

BMW Farms

At a glance

TRC Reference: BD/7145	LENZ:	F5.2a Acutely threatened
Ecological District: Egmont		H1.3a Acutely threatened
Land Tenure: Private	National:	Priority 1 – Threatened Land Environment
Area(ha): 4.09ha		Priority 4 – Threatened Species
GPS: 1680336X & 5634634Y	Regional:	Key Native Ecosystem
Habitat: Forest Remnant		Representative ecosystem type
Bioclimatic Zone: Semi-Coastal	Regional Ecosystem Loss:	Acutely Threatened <10% left
Ecosystem Type: WF13: Tawa, kohekohe, rewarewa, hinau, podocarp forest		Chronically threatened 10-20% left
WF8: Kahikatea, pukatea forest	Protection Status:	QEII Covenant
	Catchment:	Waiteika (362)

General Description

BMW Farms QEII forest remnants are located on privately owned land approximately 6km North East of Opunake township at the junction of Waiteika and Eltham roads. Both sites lie in the Egmont Ecological District and Waiteika Stream catchment. The site is comprised of two QEII covenants (2.57ha & 1.52ha) which protect remnant patches of semi-coastal forest now rare in Taranaki. Both sites have been identified as priority representative areas for management in Taranaki (Top 30%) and enhance connectivity between fragmented indigenous habitats in this area.

Ecological Features

Flora

The forest canopies of both remnants are dominated by tawa rewarewa, pukatea, and kahikatea. The understory and ground cover is a mix of pigeonwood, mahoe, coprosma, NZ gloxinia, tree ferns and ground ferns. Climbers and epiphytes are fairly common. Three species of threatened rata are present and are notable for the site. Poroporo is also present.

Fauna

Native birds recorded at the site include kereru, tui, silvereye, grey warbler, fantail, kingfisher and kahu. Ruru will also be present. A small stream running through the larger 2.57ha remnant may contain notable species such as kokopu species and the longfin eel and freshwater crayfish will be present. There is very good habitat for a range of other notable native species including reptiles and invertebrates.

Ecological Values

Rarity and Distinctiveness - Low	The recent discovery of myrtle rust in New Zealand has led to all myrtle species being listed as Threatened or at Risk. Three climbing rata species from the Myrtle family are present at this site and are listed nationally as 'Threatened'.
Representativeness - High	The remnants are of a forest type that is now rare in Taranaki (WF13 Tawa, kohekohe, rewarewa, hinau, podocarp forest, <20% original extent remaining in region). Contains indigenous vegetation on F5.2b and H1.3a- 'Acutely Threatened' LENZ environments.

Ecological Context - Medium

This site provides additional habitat and greater connectivity within the local landscape and lies within close proximity to other Key Native Ecosystem such as Te Kiri Bush.

Sustainability - Positive

Key ecological processes still influence the site and with appropriate management, it can remain resilient to existing or potential threats and will mature over time to provide increased biodiversity and ecological function. The site has the additional benefit of been formally protected.

Other Management Issues

Possum Self-help

The site is within the possum self-help area. There are a small number of bait stations and possum master traps at the site.

Predators - High

Mustelids, feral cats, rats and hedgehogs are present at the site.

Habitat Modification - Low

Localised areas of modification to the 1.52ha forest remnant with the removal or treatment of macrocarpa trees present.

Weeds - High

Both sites have Japanese honeysuckle present along the forest margins. Inkweed, gorse, pampas, macrocarpa, blackberry and barberry also present.

Herbivores - Low

Both sites are well fenced with no evidence of recent stock entry.



Corbett Road QEII Covenants

At a glance

TRC Reference: BD/9631	LENZ:	F5.2b Acutely threatened
Ecological District: Egmont	National:	Priority 1 – Threatened Land Environment
Land Tenure: Private	Regional:	Key Native Ecosystem
Area(ha): 1.63	Regional Ecosystem Loss:	Chronically threatened 10-20% left
GPS: 1702637X & 5675654Y	Protection Status:	QEII Covenant
Habitat: Forest Remnant	Catchment:	Waiongana (394)
Bioclimatic Zone: Semi-Coastal		
Ecosystem Type: WF13: Tawa, kohekohe, rewarewa, hinau, podocarp forest		

General Description

The Corbett Road QEII Covenants site is situated on private land in New Plymouth District, 4.8 kilometres south-east of Bell Block. The site is in the Egmont Ecological District and Waiongana River Catchment. The area is comprised of two near-by forest fragments that are protected by three QEII Covenants; two properties on the western side of Corbett Road and one on the eastern side of the road. In total there are 1.63 hectares of cut-over semi-coastal lowland forest, classified as ecosystem type WF13 'Tawa, kohekohe, rewarewa, hinau and podocarp forest'. The forest is in good condition with a dense mix of canopy and understory species. A common suite of indigenous species have been identified at the site, which provides good stepping-stone habitat between other forest fragments and wetlands in the area. There is no running water or wetland areas, though soil conditions are damper at the seaward ends of the fragments.

Ecological Features

Flora

The canopy of the forest remnant is dominated by tawa, puriri, kohe kohe and titoki, with occasional pukatea and karaka, rewa rewa, mahoe, pigeonwood and mamaku tree ferns on forest margins. The understory is dense in places and relatively sparse in others, and comprises mapau, nikau palms, kawakawa and kanono. Ground cover seedlings and ferns are present throughout the forest, along with vines and epiphytes, mosses, lichens and fungi.

Fauna

Native birds present include kereru, tui, silver-eye, grey warbler, fantail and morepork. Kingfisher, shining cuckoo and Australasian harrier also use the site as part of their wider habitat. There is good habitat for a range of reptiles and invertebrates.

Ecological Values

Ecological Context - Medium	Enhances stepping-stone connectivity between fragmented indigenous habitat and Key Native Ecosystems in the area, such as Tegel Bush QEII, Lepperton Bush, Te Wairoa, Cardenica Woodlot, Tarurutangi Swamp and Townsend Road KNE's.
Rarity and Distinctiveness - Medium	To date no threatened, at risk or regionally distinctive species have been observed at the site. The ecosystem type is now rare owing to widespread development for agriculture and urban development.
Representativeness - High	Contains indigenous vegetation on an 'Acutely Threatened' LENZ environment (F5.2b) and is of an ecosystem type (WF13: Tawa,

kohekohe, rewarewa, hinau, podocarp forest) considered to be 'Chronically Threatened' as only 16% remains in the region.

Sustainability - Positive

In good vegetative condition. Under appropriate management, the forest fragments can remain resilient and continue to contribute to the wider ecological context.

Other Management Issues

Possum Self-help

The fragments are situated within the 'Bell Block' zone of the regional Possum Self Help programme.

Habitat Modification - Low

Both fragments are legally protected with QEII covenants, and are securely fenced to exclude livestock.

Predators - High

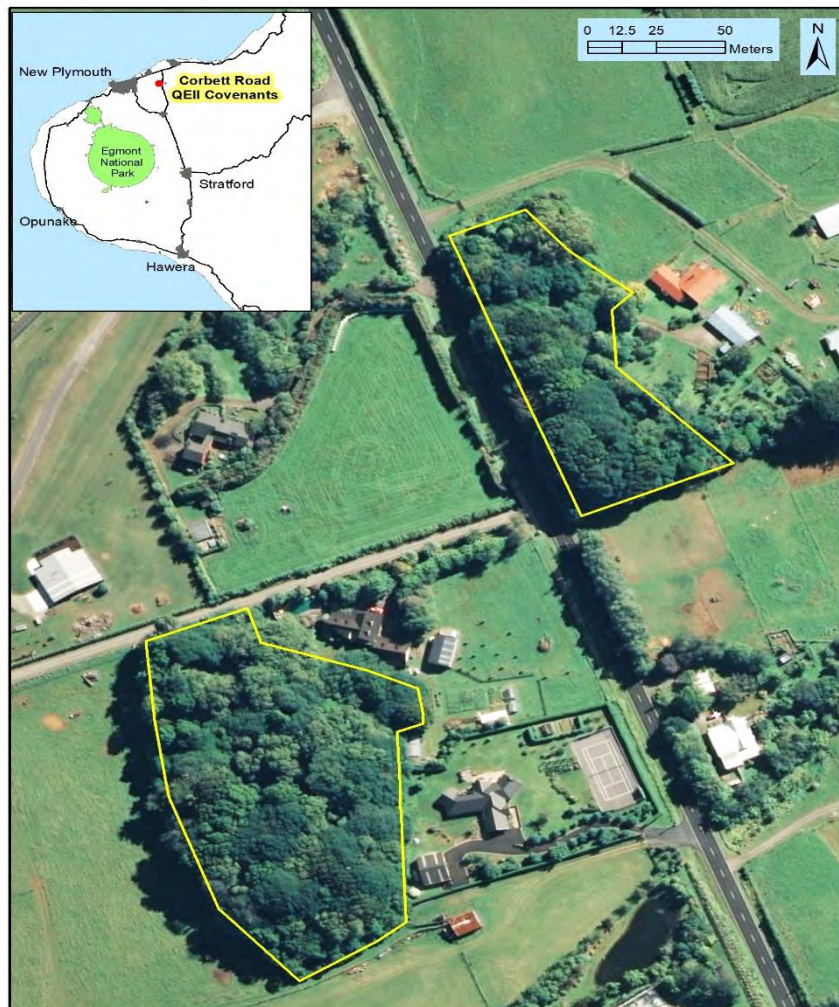
Species that prey on native birds, lizards and invertebrates include rodents (rats & mice) and hedgehogs, along with possums, mustelids and feral cats roving the wider landscape.

Weeds - High

Weeds are currently present in localised areas and present the main priority for management in the short term. In the eastern fragment *Tradescantia* is the priority species for control. In the fragment west of Corbett Road a range of garden escapee's form the priority species for control, and include jasmine, *Plectranthus*, aroid lilly, *Abutilon* and palms, along with climbing asparagus.

Herbivores - Medium

Possums will be present in low densities, and also prey on insects and chicks, but present greatest threat to vegetation through browsing.



Cotebrook

At a glance

TRC Reference: BD/9627	LENZ:	F5.2c Acutely threatened
Ecological District: Manawatu Plains	National:	Priority 1 – Threatened Land Environment
Land Tenure: Private	Regional:	Key Native Ecosystem
Area(ha): 4.4	Regional Ecosystem Loss:	At risk 20-30% left
GPS: 1719003X & 5618071Y	Protection Status:	QEII Covenant
Habitat: Forest Remnant	Catchment:	Tangahoe (348)
Bioclimatic Zone: Lowland		
Ecosystem Type: MF7.3: Tawa, pukatea, podocarp forest		

General Description

The Cotebrook forest remnant is located on private land 8 kilometres east of Hawera off the Meremere Road in South Taranaki. The remnant lies within the Manawatu Plains Ecological District and Tangahoe River catchment. The 4.4 hectare forest remnant is made up of a steep south and west facing gully and gully sidelings of the Katewheta stream. The remnant consists of a mix of older cut over semi coastal / lowland forest with a dominant canopy of tawa, pukatea and karaka. The Cotebrook forest remnant enhances connectivity between fragmented indigenous habitats in this area including the nearby Punarima Forest and Wetlands KNE.

Ecological Features

Flora

The 4.4 hectare forest remnant is made up of a steep south and west facing gully and gully sidelings of the Katewheta stream. 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. Good specimens of ngaio (listed as Regionally Distinctive) are present and notable for the site.

Fauna

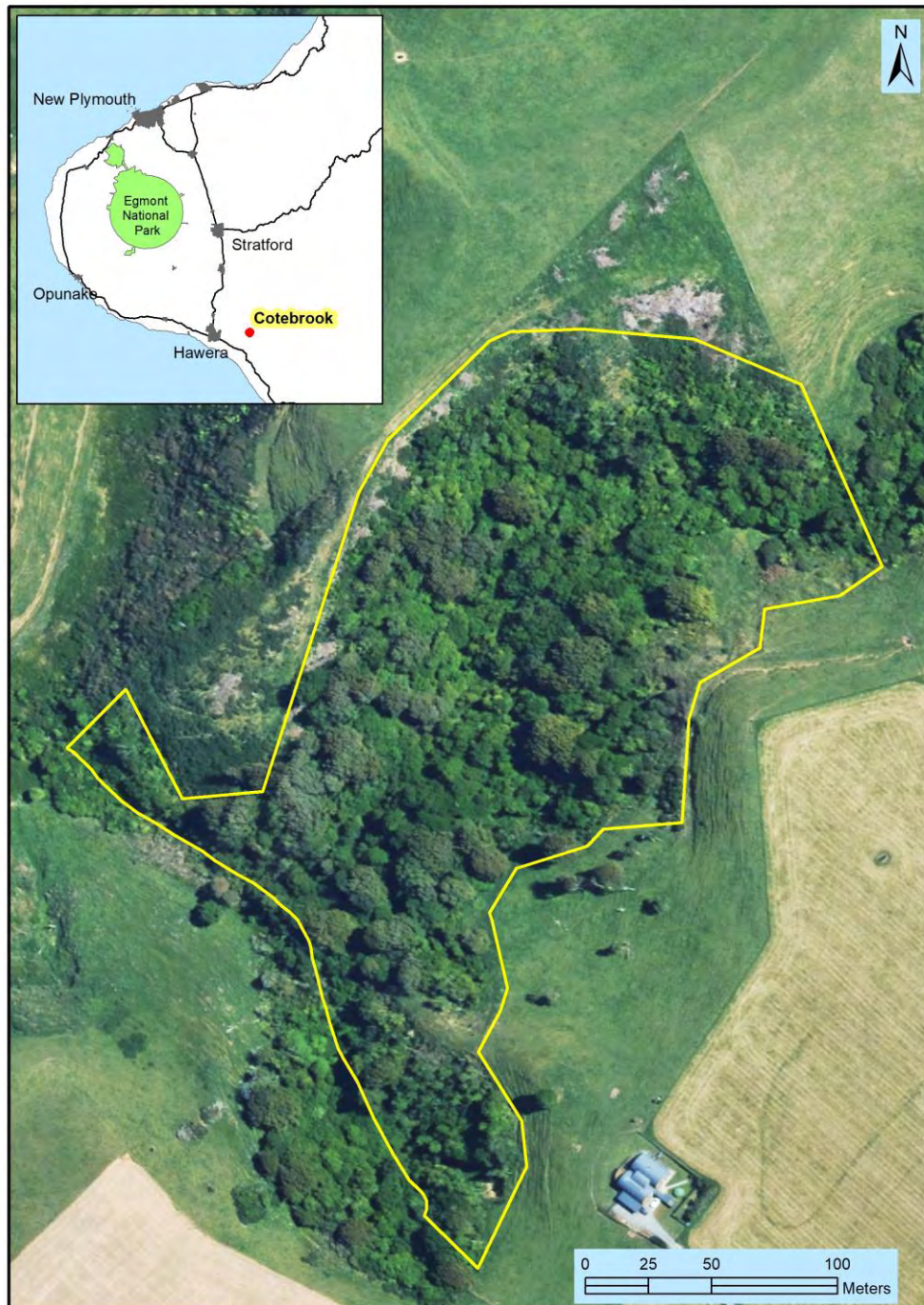
Native birds present include kereru, tui, bellbird, silvereye, shining cuckoo, grey warbler, fantail, kingfisher and morepork. A small stream in the valley floor is very likely to contain notable freshwater fish such as banded kokopu. There is very good habitat for a range of other notable native species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

Ecological Values

Ecological context - High	Enhances connectivity between fragmented indigenous habitats including the nearby Punarima Forest and Wetlands KNE.
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 'At Risk' (MF7-3 Tawa, pukatea, podocarp forest) in Taranaki.
Sustainability - Positive	In good vegetative condition and likely to resilient to existing or potential threats.

Other Management Issues

Habitat Modification - Low	Currently a low threat although vulnerable to modification from potential slips and slumping.
Herbivores - Medium	Currently low impacts although a medium to high threat if possum numbers became high or a potential stock breach.
Predators - Medium	Predators including rodents, mustelids, possums, feral cats and hedgehogs will be having an impact on native species at the site.
Weeds - High	Currently a medium threat at the site with exotic passion fruit, pampas, cotoneaster etc. Potential threats through invasion of nearby weeds such as old man's beard and other environmental weed species.



Hann Bush & Kahikatea Block

At a glance

TRC Reference: BD/7043	LENZ:	F5.2a Acutely threatened
Ecological District: North Taranaki		F1.1b Not threatened
Land Tenure: Private		F7.2a At risk
Area(ha): 11.54 (5.48 + 6.06)	National:	Priority 1 – Threatened Land Environment
GPS: 1715822X & 5660066Y	Regional:	Key Native Ecosystem
Habitat: Forest Remnant		Representative ecosystem type
Bioclimatic Zone: Lowland	Regional Ecosystem Loss:	At risk 20-30% left
Ecosystem Type: MF7.3: Tawa, pukatea, podocarp forest	Protection Status:	QEII Covenant
	Catchment:	Waitara (395)

General Description

The Hann Bush & Kahikatea Block site is located on privately owned land 12 km south east of Inglewood and lies in the North Taranaki Ecological District and Waitara River catchment. The site is comprised of two QEII covenants (5.48ha & 6.06ha) of cutover lowland tawa dominant forest. Both remnants have areas of modification and regeneration from historic or existing exotic forest management. The remnants are of a native forest type (MF7.3: Tawa, pukatea, podocarp forest) that has been greatly reduced in Taranaki. This site has been identified as a priority representative area for management (Top 30% priority ecosystem) and will enhance connectivity between fragmented indigenous habitats in this area.

Ecological Features

Flora

The forest canopies of both remnants are dominated by tawa with occasional pukatea, miro, titoki, kahikatea and rewarewa. The understory is intact in the west remnant although more sparse in the east remnant. The understory and ground cover is a mix of pigeonwood, mahoe, coprosma, NZ gloxinia, tree ferns and ground ferns. Climbers and epiphytes are fairly common. Two species of threatened rata are present and are notable for the site.

Fauna

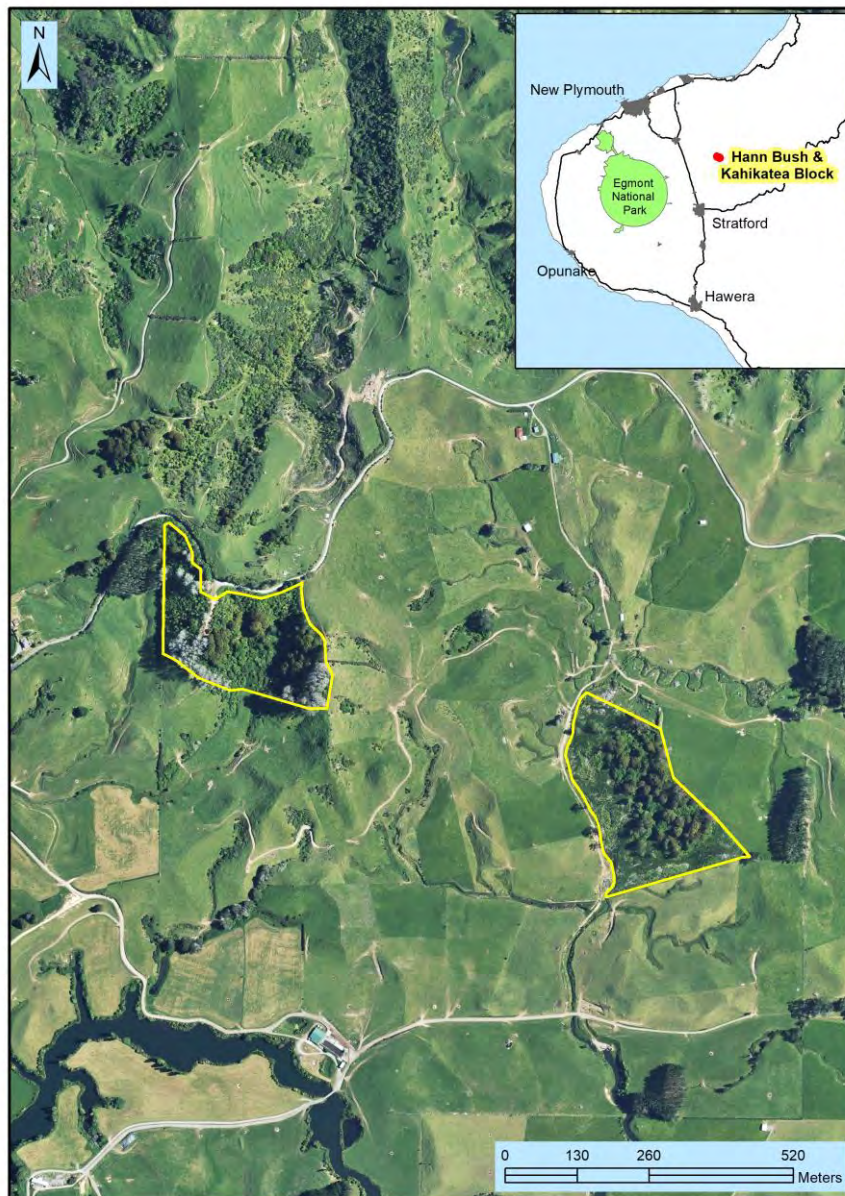
Native birds present include kereru, tui, silvereye, grey warbler, fantail, kingfisher and morepork will be present. A small stream on the east forest margin may contain notable species such as kokopu species and the longfin eel and freshwater crayfish will be present. There is very good habitat for a range of other notable native species including reptiles and invertebrates.

Ecological Values

Ecological Context - Medium	Enhances connectivity between fragmented indigenous habitats in this area.
Rarity and Distinctiveness - Medium	Contains two species of 'Threatened' rata. Provides habitat for and likely to contain other notable species including reptiles and invertebrates.
Representativeness - High	Remnants of a native forest ecosystem that have been identified as priority representative areas for management in Taranaki (Top 30% Representative Ecosystem type).
Sustainability - Positive	In relatively good vegetative condition and likely to continue to improve especially if goats are held at reduced levels.

Other Management Issues

Habitat Modification - Medium	Localised areas of modification to the forest remnants with the removal of pines and the treatment of remaining standing pines.
Herbivores - High	Stock have had an impact on areas of the east remnant forest understory and ground cover. Fence repairs have been undertaken although stock access through breaches in the fence will be an ongoing threat for the remnants.
Possum Self-help	The remnants are on the margin of the current possum self-help program boundary and receive occasional possum control by the landowner. 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 - High	A variety of environmental weed species are present including wilding pines, wandering willy, Himalayan honeysuckle, blackberry, gorse etc.



Kaka Creek Bush

At a glance

TRC Reference: BD/9628	LENZ:	F1.3b Not threatened
Ecological District: Matemateaonga	National:	Priority 4 – Threatened Species
Land Tenure: Private	Regional:	Key Native Ecosystem
Area(ha): 107		Close proximity to a representative ecosystem site
GPS: 1757495X & 5598887Y	Regional Ecosystem Loss:	Less reduced >50% left
Habitat: Forest Remnant	Catchment:	Waitotara (339)
Bioclimatic Zone: Lowland		
Ecosystem Type: MF21: Tawa, kamahi, rimu, northern rata , black beech forest		

General Description

The Kaka Creek Bush site is located on privately owned land 11kms northeast of Waitotara in south Taranaki. The site is within the Matemateaonga Ecological District and Waitotara River catchment. The remnant covers around 107 hectares and is dominated by well-established regenerating native forest with intermittent patches of original lowland forest. The majority of the remnant sits on steep south facing slopes of the Mangaone Stream. The whole site is proposed to be protected with a QEII covenant in the near future. The remnant is connected and contiguous with another large KNE to the east (Mangapuni) and two DOC reserves on the northern boundary.

Ecological Features

Flora

The well-established regenerating native forest area that makes up the majority of this remnant is dominated by kanuka with a good mix of mahoe, rewarewa and tree ferns present in places. Patches of older forest are also present with a dominant canopy of tawa or black beech. Kanuka ('Threatened, Nationally Vulnerable') and Black beech ('Regionally Distinctive') are notable for the site and other notable species may be present.

Fauna

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

Ecological Values

Ecological Context - Medium	Provides greater connectivity to other priority sites, DOC reserves and other habitats in this area. Provides core habitat for 'Threatened' and 'At Risk' species.
Rarity and Distinctiveness - High	Very likely to contain the 'Threatened' New Zealand falcon, North Island brown kiwi and long-tailed bat. Contains the 'At Risk' North Island robin and very likely to contain other 'At Risk' fauna species. Contains the 'Threatened, Nationally Vulnerable' kanuka and 'Regionally Distinctive' black beech.
Representativeness - Low	Contains indigenous vegetation on F1.3b ('Less reduced, better protected') LENZ environment.

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 this site potentially more at risk from erosion.

Herbivores - High

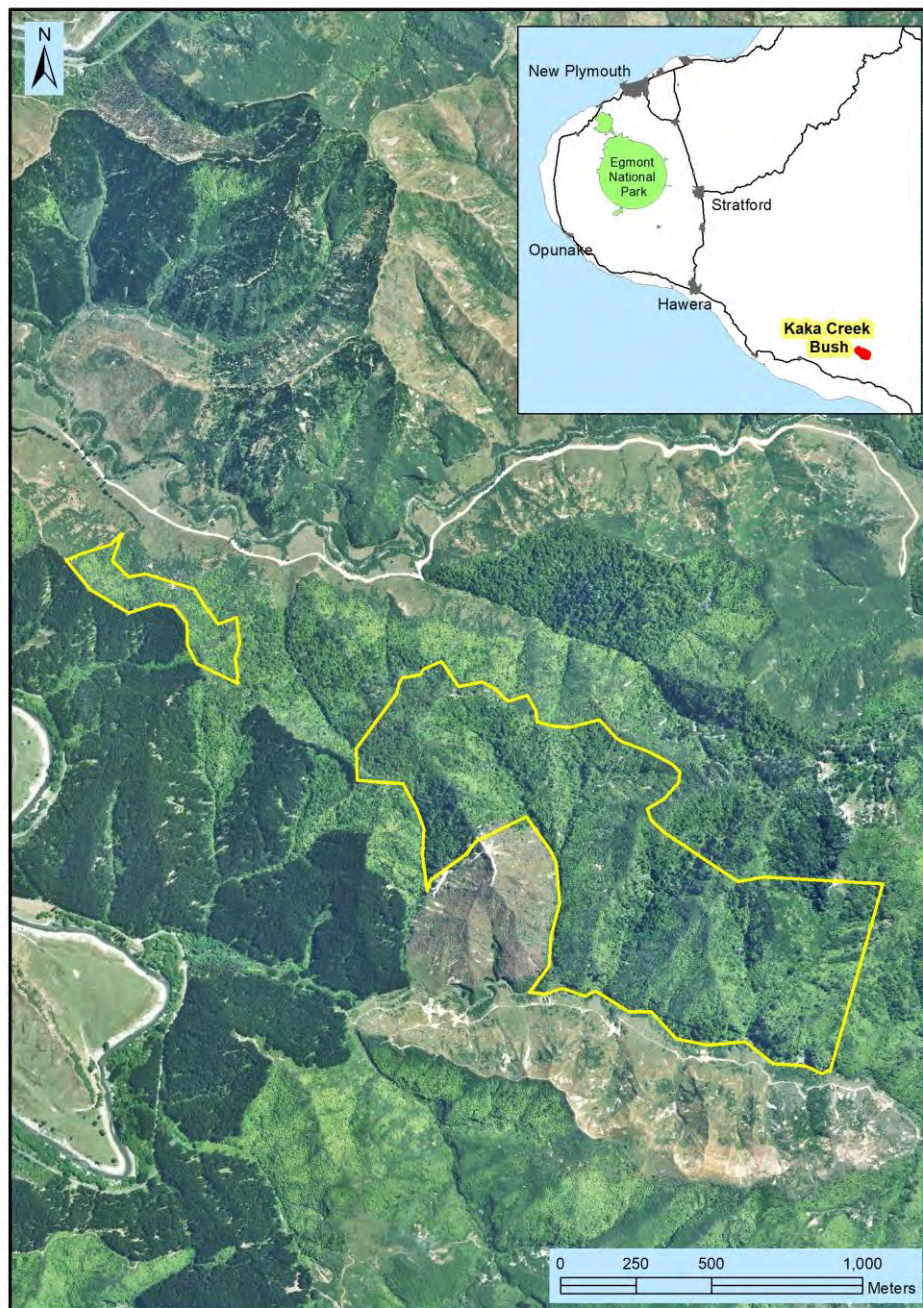
Potential high risk from browsers such as possums, goats and deer in this area although current threat is medium with control of some browsers in this area.

Predators - Medium

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

Weeds - Low

Low impacts of weeds in this area as the gorse present acts as a good nursery for native forest regeneration.



Low South Block

At a glance

TRC Reference: BD/9618	LENZ:	F7.2a At risk
Ecological District: Matemateaonga	Regional:	Key Native Ecosystem
Land Tenure: Private		Close proximity to a representative ecosystem site
Area(ha): 16.3	Regional Ecosystem Loss:	At risk 20-30% left
GPS: 1732277X & 5656805Y	Catchment:	Patea (343)
Habitat: Forest Remnant		
Bioclimatic Zone: Lowland		
Ecosystem Type: MF7.3: Tawa, pukatea, podocarp forest		

General Description

The Low South forest remnant is privately owned land and is located near Kioie approximately 25kms north east of Stratford in central Taranaki. The 16.3ha forest remnant lies in the Matemateaonga Ecological District and Patea River catchment. The forest is situated on upper hill slopes on the north west end and a south east facing valley system. The forest canopy is dominated by tawa with occasional pukatea, miro and rimu. The forest is close to a site considered as a priority representative area for management.

Ecological Features

Flora

The forest canopy is dominated by tawa with occasional pukatea, miro, rimu and rewarewa. The understory and ground cover is mainly sparse although climbers and epiphytes are fairly common. 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 three species of rata, ramarama and manuka.

Fauna

Native birds present include kereru, tui, bellbird, silvereye, grey warbler, fantail and kingfisher and morepork will be present. Notable birds such as whitehead and the North Island robin are known nearby and may be present. Also notable is the likely presence of the 'Threatened' long-tailed bat. There is very good habitat for a range of other notable native species including reptiles and invertebrates.

Ecological Values

Ecological context - High	Enhances connectivity between fragmented indigenous habitats in this area including nearby remnants on this property and nearby KNE's such as the Te Wera wetlands.
Rarity and Distinctiveness - Medium	Likely to contain notable fauna species such as the 'Threatened' long-tailed bat. Provides habitat for and also likely to contain other notable fauna species including reptiles and invertebrates. Also contains five newly listed 'Threatened' and 'At Risk' flora species due to potential vulnerability to myrtle rust including three species of rata, ramarama and manuka.
Representativeness - Medium	Similar to and close to a remnant of a native forest ecosystem (MF7.2: Rata, tawa, kamahi, podocarp forest) that has been identified as a priority representative area for management in Taranaki (Top 30% Priority Representative Ecosystems).

Sustainability - Positive

In moderate vegetative condition although would improve dramatically if fenced and goats were held at reduced levels.

Other Management Issues

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.

Weeds - Low

Currently a low threat at this site with occasional pasture weed species.

Predators - Medium

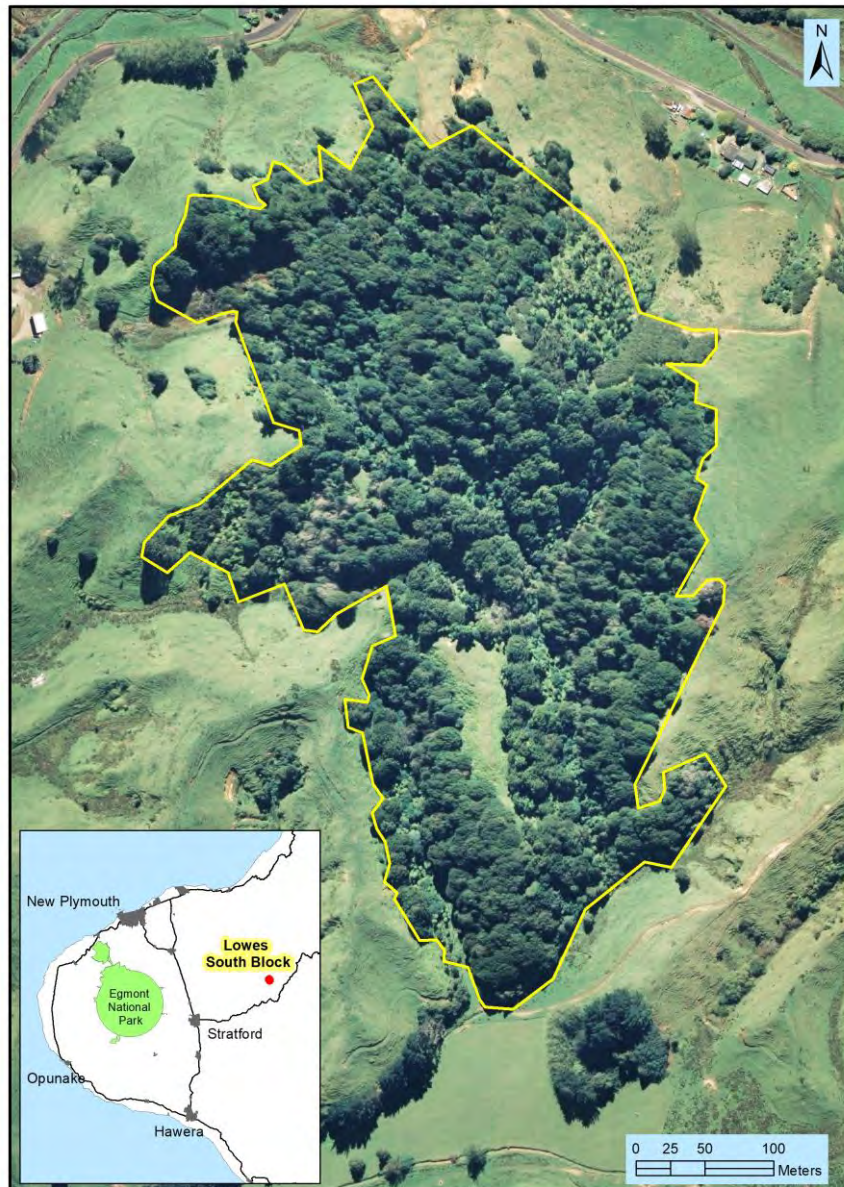
Predators including rodents, mustelids, possums, feral cats and hedgehogs will be having an impact on native species at the site.

Herbivores - High

Stock and occasional feral goats have had a large impact on the forest understory and ground cover typical in this area and remain a high threat without management.

Habitat Modification - Low

Patches of the remnant have been cleared in the past and although the habitat is vulnerable to modification there are no immediate threats.



Mathews QEII

At a glance

TRC Reference: BD/9609	LENZ:	F5.2b Acutely threatened
Ecological District: Egmont	National:	Priority 1 – Threatened Land Environment
Land Tenure: Private	Regional:	Key Native Ecosystem
Area(ha): 3.9	Regional Ecosystem Loss:	Chronically threatened 10-20% left
GPS: 1687380X & 5671910Y	Protection Status:	QEII Covenant
Habitat: Forest Remnant	Catchment:	Waireka 1 (Waireka) (904)
Bioclimatic Zone: Semi-Coastal		
Ecosystem Type: WF13: Tawa, kohekohe, rewarewa, hinau, podocarp forest		

General Description

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

Ecological Features

Flora

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

Fauna

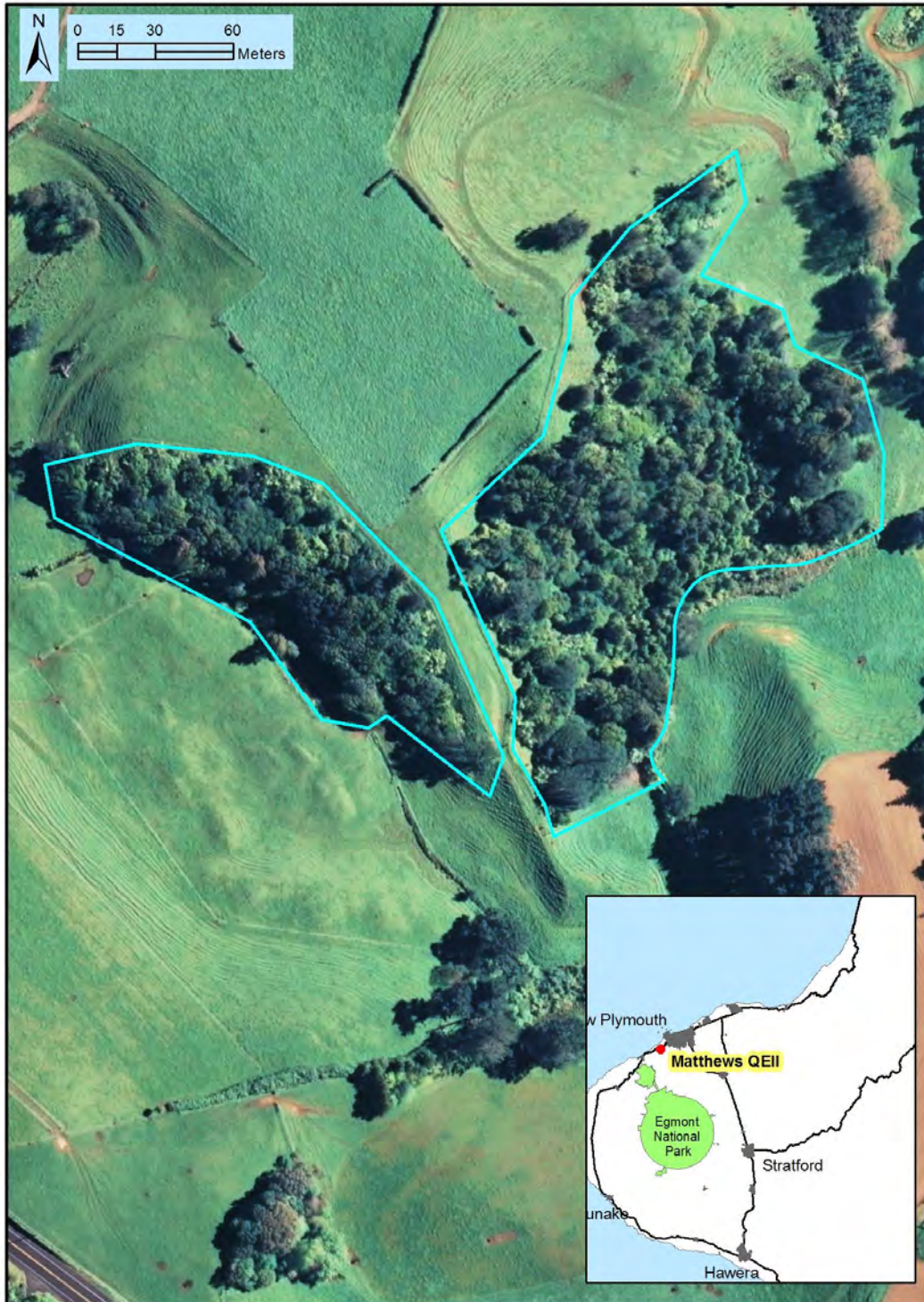
Native birdlife recorded in and around Mathews QEII include the New Zealand pigeon/kereru, grey warbler/riroriro, fantail/piwakawaka, tui and morepork/ruru. Notable freshwater species are present in the Waireka stream catchment within the forest including 'At Risk' species such as longfin eel. Native freshwater crayfish/koura are also present. The site is likely to contain other notable species such as the banded kokopu, notable native reptiles and invertebrates.

Ecological Values

Ecological context - High	Enhances connectivity between fragmented indigenous habitats and KNE's in the area such as Berridge Twin Bush, Woodside, and Tapuae Wetland etc.
Rarity and Distinctiveness - High	Contains the 'At Risk' longfin eel and 'Regionally Distinctive' jointed fern and Tawhirikaro.
Representativeness - High	Contains vegetation on a 'Acutely Threatened' land environment (F5.2b) and is a remnant of a regionally threatened ecosystem (WF13: Tawa, kohekohe, rewarewa, hinua, podocarp forest).
Sustainability - Positive	In very good vegetative condition and likely to remain resilient to existing or potential threats.

Other Management Issues

Possum Self-help	This site is in the Possum Self Help programme.
Herbivores - High	Currently fenced and stock proof. Currently under good possum control although vulnerable if possum numbers were high.
Predators - Medium	Predators including rodents, mustelids, possums, feral cats and hedgehogs will be having an impact on native species at the site.
Habitat Modification - Low	Protected by QEII covenant conditions.
Weeds - High	Small areas of holly, blackberry, woolly nightshade, tradescantia, inkweed and cherry.



Mount View

At a glance

TRC Reference: BD/9572	LENZ:	F5.3b Not threatened
Ecological District: Egmont	National:	Priority 4 – Threatened Species
Land Tenure: Private	Regional:	Key Native Ecosystem
Area(ha): 4.6		Close proximity to a representative ecosystem site
GPS: 1692307X & 5660534Y	Regional Ecosystem Loss:	Less reduced >50% left
Habitat: Forest Remnant	Protection Status:	QEII Covenant
Bioclimatic Zone: Lowland	Catchment:	Waiwhakaiho (392)
Ecosystem Type: MF8.2: Rimu, rata, kamahi forest		

General Description

The Mount View site is located off the top end of Korito Road 14 kilometres south of New Plymouth. The covenant provides connectivity to other priority KNE's and habitats in the area as is within one kilometre of Egmont National Park and 500 metres west of the Korito Heights KNE. The covenanted area is within the Waiwhakaiho River catchment and Egmont Ecological District. Covering 4.6 hectares, the site is comprised of lowland forest and includes two small unnamed tributaries of the Mangorei Stream.

Ecological Features

Flora

The canopy of the remnant is dominated by kamahi and tawa with a mix of other species such as miro, toro, hinau, rimu and rewarewa. A good sub canopy and understorey is also present and includes mahoe, wineberry, raukawa, rangiora, pigeonwood and hangehange. Tree ferns and ground ferns are common in places and seedlings and saplings are also common. The area falls within the 'Less reduced, better protected' LENZ environment F5.3b.

Fauna

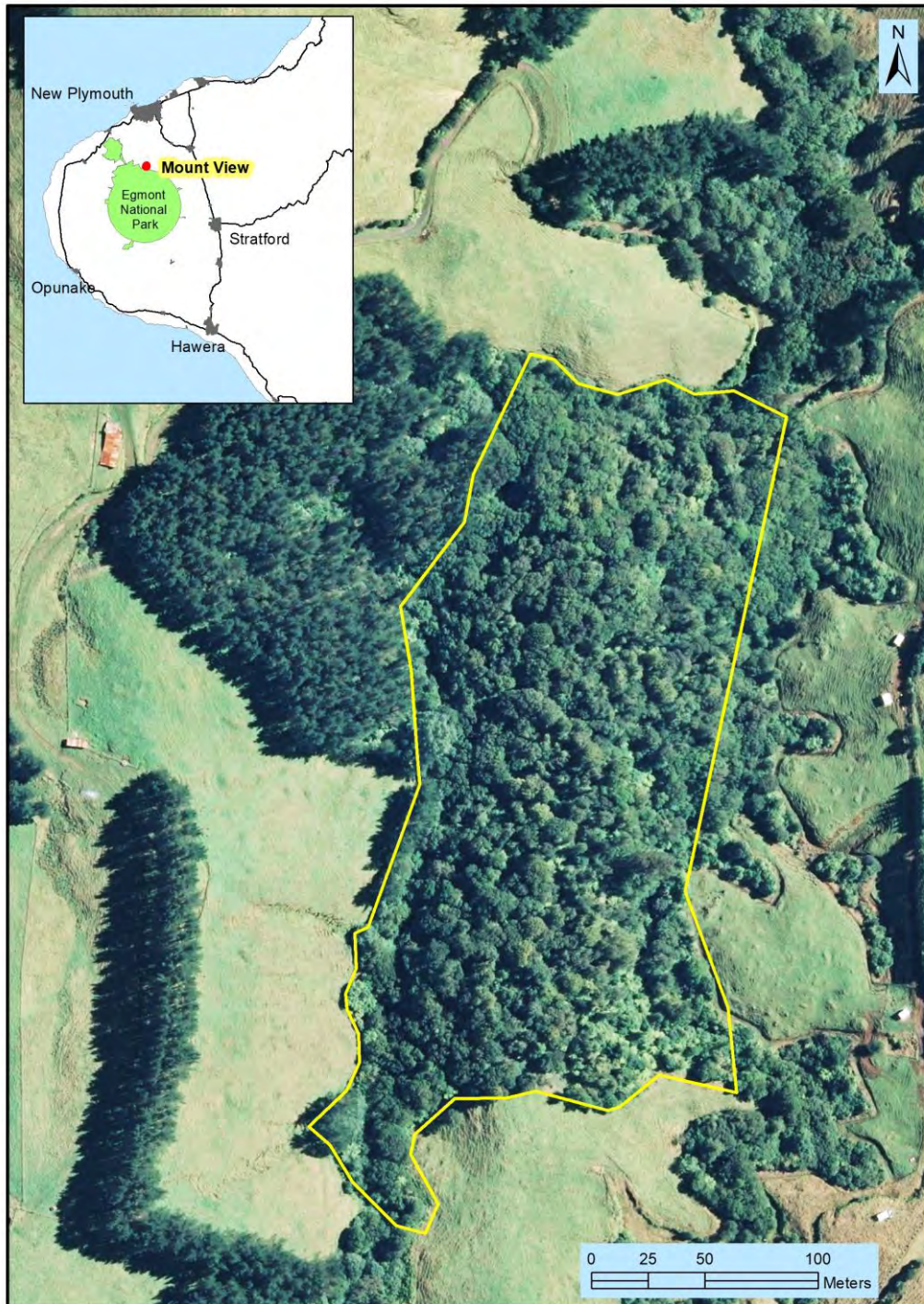
Native birdlife recorded in and around the covenanted area include the 'At Risk' whitehead. Other birdlife includes the New Zealand pigeon, grey warbler, fantail, tui, bellbird, tomtit and silvereye. Very good habitat exists for notable freshwater fish such as shortjaw kokopu and koaro. The 'At Risk' longfin eel will also be present along with the native freshwater crayfish.

Ecological Values

Ecological context - High	Close to and provides connectivity with other priority ecosystems, KNE's and habitats in the area such as Egmont National park and Korito Heights. Also provides core habitat for 'At Risk' native species such as native freshwater fish and reptiles.
Rarity and Distinctiveness - Medium	Contains two species of 'Threatened' rata and the 'At Risk' whitehead. Provides habitat and likely to contain other Threatened and At Risk native species.
Representativeness - Low	Contains indigenous vegetation on F5.3b ('Less reduced, better protected') LENZ environment.
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	The covenanted area is currently fenced and protected with the conditions of a QEII covenant.
Weeds - Medium	Scattered areas of exotic tree species and weeds such as blackberry and inkweed.
Herbivores - High	Ground vegetation would potentially be vulnerable to browsing from stock if the fences were breached and high possum numbers would be detrimental to the forest canopy.
Predators - Medium	Native fauna and flora will be impacted by predation at this site.



Ralph Arnold

At a glance

TRC Reference: BD/9638	LENZ:	F5.2b Acutely threatened
Ecological District: Egmont	Local:	Significant Natural Area
Land Tenure: Private	National:	Priority 1 – Threatened Land Environment
Area(ha): 4.69		Priority 4 – Threatened Species
GPS: 1688267X & 5668272Y	Regional:	Key Native Ecosystem
Habitat: Coastal/Forest Remnant	Regional Ecosystem Loss:	Acutely Threatened <10% left
Bioclimatic Zone: Semi-Coastal	Protection Status:	Local Government
Ecosystem Type: WF13: Tawa, kohekohe, rewarewa, hinau, podocarp forest	Catchment:	Tapuae (386)

General Description

Arnold 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. The Arnold KNE consists of a 4.69ha semi-coastal kohekohe, tawa forest remnant and lies in close proximity to other Key Native Ecosystems in the area including the McNeil KNE, Woodside and Berridge Twin Bush.

Ecological Features

Flora

The covenanted areas contain a good representation of semi coastal forest (classified as an 'Acutely Threatened' indigenous vegetation type under LENZ environment F5.2b). The forest canopies predominantly consist of tawa, pukatea, puriri and kohekohe.

Fauna

Native birdlife recorded in and around the covenanted area include the New Zealand pigeon, grey warbler, fantail, bellbird, tui and morepork. Good habitat exists for terrestrial and arboreal reptile species at this site and notable species are likely to be present. Notable freshwater species are present including 'At Risk' species such as longfin and kokopu.

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 additional habitat and greater connectivity with other Key Native Ecosystems in this area such as the adjacent covenants, Berridge Twin Bush, Woodside and McNeils.
Representativeness - High	Contains indigenous vegetation classified as an 'Acutely Threatened' (F5.2b) LENZ environment.
Rarity and Distinctiveness - Medium	Contains several threatened and at risk plant species including poroporo and climbing rata. Good habitat exists for terrestrial and arboreal reptile species at this site and notable species are likely to be present. Notable freshwater species are present including 'At Risk' species such as longfin eel and kokopu.

Other Management Issues

Possum Self-help

This site is in the Possum Self Help programme.

Herbivores - Low

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

Predators - Medium

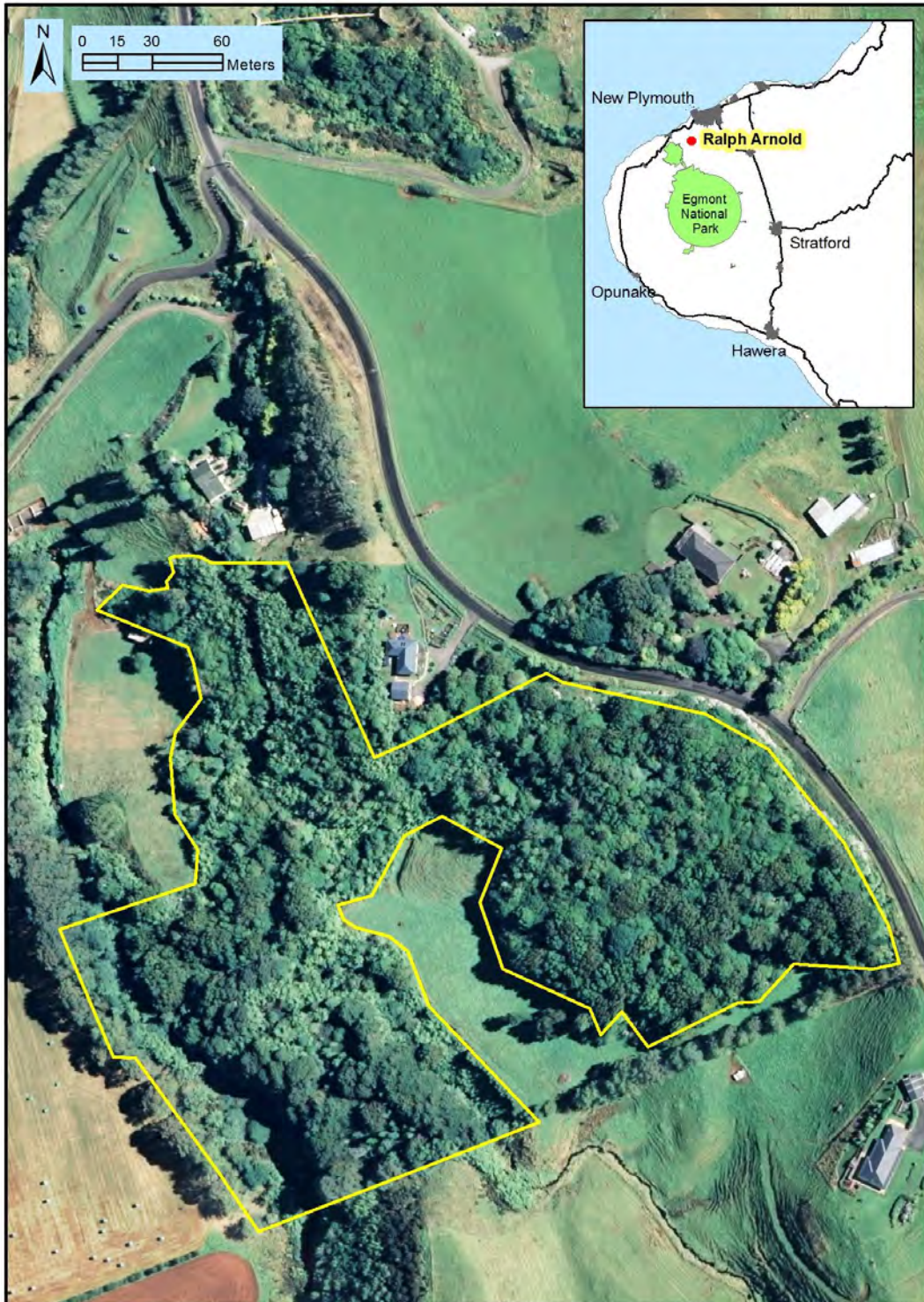
Predators including rodents, mustelids, possums, feral cats and hedgehogs will be having an impact on native species at the site.

Habitat Modification - Low

At risk from modification although no immediate threats.

Weeds - High

Small areas of blackberry, woolly nightshade, tradescantia, inkweed and cherry.



Te Huia Holdings Wetlands

At a glance

TRC Reference: BD/9635	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): 6.4		Priority 4 – Threatened Species
GPS: 1740802X & 5593342Y		Priority 3 – Originally Rare Ecosystem
Habitat: Coastal/Wetland	Regional:	Key Native Ecosystem
Bioclimatic Zone: Semi-Coastal		Close proximity to a representative ecosystem site
Ecosystem Type: MF7.3: Tawa, pukatea, podocarp forest		Regionally Significant Wetland
Open Water	Regional Ecosystem Loss:	At risk 20-30% left
WF6: Tōtara, mataī, broadleaved forest[Dune Forest]	Protection Status:	Memorandum of Encumbrance
	Catchment:	Unnamed catchment 3 (803)

General Description

The Te Huia Holdings wetlands are located on privately owned land, 3.7km south-east of Waverley and lie in the Manawatu Plains Ecological District. The wetlands are located in a catchment area referred to as 'Unnamed Catchment 3'. There are three separate wetlands at the site that are within 350m of each other and range from 1.0ha to 2.9ha and total about 6.4ha. These wetlands provide additional habitat and connection to other priority KNE wetlands very nearby such as Lake Herengawe and Ihupuku Swamp.

Ecological Features

Flora

Wetland vegetation is varied over each wetland although a good range is present including kuta, raupo, carex, flax and a range of submersed aquatic vegetation. Buffer margin vegetation ranges from rank grass, exotic trees and a range of establishing planted native trees.

Fauna

A good range of wetland birds are present or are known to use the wetlands including notable species such as the Australasian bittern. Other native birds recorded were the kingfisher, NZ shoveller, grey duck, black swan, paradise shelduck, pukeko and little shag. Grey warbler were seen in the buffer vegetation and a range of exotic birds were present. There is good habitat for reptiles on the wetland fringes, wetland vegetation and retired buffer margins and notable species may be present. There is little information on aquatic life although surveys are planned in the future. A very large goldfish was observed at the southern end of the middle wetland.

Ecological Values

Ecological context - High

Part of a series of southern coastal dune lakes and wetlands that together provide one of Taranaki's most significant habitats for the 'Threatened' Australasian bittern. Vegetation associated with wetland margins are an 'originally rare' ecosystem type.

Rarity and Distinctiveness - Medium

Contains habitat for the 'Threatened' Australasian bittern and other notable species will be present.

Representativeness - High

Remnant indigenous vegetation and habitat on F5.2c 'Acutely Threatened' LENZ environment. Close to and provides connectivity to a representative priority ecosystem.

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 - Medium

At risk from modification although no immediate threats.

Herbivores - Medium

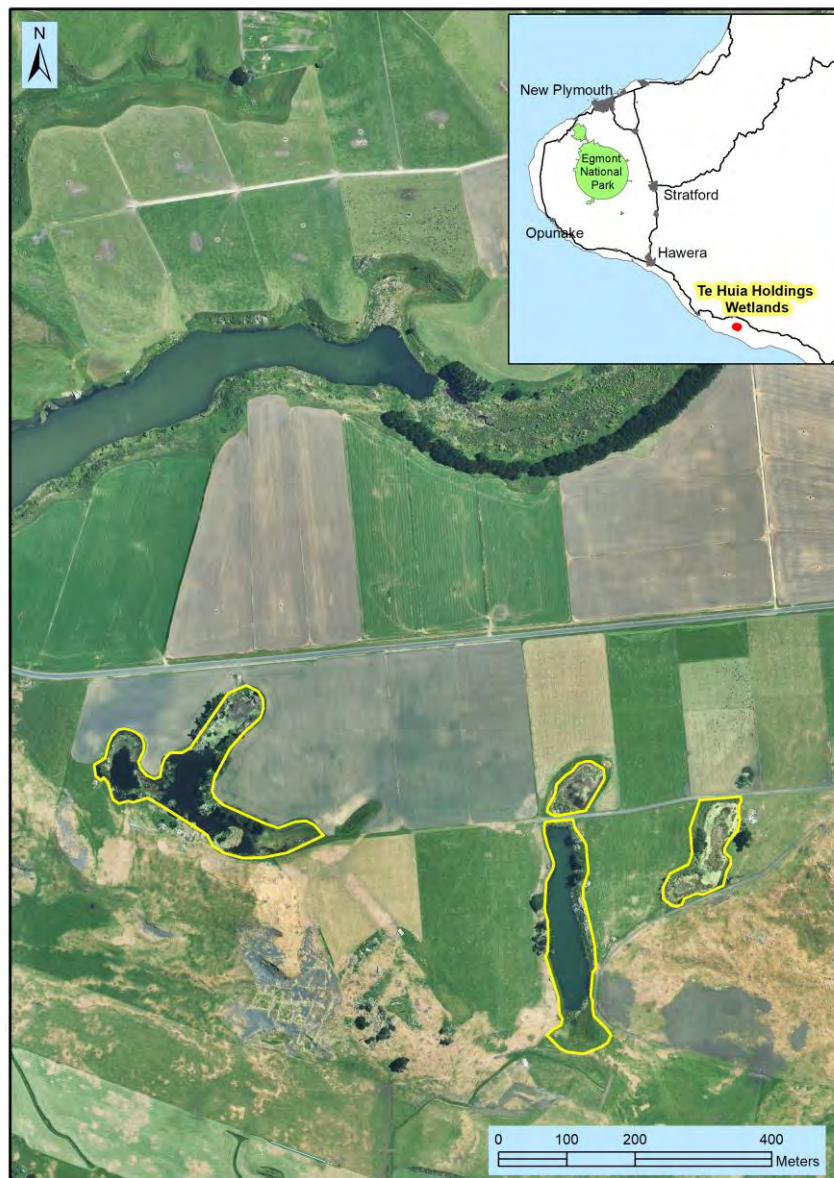
Potential high risk from stock browse of buffer vegetation if the fenced areas were ever breached.

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 localised areas of weedy species.



Te Urenui & Pohokura Pa

At a glance

TRC Reference: BD/9633	LENZ:	C1.2a Acutely threatened
Ecological District: North Taranaki	National:	Priority 1 – Threatened Land Environment
Land Tenure: Private		Priority 4 – Threatened Species
Area(ha): 3.71	Regional:	Key Native Ecosystem
GPS: 1720945X & 5683137Y	Regional Ecosystem Loss:	Chronically threatened 10-20% left
Habitat: Coastal/Forest Remnant	Protection Status:	DOC Covenant
Bioclimatic Zone: Coastal		Local Government
Ecosystem Type: WF13: Tawa, kohekohe, rewarewa, hinau, podocarp forest	Catchment:	Urenui (399)

General Description

The Te Urenui & Pohokura Pa KNE is located within 500 metres of the Urenui township in North Taranaki and are within the North Taranaki Ecological District and Urenui River catchment. The site consists of two pa (Te Urenui and Pohokura) which are fine examples of old pa with much of the evidence of former occupation (ditches, banks, terraces, middens and graves) preserved under regenerating native vegetation. The sites are next to the Urenui river and are respectively 400m and 700m from the Urenui river mouth. The combined area of the two Pa covers 3.71ha.

Ecological Features

Flora

Both pa sites are located on a land environment classified as 'Acutely Threatened' (less than 10% of this type of indigenous vegetation left remaining in Taranaki). The main canopy of both sites is a mix of kohekohe, karaka, mahoe, pigeonwood, kowhai and rewarewa and is generally in good condition. The understorey and ground cover is in good condition and is made up of a number of shrub species including kawakawa, kanono, rangiora, red mapou and hangehange along with a wide range of ferns including mamaku. New Zealand hazel *Tainui* (planted) is also present at Pohokura Pa.

Fauna

Native birdlife recorded in and around the site includes kereru, grey warbler, fantail, ruru, kahu, silvereye, tui, black shag, white-faced heron and kingfisher. No native lizards have been recorded at the site, however there is adequate habitat for terrestrial and arboreal species in the remnants, ranging from deep leaf litter and logs on the forest floor.

Ecological Values

Sustainability - Positive	In very good vegetative condition and likely to remain resilient to existing or potential threats.
Rarity and Distinctiveness - Medium	The recent discovery of myrtle rust in New Zealand has led to all myrtle species being listed as Threatened or At Risk. Te Urenui and Pohokura Pa sites have three climbing rata species, all of which are from the plant family Myrataceae. A Nationally Vulnerable species of poroporo is also known from the site.
Representativeness - High	Contains vegetation on a land environment classified as 'Acutely Threatened' (C1.2a) and is valuable as a remnant of a greatly reduced ecosystem type within the region.

Ecological Context - Medium

Regenerating coastal forest remnants like these help to link estuarine and terrestrial ecosystems and provide habitat for indigenous species. The pa sites are also relatively close (approx.2.5km) to other Key Native Ecosystems in the area, including Pukemiro and Okoki pa.

Other Management Issues

Herbivores - Low

Both sites are secure from stock

Predators - High

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

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

Weeds - High

Tradescantia, climbing asparagus, kahili ginger, woolly nightshade and pampas were observed at the site.

Habitat Modification - Low

Low potential risk of further habitat modification.

