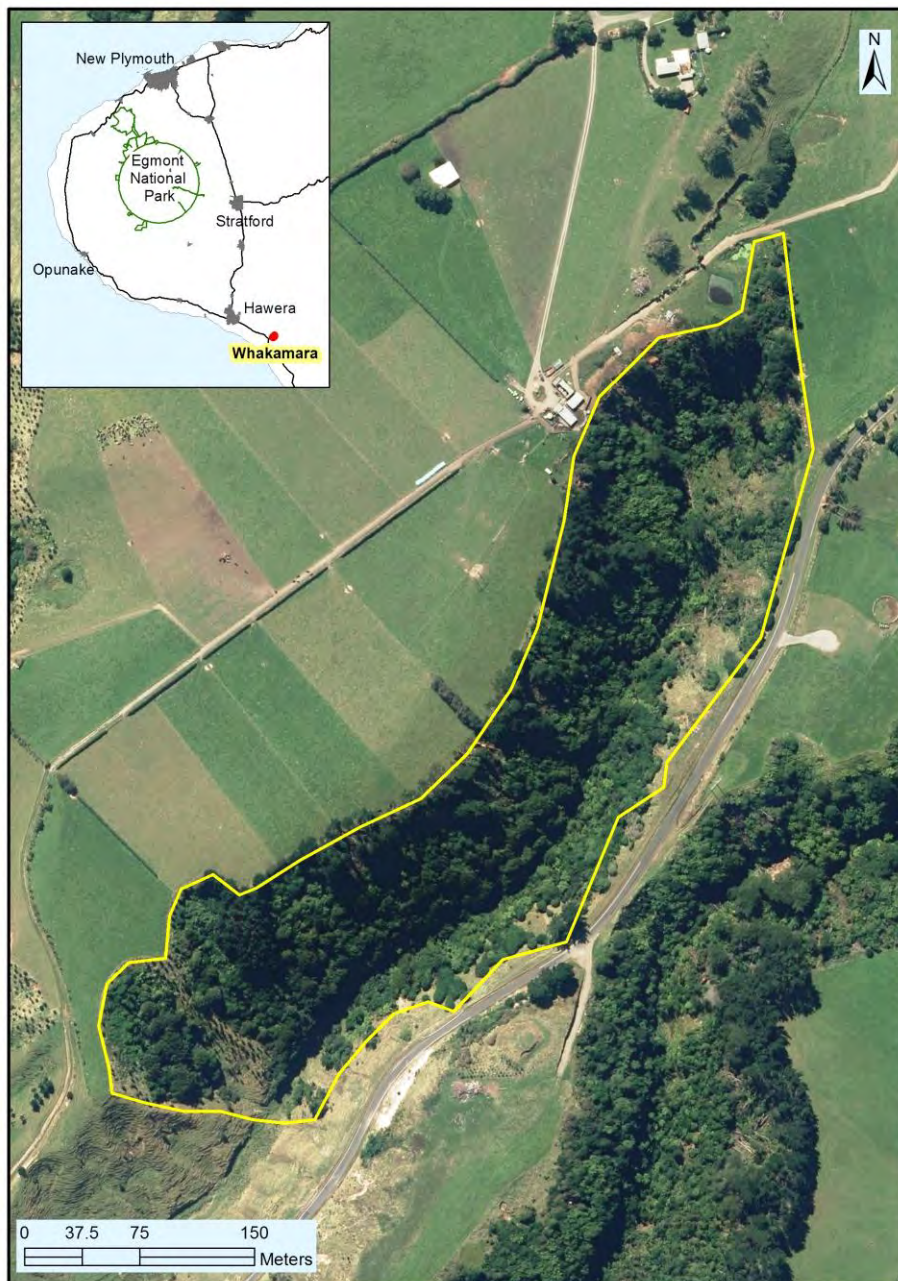
The area is close to but outside the possum self-help area.

Predators - Medium

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

Weeds - Medium

Currently a low to medium threat at the site.



Willings Woodlot

At a glance

TRC Reference: BD/9597	LENZ:	F5.2b Acutely threatened
Ecological District: Egmont	National:	Priority 1 - Threatened Land Environment
Land Tenure: Private	Regional:	Key Native Ecosystem
Area(ha): 1.5	Regional Ecosystem Loss:	Chronically threatened 10-20% left
GPS: 1678630X & 5662821Y	Catchment:	Katikara (382)
Bioclimate Zone: Semi-Coastal		
Habitat: Forest Remnant		

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

General Description

Willings woodlot is a 1.5ha remnant of semi-coastal forest dominated by tawa, kohekohe, rewarewa, hinau and rimu with pukatea in the bottoms of the gullies. The site consists of the heads of two separate gullies in the katikara stream catchment. The site is located approximately 3km east of Okato in the Egmont ecological district. The site provides good connectivity to other Key Native Ecosystems in the area including Tom and Dons Bush, and Maitahi wetlands.

Ecological Features

Flora

The site is a remnant of semi-coastal forest and the canopy is dominated by tawa, kohekohe, rewarewa, hinau and rimu with pukatea in the bottoms of the gullies. The understory is made up of a diverse range of ferns along with mahoe, pigeonwood, kawakawa, and pate in the wetter areas.

Fauna

Willings woodlot provides habitat for a variety of native forest birds including New Zealand pigeon/kereru, bellbird/korimako, tui, shining cuckoo, North Island fantail/piwakawaka and silvereye/tauhou. Other native and notable fauna are also likely to be present including native lizards.

Ecological Values

Rarity and Distinctiveness - Medium	No threatened species or species uncommon in Taranaki have been recorded from this site to date.
Representativeness - High	Contains indigenous vegetation on F5.2b - an 'Acutely Threatened' LENZ environment and is a good remnant of a Chronically Threatened semi coastal ecosystem type in Taranaki (WF13 Tawa, kohekohe, rewarewa, hinau, podocarp forest)
Ecological Context - Medium	Close to and interconnected with other small forest remnants and riparian vegetation in vicinity.
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

Predators - High

Possums, mustelids, rats and mice.

Weeds - Low

Few problem weeds are present at the site. Some woolly nightshade is present on the neighbouring property.

Habitat Modification - Medium

Landowners are working with the QEII trust to covenant the site.

Possum Self-help

The remnant is within the PSH area.

