

RUNARUNA MUD VOLCANO

Survey no. O05/154
Survey date 28 June 1993
Grid reference O05 421 546
Area 1 ha
Altitude c. 80 m asl

Ecological unit

Volcano



Runaruna Mud Volcano O05/154

Each grid is 1000m x 1000m
and = 100 ha.

S = shrubland
F = forest
W = wetland
E = estuarine
D = duneland

Landform/geology

Mud-spring volcano surrounded by extensive area of silts, muds and grits deposited by spring activity.

The volcano is 3 m high with multiple vents that release a mixture of carbon dioxide, methane and some water (Kenny & Hayward 1996).

There is no vegetation on the volcano, with the mud having high levels of salt and boron.

Fauna

Not surveyed.

Significance

The Runaruna mud volcano is ranked as a nationally important geological site and landform as it is the only active mud volcano in Northland (Kenny & Hayward 1996).

HERBERT RD SWAMP FOREST

Survey no.	O05/155
Survey date	17 February 1995
Grid reference	O05 373 526
Area	2 ha
Altitude	< 20 m asl

Ecological unit

Kahikatea-pukatea-ti kouka forest on alluvium

Landform/geology

Swamp on alluvium.

Vegetation

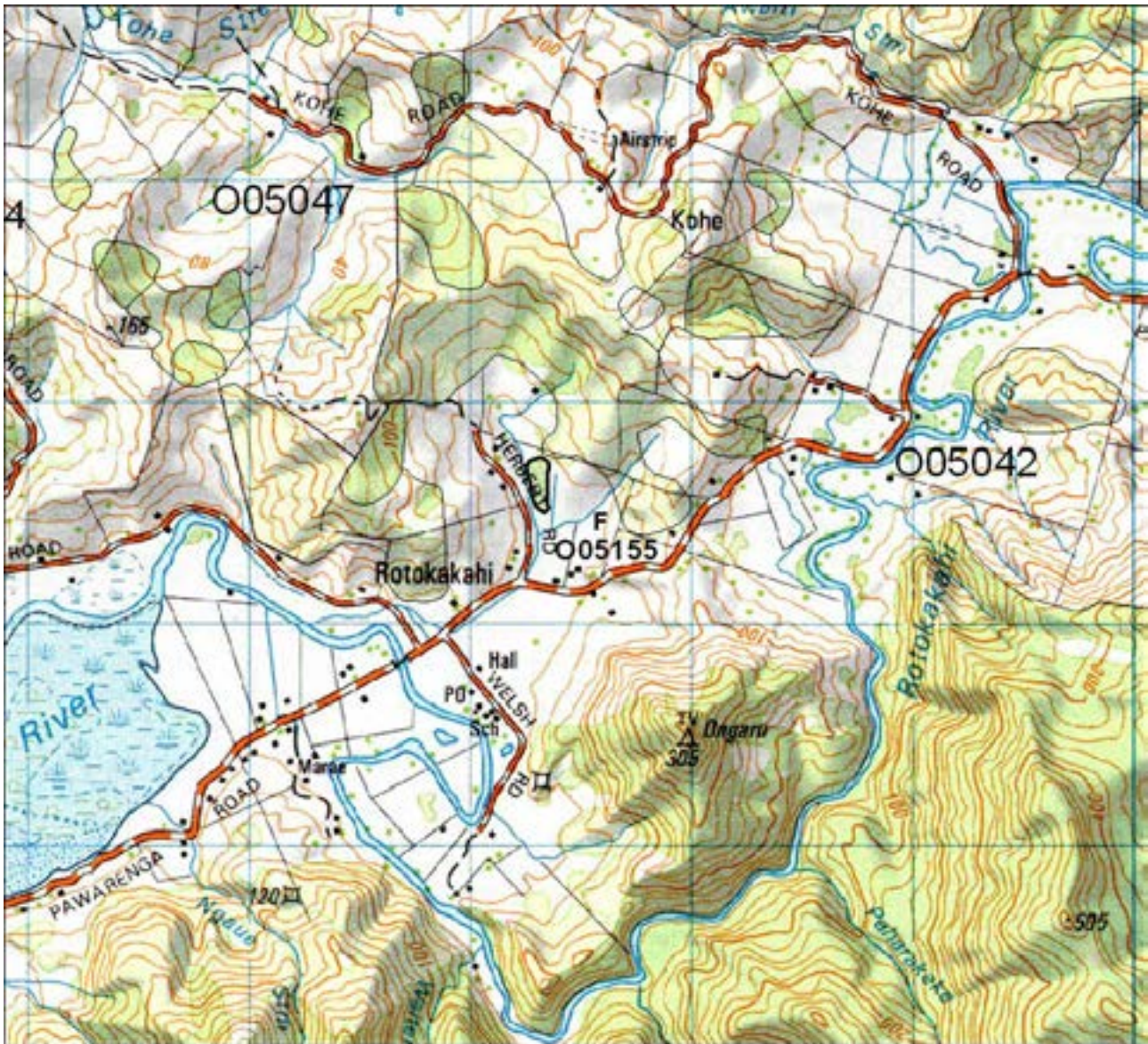
A small remnant of lowland flood forest consisting of kahikatea, pukatea, and ti kouka and occurs on the flats at Herbert Rd.

Fauna

Not surveyed.

Significance

Representative site although severely degraded, the swamp forest remnant is a very rare forest type and only one of two examples recorded in the Ecological District.



Herbert Rd Swamp Forest O05/155

Each grid is 1000m x 1000m
and = 100 ha

- S = shrubland
- F = forest
- W = wetland
- E = estuarine
- D = duneland

REENA BUSH

Survey no.	O05/156
Survey date	c. 1996/97
Grid reference	O05 391 408
Area	165 ha
Altitude	20-160 m asl



Reena Bush O05/156

Each grid is 1000m x 1000m
and = 100 ha.

S = shrubland
F = forest
W = wetland
E = estuarine
D = duneland

Ecological unit

Kanuka/manuka forest on moderate to gentle hillslope

Landform/geology

Giant landslide of predominantly Tangihua Complex material over Mangakahia Complex sandstone.

Vegetation

Secondary kanuka-manuka forest in an advanced stage of succession with frequent emergent kahikatea, ti kouka, puriri, towai and rewarewa. Mamangi is locally frequent. Other species present include kowhai, putaputaweta, mahoe, kauri, toru and rimu.

Significant flora

Australina pusila (Regionally significant species).

Fauna

NI brown kiwi (Serious Decline) has been reported at this site.

Significance

Contiguous with Warawara Forest (Ahipara Ecological District) this is one of the largest and best representative examples of kanuka/manuka succession in the Ecological District.

Presence of a threatened and regionally significant species.

The Department of Conservation administers 3 ha of this site as Conservation Covenant.

OPARA RD QEII REMNANT

Survey no.	O05/157
Survey date	25 May 1995
Grid reference	O05 524 402
Area	20.7 ha
Altitude	0-80 m asl

Ecological unit

Manuka-tanekaha forest on coastal hillslope

Landform/geology

Steep hillslope on Mangakahia Complex sandstone and mudstone.

Vegetation

Manuka and tanekaha are co-dominant with taraire, puriri and kohekohe mostly occurring in the gullies. Rimu and rewarewa are conspicuous on the ridges while kahikatea, lancewood, nikau and ti kouka occur near the coastal edge.

Fauna

NI brown kiwi (Serious Decline) and kukupa (Gradual Decline).

Significance

A representative secondary coastal forest remnant grading from hill forest to harbours edge. Riparian remnants adjacent to the Hokianga Harbour are priority areas for protection.

Presence of two threatened species.

The manuka-tanekaha forest type is unrecorded elsewhere in the Ecological District.

A Queen Elizabeth II National Trust Open Space Covenant protects 10 ha of this site.



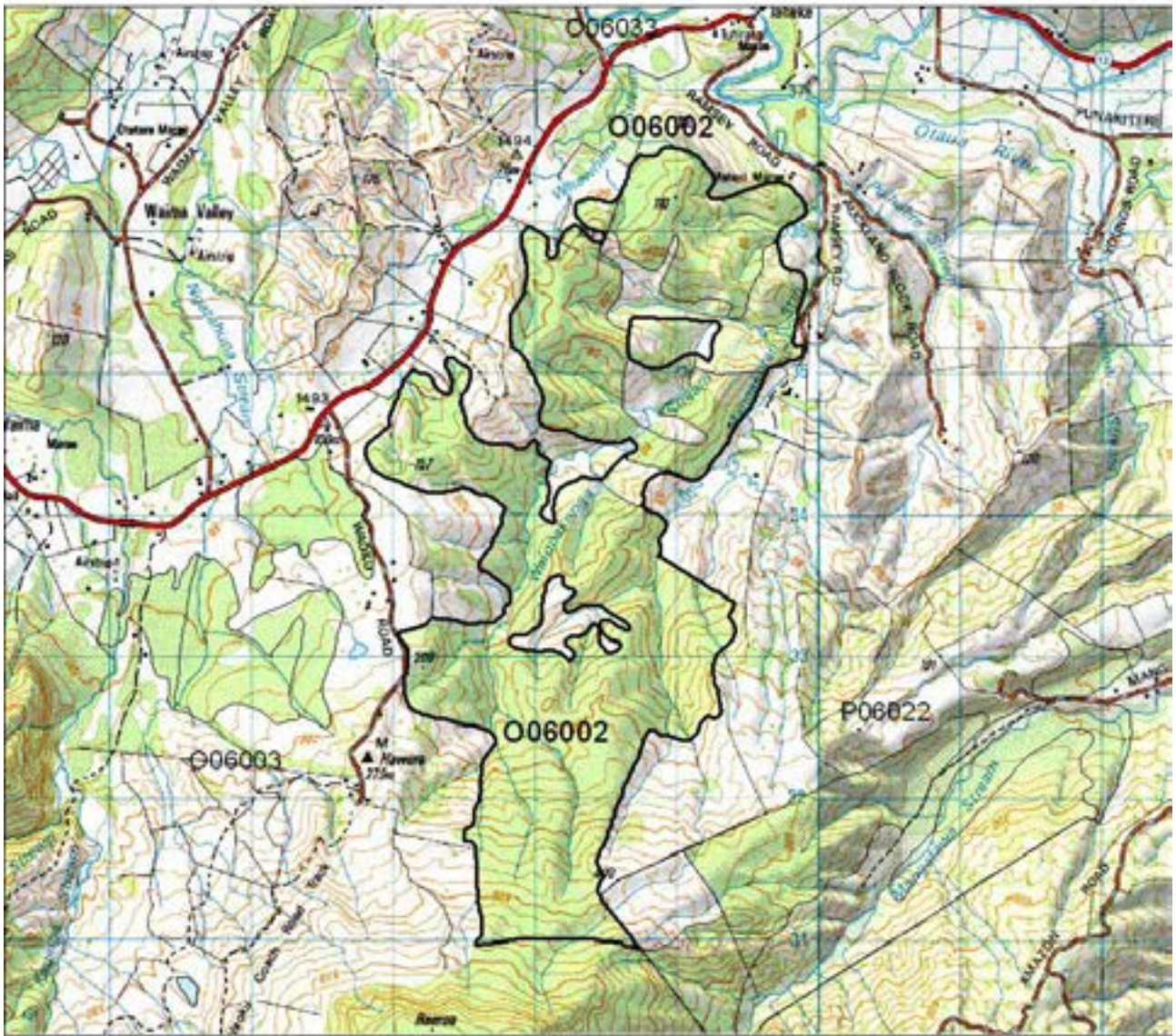
Opara Rd QEII Remnant O05/157

Each grid is 1000m x 1000m
and = 100 ha.

- S = shrubland
- F = forest
- W = wetland
- E = estuarine
- D = duneland

NORTHERN MATARAUA FOREST

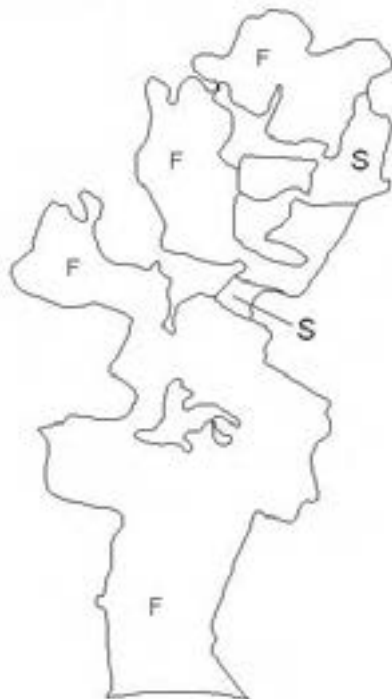
Survey no.	O06/002
Survey date	3 May 1994
Grid reference	O06 683 337
Area	796 ha (706 ha forest, 90 ha shrubland)
Altitude	10-c. 400 m asl



Northern Mataraua Forest O06/002

Each grid is 1000m x 1000m
and = 100 ha

- S = shrubland
- F = forest
- W = wetland
- E = estuarine
- D = duneland



Ecological unit

- (a) Pukatea-taraire-towai forest on hillslope
- (b) Kahikatea-towai forest on hillslope
- (c) Manuka shrubland on hillslope

Landform/geology

The site is geologically distinct from the parent tract (Waipoua basalt plateau), being on dissected Mangakahia Complex sandstone hill country.

Vegetation

Another large extension of the Waipoua-Waima-Mataraua Forest tract, but lying within the Hokianga Ecological District. Forest types reflect the mid to low altitudes, adding considerably to the altitudinal range encompassed by this generally upper altitude forest tract. The northern portion has undergone repeated historical modification, but is still linked by secondary forest and shrubland to the main tract. It is important that this tenuous link is maintained or enhanced in order to retain the altitudinal sequences represented.

- (a) Pukatea, taraire and towai are common with frequent rewarewa, puriri and emergent northern rata. Rimu, tawa and nikau are occasional.
- (b) Kahikatea and towai are co-dominant with frequent pukatea, puriri and occasional northern rata, rimu and taraire.
- (c) An area of manuka shrubland occurs.

Fauna

NI brown kiwi (Serious Decline) has been reported at this site.

Significance

An important site for maintaining the full altitudinal range associated with the Mataraua Plateau. Representative site for type (a) pukatea-taraire-towai forest which has only been recorded in one other site in this Ecological District and type (b) kahikatea-towai forest.

The site also contributes to water and soil protection in the catchment, and is particularly important for its riparian values.

WAOKU RD BUSH

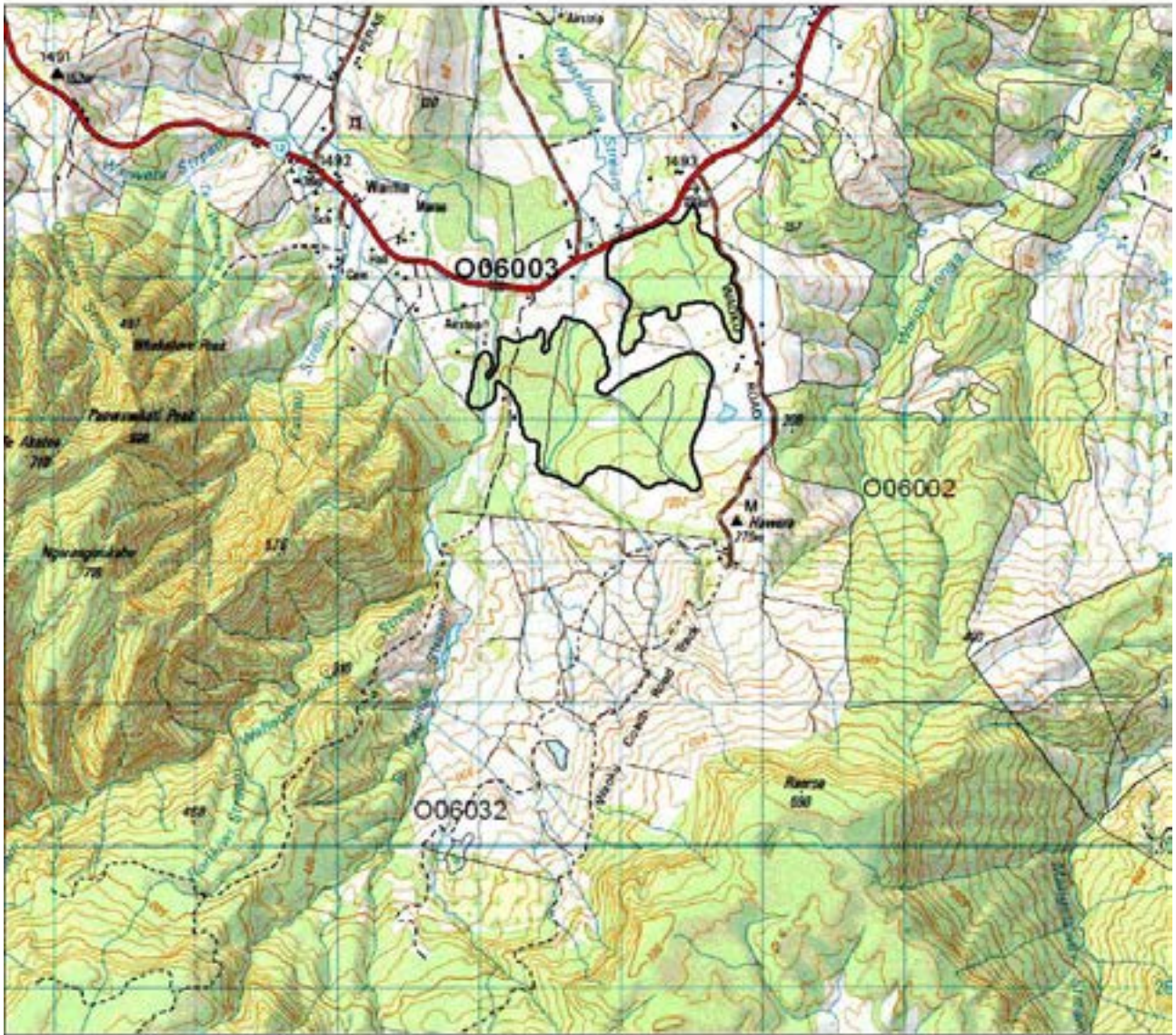
Survey no.	O06/003
Survey date	3 May 1994
Grid reference	O06 663 339, O06 657 331
Area	175 ha (114 ha forest, 61 ha shrubland)
Altitude	c. 70-200 m asl

Ecological unit

- (a) Kahikatea-pukatea-taraire forest on gentle hillslope (70%)
- (b) Kahikatea secondary forest on alluvial terrace (10%)
- (c) Manuka shrubland on hillslope (20%)

Landform/geology

Situated on low relief hill country and quarternary alluvial terraces, it is underlain by Mangakahia Complex sandstone and mudstone with alluvial terraces in the west.



Waiku Rd Bush O06/003

Each grid is 1000m x 1000m
and = 100 ha

- S = shrubland
- F = forest
- W = wetland
- E = estuarine
- D = duneland



Vegetation

(a) Most of the site is an association of kahikatea, pukatea and taraire. Northern rata and rewarewa are frequent while kauri, rimu, puriri, puka and nikau are occasional.

(b) Kahikatea is dominant with the occasional rewarewa and rimu.

(c) Areas of manuka dominant shrubland are giving way to emergent kahikatea and ti kouka and will, if left to regenerate, provide additional podocarp dominant lowland forest.

Fauna

NI brown kiwi (Serious Decline) has been reported at this site and common forest birds.

Significance

This large secondary outlier to Waima Forest is one of the best examples of lowland alluvial podocarp dominant forest remaining within this Ecological District and is representative site with type (a) unrecorded elsewhere in the Ecological District.

It is linked and/or closely associated with the Waima Forest tract.

It also provides a riparian function.

Marginal Strip, administered by the Department of Conservation occupies 2 ha of this site.

CLASSENS/DUDDYS BUSH

Survey no.	O06/004
Survey date	2 May 1994
Grid reference	O06 603 399, O06 627 408, O06 625 414 O06 634 381, O06 619 408
Area	2130 ha (1640 ha forest, 467 ha shrubland, 23 ha wetland)
Altitude	0-c.150 m asl

Ecological unit

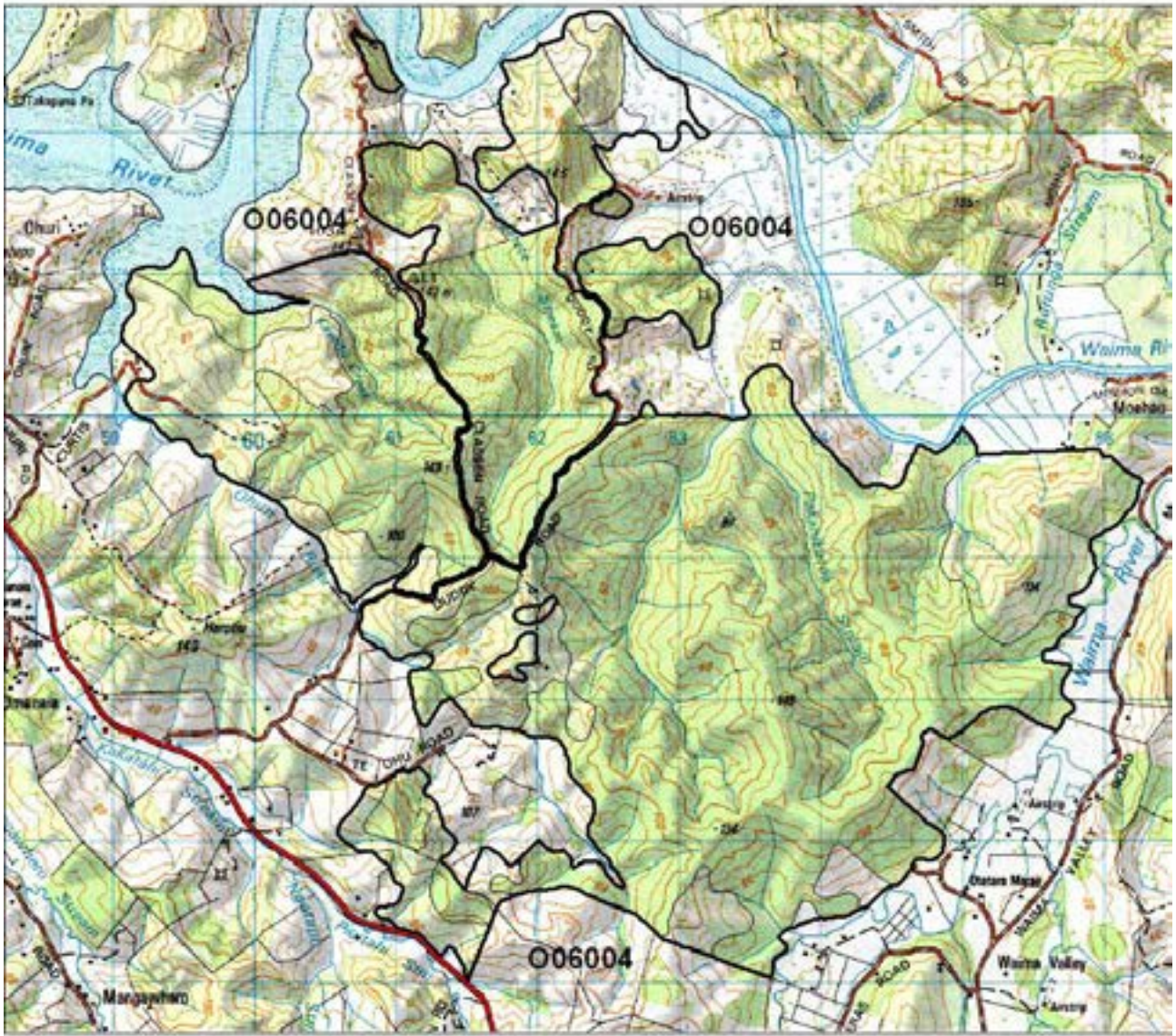
- (a) Taraire forest on hillslope
- (b) Kahikatea-rewarewa-taraire forest on hillslope
- (c) Towai forest on hillslope
- (d) Kanuka-towai forest on hillslope
- (e) Manuka shrubland on hillslope
- (f) Raupo reedland in swamp
- (g) Oioi saltmarsh in estuary

Landform/geology

This large site occupies dissected hill country underlain by Mangakahia Complex sandstone, running into marine sediments adjoining the Waima River.

Vegetation

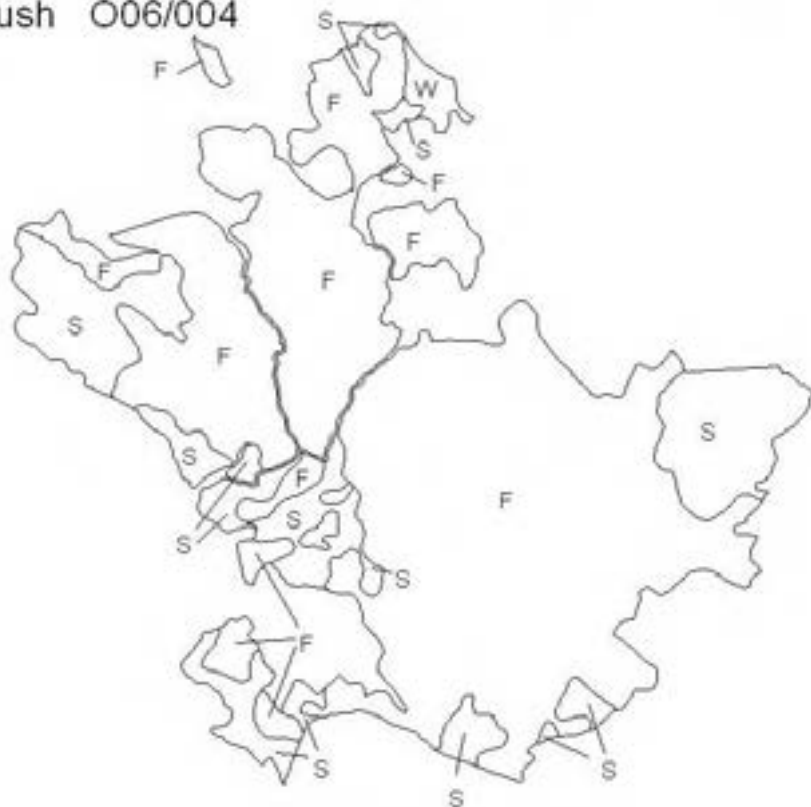
This forest is heavily modified having been cut over for kauri and podocarps at least twice, but has regenerated well.



Classens/Duddys Bush 006/004

Each grid is 1000m x 1000m
and = 100 ha

- S = shrubland
- F = forest
- W = wetland
- E = estuarine
- D = duneland



- (a) Cutover taraire forest with frequent towai, rewarewa, pukatea, puriri, kahikatea and totara and occasional rimu, northern rata and tawa.
- (b) Kahikatea, rewarewa and taraire are co-dominant with frequent pukatea and nikau and occasional northern rata, kanuka, puka and rimu.
- (c) Towai occurs with frequent taraire, puriri, pukatea, kahikatea, and rewarewa. Rimu, miro and northern rata are occasional.
- (d) Kanuka and towai are common with frequent rewarewa, kahikatea, puriri and occasional pukatea, rimu and tanekaha.
- (e) Manuka shrubland occurs with emergent tanekaha and occasional emergent rimu and kahikatea.
- (f) On the Waima River an area of raupo occurs with occasional ti kouka.
- (g) Abundant oioi occurs with frequent raupo and occasional pampas.

Towai and manuka generally dominates the more disturbed periphery, while taraire is dominant in the more intact catchments. Totara die-off is evident, presumably due to possum browse. Goats are present in moderate numbers and livestock are also present.

Significant flora

Urtica incisa (Regionally significant species) approaching its northern limit of distribution.

Fauna

Birds: NI brown kiwi (Serious Decline), kukupa (Gradual Decline) and NI tomtit (Regionally significant species) in low numbers. NZ dabchick (Sparse) have also been recorded from within this habitat.

Fish: 1999 record of banded kokopu (Regionally significant species), inanga, common smelt, eel (species not known) and the pest fish *Gambusia*.

Significance

The forest exhibits a very good altitudinal sequence running, in places, into the wetland, saltmarsh and mangrove associations of the Waima River. Its large size and close proximity to the large Waipoua-Waima-Mataraua Forest tract potentially increases its viability.

Presence of threatened and regionally significant species.

Representative site for type (b), which is unrecorded elsewhere in the Ecological District and type (c), (d), (e), (f) and (g).

Contributes to water and soil protection in the catchment.

UPOKOWHAWHA FOREST REMNANT

Survey no.	O06/006
Survey date	5 May 1994
Grid reference	O06 550 355
Area	11 ha
Altitude	40-160 m asl

Ecological unit

- (a) Kahikatea forest on alluvium (20%)
- (b) Kahikatea-nikau-puriri-taraire forest on hillslope (80%)



Upokowhaha Forest Remnant O06/006

Each grid is 1000m x 1000m
and = 100 ha.

- S = shrubland
- F = forest
- W = wetland
- E = estuarine
- D = duneland

Landform/geology

A small podocarp broadleaf remnant partially on an alluvial ribbon in dissected hill country.

Vegetation

(a) The unusual component of this remnant is emergent old growth kahikatea at the eastern end, representing one of only a few pockets of unlogged forest in this Ecological District.

(b) The majority of the site contains co-dominant kahikatea (some emergent), nikau, puriri and taraire forest with frequent pukatea. Puka, rimu, rewarewa, karaka, titoki and kohekohe are occasional.

Fauna

Not surveyed.

Significance

Representative site for type (a) old growth kahikatea forest, a very rare forest type within this Ecological District, and type (b), kahikatea-nikau-puriri-taraire forest which is also unrecorded elsewhere in the District.

The remnant is unfenced.

An upper catchment and riparian protection function is present.

KARANGI BUSH REMNANTS

Survey no.	O06/007
Survey date	5 May 1994
Grid reference	O06 558 374, O06 550 372
Area	39 ha
Altitude	20-120 m asl

Ecological unit

(a) Kahikatea forest on gentle hillslope (50%)

(b) Taraire-pukatea-puriri forest on hillslope (50%)

Landform/geology

Two forest remnants on dissected hill country underlain by Mangakahia Complex sandstone.

Vegetation

(a) Kahikatea with frequent puriri, pukatea and occasional totara and kanuka.

(b) Taraire is dominant with pukatea and puriri common. Kahikatea, rewarewa, and nikau are frequent while rimu, karaka and totara are occasional.

Fauna

Not surveyed.

Significance

Contains a sequential gradient from broadleaf dominant hill forests to podocarp dominant in the lower, flatter sites. Representative site for type (b).



Karangi Bush Remnants O06/007

Each grid is 1000m x 1000m
and = 100 ha.

- S = shrubland
- F = forest
- W = wetland
- E = estuarine
- D = duneland

VUJCICH RD SWAMP

Survey no.	O06/008
Survey date	5 May 1994
Grid reference	O06 534 374
Area	3 ha
Altitude	< 5 m asl

Ecological unit

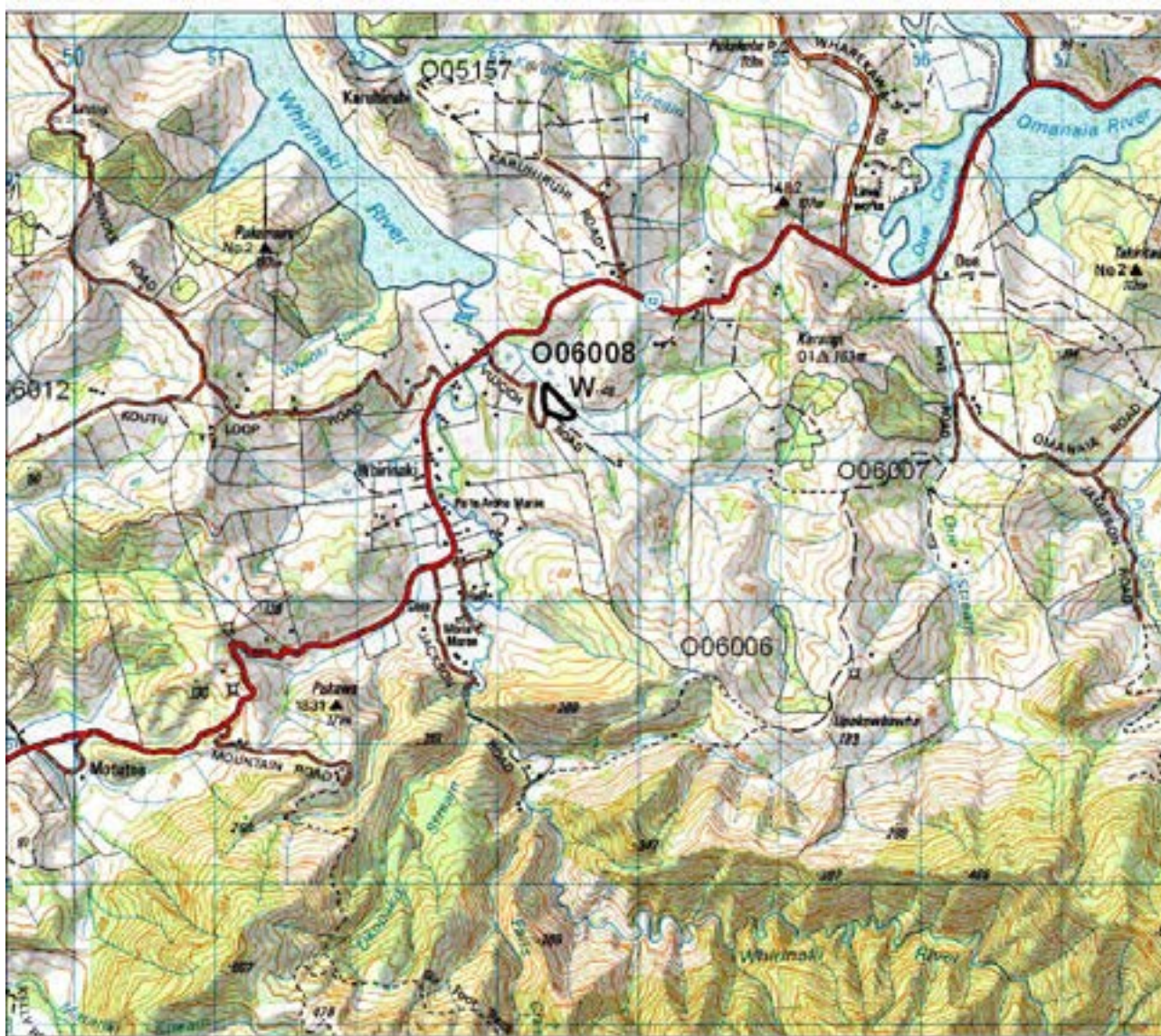
(a) Harakeke-raupo-ti kouka association in swamp

Landform/geology

The site occurs on Holocene alluvial estuarine deposits.

Vegetation

This small and partially drained swamp was originally part of a larger wetland/saltmarsh system. Saltmarsh ribbonwood is frequent suggesting a saline influence at the upper edge of a saltmarsh which is now almost completely “reclaimed” for pastoral farming.



Vujcich Rd Swamp O06/008

Each grid is 1000m x 1000m
and = 100 ha.

- S = shrubland
- F = forest
- W = wetland
- E = estuarine
- D = duneland

Fauna

Not surveyed.

Significance

Representative of a mineralised freshwater wetland type with brackish influence. Freshwater and brackish wetlands of this nature are now extremely uncommon due to reclamation/drainage for pastoral farming and the association of harakeke, raupo and ti kouka is unrecorded elsewhere in the Ecological District. The appearance of drier swamp vegetation is due to the effects of adjacent drains.

Sites like these are known to be important spawning areas for native freshwater fish such as banded kokopu (Regionally significant species) and inanga, and also wetland birds like Australasian bittern (Nationally Endangered).

WHEOKI STREAM/PUKEMAIRE REMNANTS

Survey no.	O06/009
Survey date	4 May 1994
Grid reference	O06 507 393, O06 507 382, O06 498 391 O06 507 388, O06 518 382
Area	135 ha (40 ha forest, 95 ha shrubland)
Altitude	0-157 m asl

Ecological unit

- (a) Nikau forest on coastal hillslope
- (b) Kahikatea-kowhai-manuka-puriri forest on coastal hillslope
- (c) Taraire-tanekaha forest on coastal hillslope
- (d) Manuka-kauri-mamangi forest on coastal hillslope
- (e) Puriri-taraire forest on coastal hillslope
- (f) Kahikatea-tanekaha forest on coastal hillslope
- (g) Mamaku-nikau-ti kouka forest on coastal hillslope
- (h) Manuka shrubland on coastal hillslope

Landform/geology

The area is dissected hill country with Holocene alluvial/estuarine deposits in the valley of Wheoki Stream, and Mangakahia Complex sandstone underlying the hill country.

Vegetation

This moderate-sized forest remnant exhibits a large range of semi-coastal mixed podocarp/broadleaf/kauri vegetation types reflecting a range of historic modifications and physical influences.

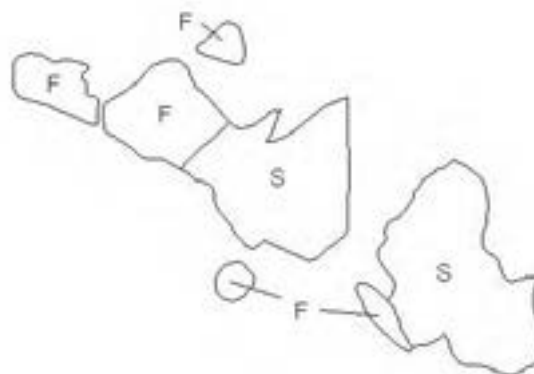
- (a) Dominant nikau with frequent kahikatea, puriri, pukatea, taraire and occasional titoki, karaka, kohekohe, manuka and totara.
- (b) Kahikatea, manuka, kowhai and puriri are common. Titoki and ti kouka are frequent with occasional rewarewa, pukatea, karaka, kauri, taraire, nikau and totara.
- (c) Approximately half of the western remnant is taraire-dominant with common tanekaha. Kauri, puriri, towai and rewarewa are frequent while rimu, miro, pukatea, totara and karaka are occasional.



Wheeki Stream/Pukemaire Remnants O06/009

Each grid is 1000m x 1000m
and = 100 ha

- S = shrubland
- F = forest
- W = wetland
- E = estuarine
- D = duneland



(d) Manuka is dominant while kauri (ridges) and mamangi are common. Tanekaha, towai and taraire are frequent species with occasional puriri, rewarewa, kahikatea and titoki.

(e) Puriri and taraire are co-dominant while northern rata (emergent), kahikatea, manuka are frequent and totara is occasional.

(f) Kahikatea and tanekaha are common. Ti kouka is frequent with occasional mamangi and kanuka.

(g) In a small area mamaku, nikau, and ti kouka occur as common species. Rimu, kahikatea and totara are frequent with occasional kowhai.

(h) Most of the eastern remnant at Wheoki Stream is manuka dominant shrubland with frequent kahikatea and towai and occasional puriri, ti kouka and tanekaha.

Fauna

NI brown kiwi (Serious Decline) has been reported at least within the main body of the habitat.

Significance

A representative site for all ecological units. The site is physically linked to the estuarine habitat of the Hokianga Harbour and provides very diverse coastal forest associations, including riparian protection and transitional ecotones between the saltmarsh/mangrove of the harbour and the older growth forest. Some healthy emergent northern rata remain in the more intact gullies.

TE HURUNGA FOREST

Survey no.	O06/010
Survey date	28 June 1994
Grid reference	O06 436 375, O06 428 385
Area	470 ha (391 ha forest, 64 ha shrubland, 15 ha wetland)
Altitude	0-180 m asl

Ecological unit

- (a) Puriri-taraire forest on hillslope (20%)
- (b) Manuka-kauri forest on hillslope (50%)
- (c) Manuka shrubland on hillslope (20%)
- (d) Raupo reedland in swamp (5%)

Landform/geology

This large site exhibits a range of vegetation types on an equally diverse range of geological types. The oldest forest, occurring on Otatau Group sandstone and mudstone, is found on dissected hill country at the northern end of this forest complex. It is separated from the remainder by 200-300 m of broken treeland and pasture.

The bulk of the site is secondary forest and advanced shrubland underlain by more Otatau Group sedimentaries with Mangakahia Complex siliceous mudstone dune sands along the southern margin and some Holocene alluvium in the valley of the Waihopai Stream (overlain by raupo reedland).



Te Hurunga Forest O06/010

Each grid is 1000m x 1000m
and = 100 ha

- S = shrubland
- F = forest
- W = wetland
- E = estuarine
- D = duneland



Vegetation

The area adjoins plantation forestry to the south and west, and pasture to the north and east.

(a) Puriri and taraire are co-dominant with frequent karaka, towai, kohekohe, kowhai and kanuka. Matai, miro, tawa, rimu, totara and emergent kauri, kahikatea and northern rata are occasional.

(b) About half of the site is common manuka and kauri. Tanekaha is frequent while towai, puriri, kahikatea and emergent kauri are occasional.

(c) Manuka shrubland.

(d) A raupo area occurs adjacent to the pine forest in the lower Waihopai River.

Significant flora

In 1949 Mason recorded *Mazus novaezeelandiae* ssp. *impolitus* f. *impolitus* (Serious Decline) from Te Waihopai Stream.

Fauna

Not surveyed.

Significance

Lowland forest with a significant emergent element. It includes a mineralised freshwater wetland and the coastal influence is reflected in the frequent occurrence of kowhai and karaka.

Representative site for type (a), (b) and (d).

The site will function as a 'refuge' for forest species during harvest of adjoining pines.

OTAWHITI BUSH

Survey no.	O06/012
Survey date	4 May 1994
Grid reference	O06 490 382, O06 496 385
Area	46 ha
Altitude	20-123 m asl

Ecological unit

(a) Kahikatea-taraire forest on coastal hillslope (15%)

(b) Manuka-kahikatea forest on coastal hillslope (85%)

Landform/geology

This moderate sized secondary forest remnant occurs on dissected hill country underlain by Mangakahia Complex sandstone.

Vegetation

(a) The eastern portion is dominated by kahikatea and taraire with frequent rimu, pukatea, and puriri. Kauri and kohekohe are occasional.

(b) Most of the area is dominated by abundant manuka with common kahikatea. Ti kouka and puriri are also present.

Fauna

Not surveyed by the Department of Conservation. NI brown kiwi (Serious Decline) has been reported from this site.



Otawhiti Bush O06/012

Each grid is 1000m x 1000m
and = 100 ha.

- S = shrubland
- F = forest
- W = wetland
- E = estuarine
- D = duneland

Significance

The site location suggests a strong coastal influence will be operating, which will determine the composition of understory plants and future canopy species within the majority of the site.

Representative site for both ecological units and only record of type (b) in the Ecological District.

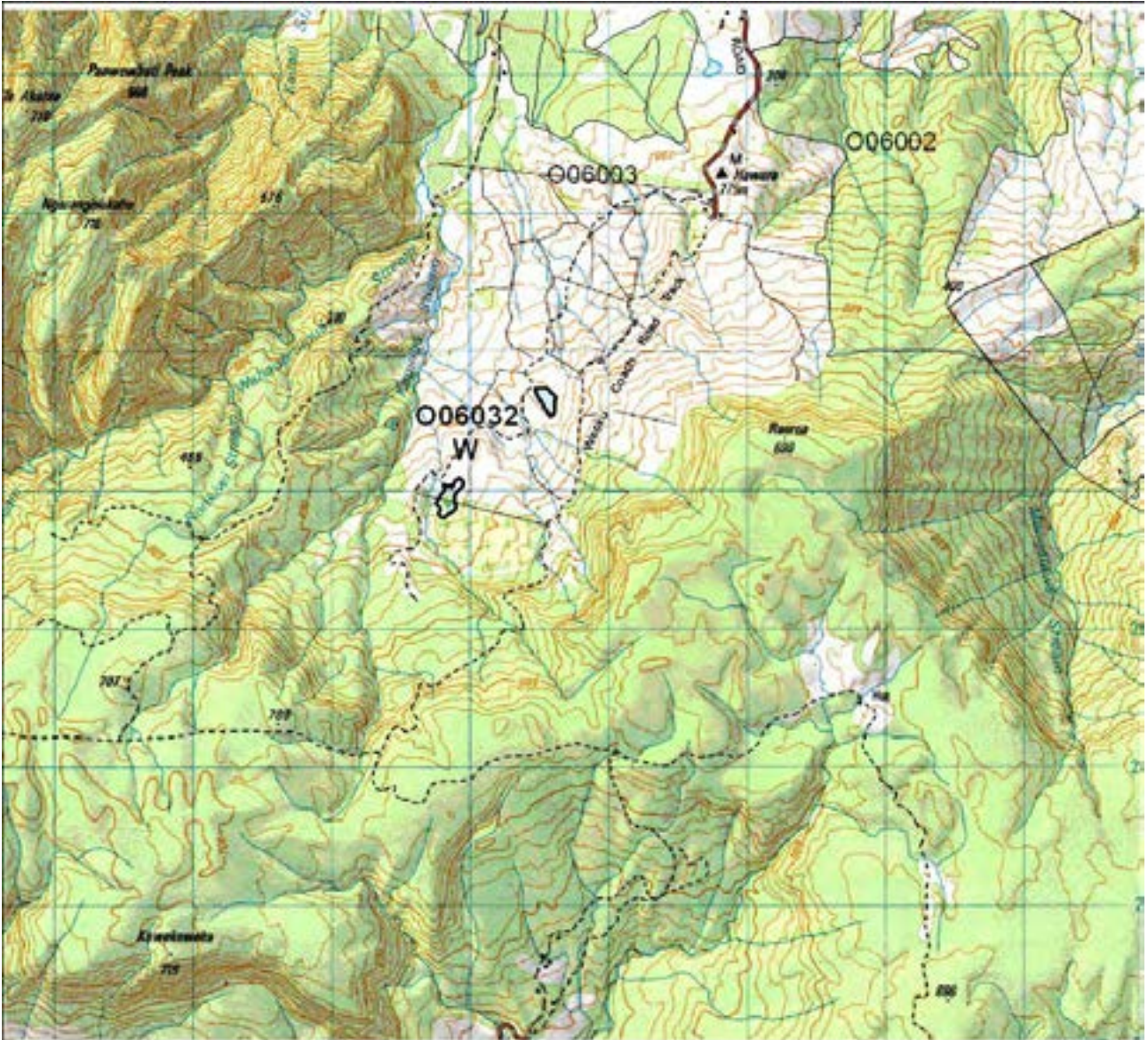
Presence of a threatened species.

WAOKU COACH RD WETLANDS

Survey no. O06/032
Survey date 6 July 1995
Grid reference O06 655 306, O06 648 299
Area 4 ha
Altitude 330-350 m asl

Ecological unit

(a) Raupo reedland in pond



Waiku Coach Rd Wetlands O06/032

Each grid is 1000m x 1000m
and = 100 ha.

S = shrubland
F = forest
W = wetland
E = estuarine
D = duneland

- (b) Swamp maire swamp forest on island
- (c) Kahikatea-ti kouka forest on pond margin

Landform/geology

Dissected Mangakahia Complex sandstone.

Vegetation

Two artificial ponds c. 350 m asl adjoining exotic plantation forest to the south and rough pasture on their remaining margins.

- (a) The northernmost pond is completely (100%) vegetated by raupo.
- (b) The other pond borders pines and features a small island dominated by swamp maire and occasional towai.
- (c) Kahikatea and ti kouka form the periphery of the pond with *Carex* sp. and raupo.

Fauna

NI fernbird (Sparse).

Significance

Diversity restricted by small size and lack of open water. Presence of the Sparse NI fernbird and potential habitat for spotless crane (Sparse). Contains uncommon ecosystem-vegetation types within this Ecological District, freshwater wetland and swamp forest.

Representative site for type (b), swamp maire forest, which has also been unrecorded elsewhere in this Ecological District.

WHAWHARU SWAMP

Survey no.	O06/033
Survey date	6 July 1995
Grid reference	O06 688 372
Area	11 ha
Altitude	< 20 m asl

Ecological unit

- (a) Kahikatea-taraire forest on swamp margin (20%)
- (b) Kahikatea-ti kouka swamp forest in swamp (50%)
- (c) Raupo reedland in swamp (20%)
- (d) Willow treeland in swamp (10%)

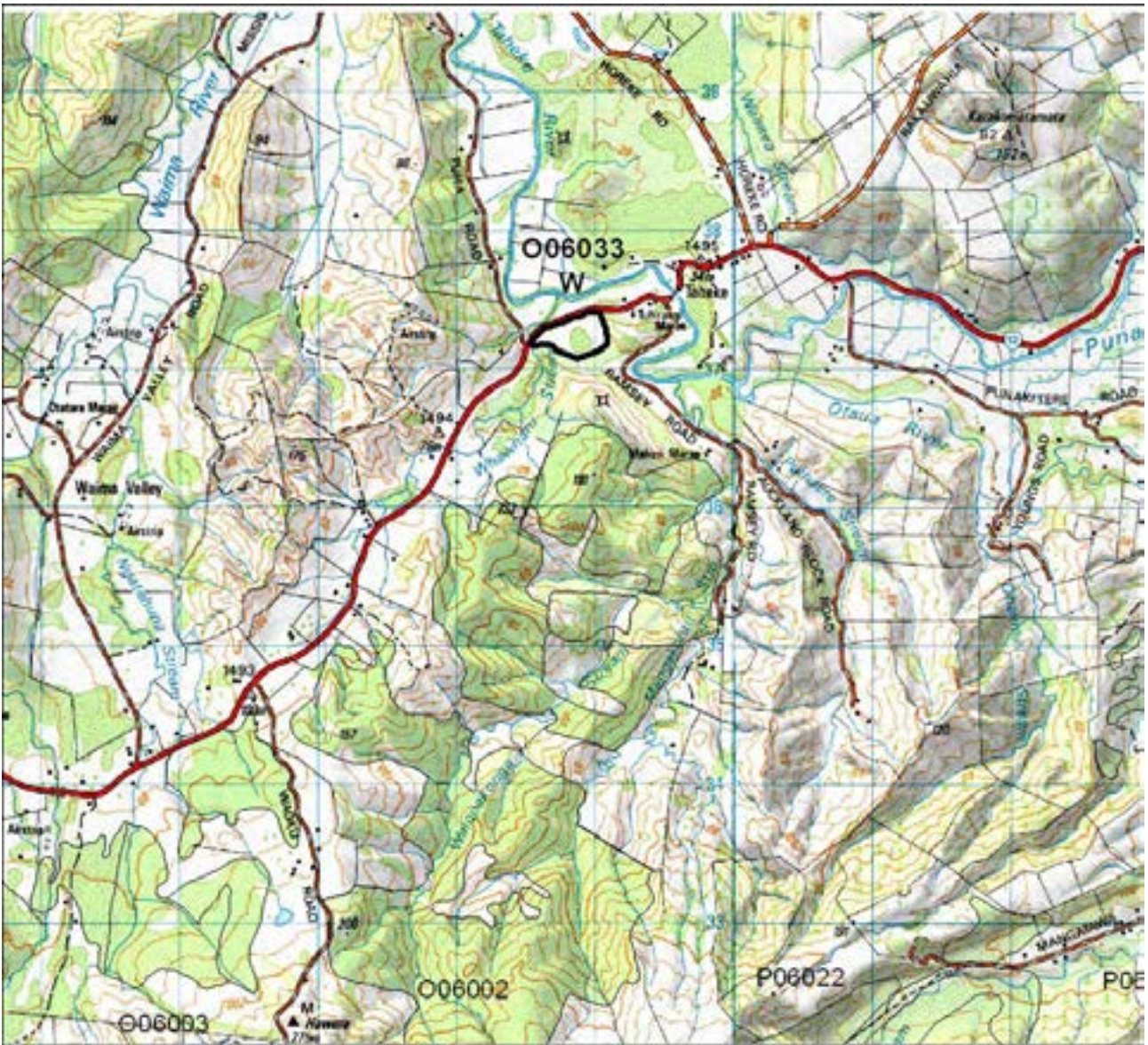
Landform/geology

This site is a freshwater wetland on alluvium formed by the impoundment of a small tributary of the Whawharu Stream.

Vegetation

A mineralised swamp which grades from peripheral podocarp broadleaf secondary forest into kahikatea and ti kouka swamp forest and finally into raupo dominant reedland. Willows may need to be controlled or eradicated to improve the natural integrity of the area.

- (a) Kahikatea and taraire occur on the periphery of the swamp with frequent towai.



Whawharu Swamp O06/033

Each grid is 1000m x 1000m
and = 100 ha.

- S = shrubland
- F = forest
- W = wetland
- E = estuarine
- D = duneland

- (b) Kahikatea and ti kouka occur in about half of the site with frequent raupo and *Carex* sp.
- (c) Raupo-dominant with frequent ti kouka and occasional *Carex* sp.
- (d) On the north eastern edge an area of abundant willow occurs.

Fauna

Australasian bittern (Nationally Endangered), welcome swallow, pukeko and NZ kingfisher.

Significance

High-quality wetland with a high water table. Representative of uncommon ecosystems within this Ecological District and Region, type (a), (b) and (c).

It is one of only three examples of kahikatea-ti kouka associations in the Ecological District.

Habitat for a threatened species and potential habitat for banded rail and spotless crane (both Sparse).

HOKIANGA NORTH HEAD COASTAL ASSOCIATIONS

Survey no.	O06/034
Survey date	April 1995
Grid reference	O06 405 355, O06 456 350
Area	1155 ha (786 ha duneland, 37 ha forest, 332 ha shrubland)
Altitude	0-202 m asl

Ecological unit

- (a) Sandfield (70%)
- (b) Pohutukawa forest on dune sands (<2%)
- (c) Kanuka/manuka-towai forest on dune sands (5%)
- (d) Karaka-kohekohe-kowhai-puriri forest on dune sands (<2%)
- (e) Lupin-*Spinifex* association on foredunes (10%)
- (f) Exotic pasture grass-native grass-rush association on dune sands (10-20%)
- (g) *Spinifex* association on sandspit

Landform/geology

Composed of Pleistocene eroded consolidated dunes overlain by mobile sand and features an eroded muddy limestone peak (Rangitira) on the eastern margin and an eroded canyon in the south branch of Waipapa Stream.

Vegetation

The Hokianga North Head is a site of considerable size and geomorphic distinction which supports several small remnants of coastal broadleaf forest and wetland.

- (a) Sandfield comprises most of the site.
- (b) Pohutukawa-abundant forest occurs in a very small area.
- (c) Kanuka/manuka and towai forest occurs with frequent pohutukawa and occasional kauri and tanekaha.
- (d) Karaka, kohekohe, kowhai and puriri are common associates in a small area.
- (e) Lupin and *Spinifex* are common with frequent shore bindweed and occasional pingao and pohuehue.
- (f) An association of exotic pasture grass, native grass and rush species is one of the most extensive vegetation types. While it is heavily infested with exotic species and, at times heavily grazed, it also exhibits a considerable native coastal plant component, which is inseparable from the exotics. For that reason it has been included.



Hokianga North Head Coastal Associations O06/034

Each grid is 1000m x 1000m
and = 100 ha.

- S = shrubland
- F = forest
- W = wetland
- E = estuarine
- D = duneland



(g) At Kawehitiki Point the only sandspit adjacent to the Hokianga Harbour occurs. *Spinifex* with lupin and pohuehue occur with small amounts of pingao. Further inland, shore bindweed, lupin, pohuehue, harakeke, and apple of Sodom occur.

Significant flora

Year 2000 record of *Mazus novaezeelandiae* subsp. *impolitus* f. *impolitus* (Serious Decline). *Eleocharis neozelandica*, *Pimelea arenaria* and pingao (all Gradual Decline).

Fauna

Australasian bittern (Nationally Endangered), Caspian tern (Nationally Vulnerable), banded dotterel and white-fronted tern (both Gradual Decline) and breeding Northern NZ dotterel (Sparse).

Significance

A unique landform within this Ecological District.

The extensive area of active sand dunes within this site, some reaching 200 m are classified as a geological site and landform of national significance with scientific, educational and scenic value (Kenny & Hayward 1996).

This site contains the only examples of extensive dunes in the Hokianga Ecological District and is representative for vegetation types (a), (b), (c), (d), (f) and (g). Type (a), (b), (d) and (g) are unrecorded elsewhere in the Ecological District.

This site represents one of the few remaining areas of mobile transverse dunes on the west coast of Northland.

Pohutukawa and broadleaf forest types on dune sands are also nationally rare vegetation types.

Stewardship Land of 415 ha and Marginal Strip of 69 ha, administered by the Department of Conservation, protects 41 % of this site.

RANGI POINT REMNANTS

Survey no.	O06/035
Survey date	April 1995
Grid reference	O06 445 380
Area	99 ha (8 ha estuary, 62 ha forest, 3 ha shrubland, 26 ha wetland)
Altitude	0-c.100 m asl

Ecological unit

- (a) Kanuka/manuka forest on coastal hillslope
- (b) Kanuka/manuka-towai forest on coastal hillslope
- (c) Raupo reedland in swamp
- (d) Mangrove forest in estuary

Landform/geology

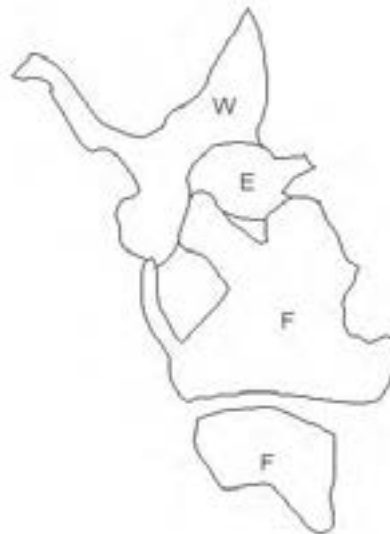
The area is underlain by Mangakahia Complex siliceous mudstone in the north and Motatau Complex muddy limestone in the south.



Rangi Point Remnants O06/035

Each grid is 1000m x 1000m
and = 100 ha

- S = shrubland
- F = forest
- W = wetland
- E = estuarine
- D = duneland



Vegetation

Coastal shrubland grading into mineralised freshwater wetland and estuary.

- (a) Kanuka/manuka forest with frequent towai and ti kouka.
- (b) Kanuka/manuka and towai are common with the occasional kahikatea, tanekaha and kowhai.
- (c) Dominant raupo reedland.
- (d) Dominant mangrove forest.

Fauna

Northland green gecko (Gradual Decline).

Significance

Significant for its diversity of habitat types, this area exhibits gradients from coastal shrubland and young forest, through raupo dominant freshwater wetlands, into an estuarine saltmarsh/mangrove association of the Hokianga Harbour. Stock damage to the latter is evident and may extend into the other habitat types as well.

This site is physically linked by plantation forest to the large Te Hurunga Forest to the west and, to the east, grades into coastal riparian forest in areas.

Representative site for type (b), (c) and (d).

It is one of only a few sites in the North Hokianga where the threatened Northland green gecko has been recorded and it is likely to support several wetland bird species of Sparse ranking.

The Department of Conservation administers 1 ha of Stewardship Land within this site.

ARAIWHENUA STREAM SWAMP FOREST REMNANTS

Survey no.	P06/016
Survey date	1 May 1994
Grid reference	P06 778 296, P06 781 301
Area	9 ha
Altitude	90 m asl

Ecological unit

- (a) Kahikatea-pukatea forest on alluvium (60%)
- (b) Kahikatea forest on alluvium (40%)

Landform/geology

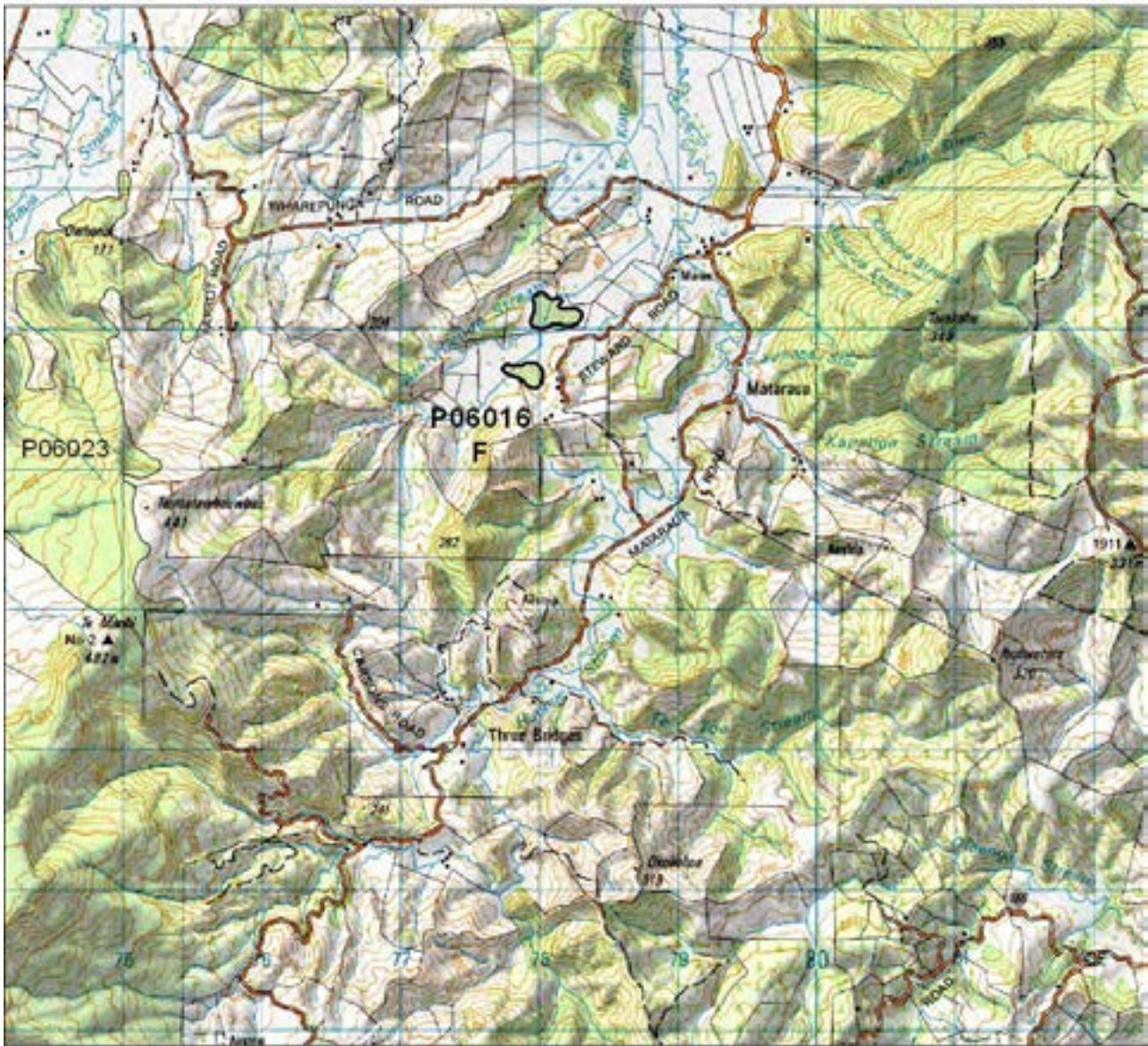
Alluvium in valley.

Vegetation

Two small unfenced forest remnants in the Araiwhenua Stream valley. The understorey is sparse.

(a) Kahikatea and pukatea are common species in the larger remnant. *Astelia* sp. is frequent with occasional titoki and ti kouka in a somewhat fragmented canopy.

(b) In the smaller block kahikatea is dominant with frequent pukatea and occasional taraire.



Araiwhenua Stream Swamp Forest Remnants P06/016

Each grid is 1000m x 1000m
and = 100 ha.

S = shrubland
F = forest
W = wetland
E = estuarine
D = duneland

Fauna

Not surveyed.

Significance

Representative of a rare and diminishing forest type, alluvial kahikatea and kahikatea-pukatea forest. The latter is unrecorded elsewhere in the Ecological District.

NINIHI RD SWAMP & CATCHMENT

Survey no.	P06/020
Grid reference	P06 762 323
Survey date	1 May 1994
Area	120 ha (112 ha forest, 8 ha wetland)
Altitude	60-214 m asl

Ecological unit

- (a) Kahikatea-totara-towai secondary forest on hillslope
- (b) Manuka forest on hillslope
- (c) Raupo reedland in swampy valley

Landform/geology

Underlain by Otatau Group sandstone and conglomerate.

Vegetation

This outlier to the Kaipaha wetland catchment is physically linked to that habitat by a narrow corridor of secondary forest and swamp.

- (a) Kahikatea, totara and towai-dominant canopy with frequent taraire and rewarewa and occasional kauri, tanekaha and ti kouka.
- (b) Manuka forest.
- (c) Raupo-dominant wetland with frequent ti kouka and occasional manuka.

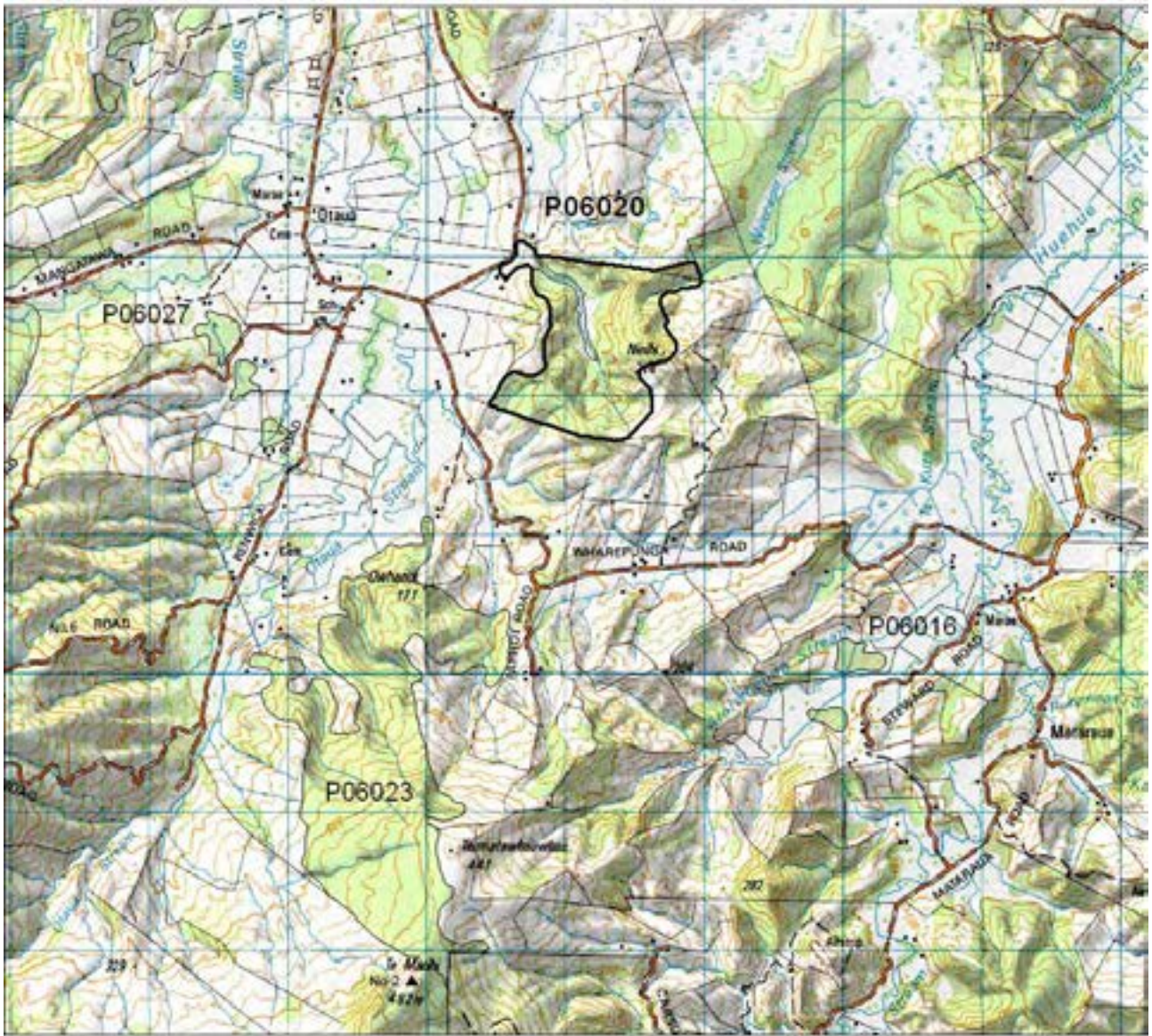
Although Kaipaha Wetland lies within the Kaikohe Ecological District, it is closely associated and an integral part of the Ninihi Rd habitat.

Fauna

NI brown kiwi (Serious Decline) has been recorded from within the greater habitat and it is very likely that NI fernbird and spotless crane (both Sparse), recorded within the adjoining wetland, are present in the raupo dominant wetland. Australasian bittern (Nationally Endangered) may also utilise the additional habitat available within this largely forested enclave as their territories are (depending on quality) generally quite large and bittern are a mobile species. Likely seasonal use by kukupa (Gradual Decline) especially during kahikatea fruiting period.

Significance

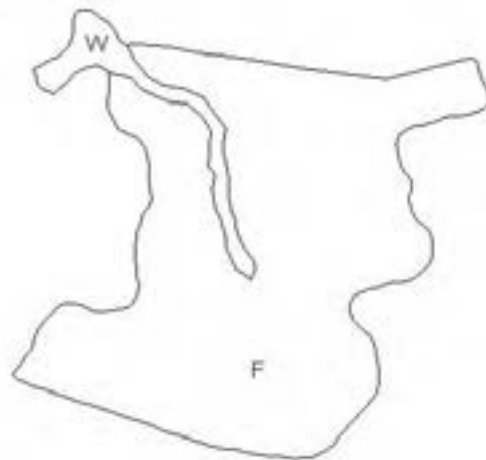
Contains representation of mineralised freshwater wetlands and performs a catchment protection function for, and is an integral part of one of the largest freshwater systems in the Ecological Region (Kaipaha Swamp in the Kaikohe Ecological District). Representative site for type (c) raupo reedland and type (a), kahikatea-totara-towai secondary forest which is unrecorded elsewhere in the Ecological District.



Ninihi Rd Swamp & Catchment P06/020

Each grid is 1000m x 1000m
and = 100 ha

- S = shrubland
- F = forest
- W = wetland
- E = estuarine
- D = duneland

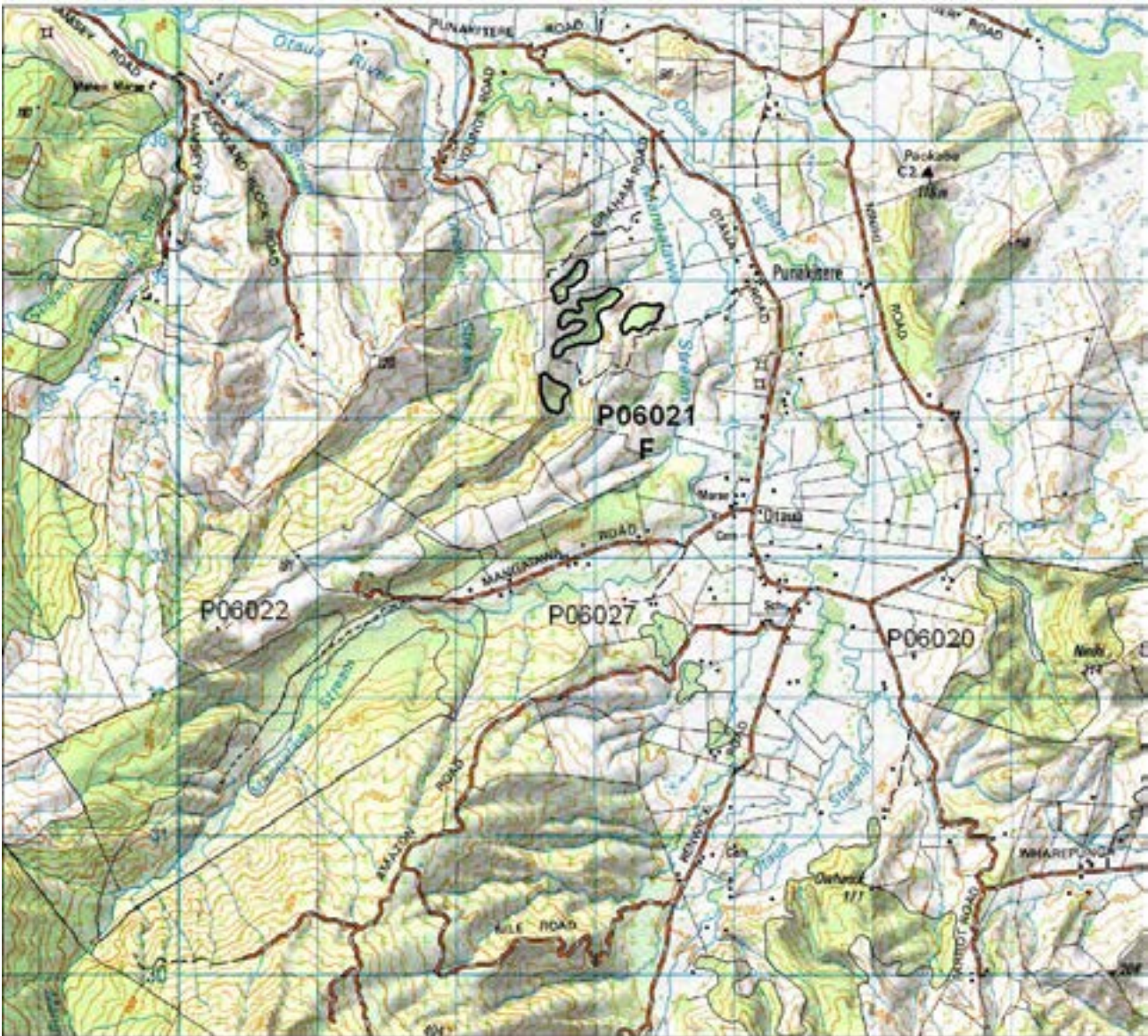


MANGATAWA STREAM FOREST REMNANTS

Survey no. P06/021
Survey date 2 May 1995
Grid reference P06 729 346, P06 733 347, P06 727 341, P06 728 349
Area 20 ha
Altitude 40-100 m asl

Ecological unit

(a) Taraire-totara forest on hillslope



Mangatawa Stream Forest Remnants P06/021

Each grid is 1000m x 1000m

and = 100 ha.

S = shrubland

F = forest

W = wetland

E = estuarine

D = duneland

(b) Kahikatea secondary forest on alluvial terrace

Landform/geology

Situated in an open valley with high-level terraces underlain by Mangakahia Complex sandstone.

Vegetation

These four secondary forest remnants are unfenced, but are loosely linked to the Waima Forest tract by adjacent plantation forestry.

(a) Taraire and totara forest with frequent kahikatea and occasional pukatea and rimu, some of which are emergent.

(b) Kahikatea forest with frequent totara and occasional rimu and pukatea. An understorey element persists.

Fauna

Not surveyed.

Significance

Representative site and the best remaining example in the Ecological District of type (a) taraire-totara forest, (only one of two sites recorded in the District), and type (b) kahikatea secondary forest on alluvial terrace, an uncommon forest type in this Ecological District and Northland.

MANGATAWA BUSH

Survey no.	P06/022
Survey date	2 March 1994
Grid reference	P06 718 329, P06 703 314
Area	433 ha (219 ha forest, 214 ha shrubland)
Altitude	c. 100-400 m asl

Ecological unit

(a) Taraire-towai forest on hillslope

(b) Totara secondary forest on hillslope

(c) Manuka shrubland on hillslope

Landform/geology

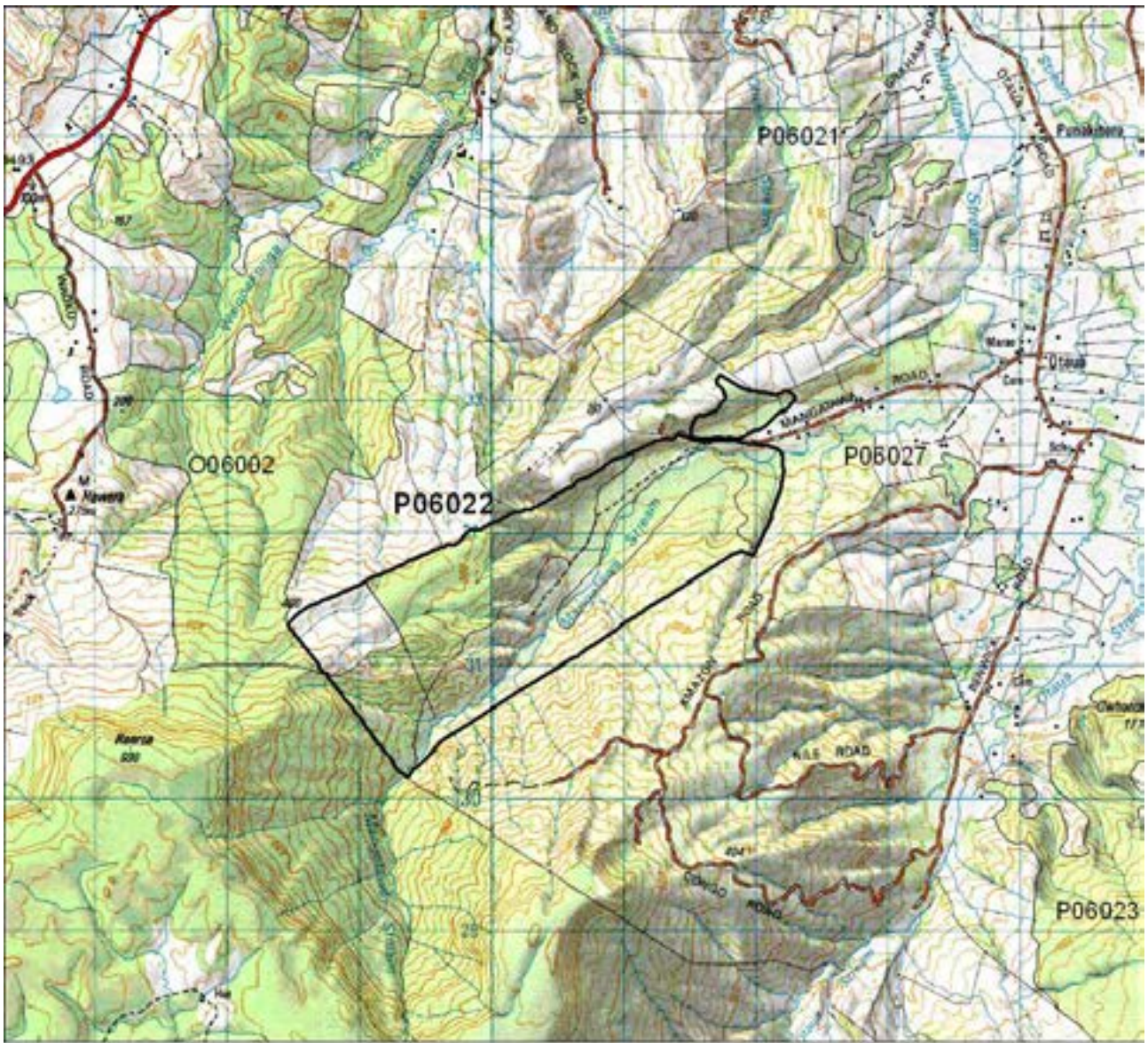
This large outlier of Mataraua Forest is situated in steep hill country underlain by Mangakahia Complex sandstone with basalt alluvium in the Mangatawa Stream valley.

Vegetation

(a) The age and quality of the forest increases towards the interior with emergent northern rata and podocarps becoming more frequent away from the effects of historic modification.

Co-dominant taraire and towai occur with frequent kahikatea, totara, nikau, rewarewa with occasional pukatea, puriri, emergent northern rata and rimu. Kauri is occasional.

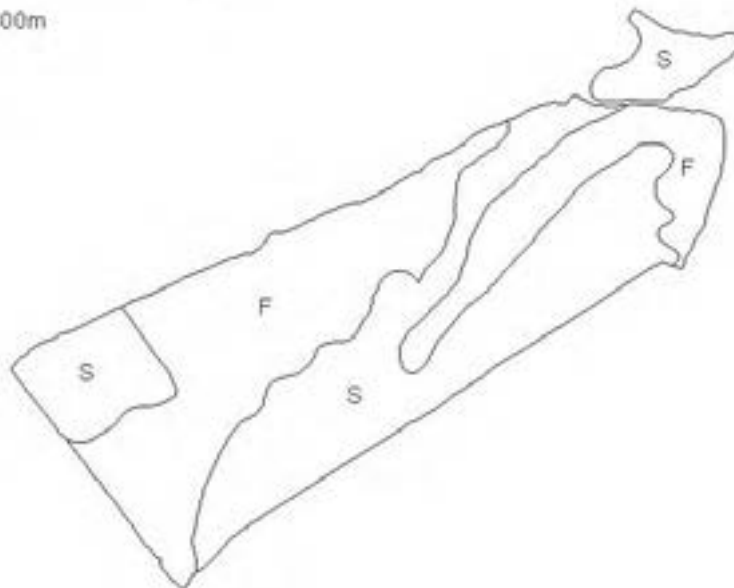
(b) Secondary totara forest with locally frequent kahikatea, and occasional rewarewa and rimu.



Mangatawa Bush P06/022

Each grid is 1000m x 1000m
and = 100 ha

- S = shrubland
- F = forest
- W = wetland
- E = estuarine
- D = duneland



(c) Manuka shrubland with mamaku, totara and towai. Totara is locally common.

Fauna

NI brown kiwi (Serious Decline) and kauri snail (Gradual Decline). Kukupa (Gradual Decline) are likely to occur as they are present in the rest of the contiguous forest area.

Significance

As a connected outlier of the Waipoua-Waima-Mataraua Forest continuum, this site can be expected to share many of the values of the greater habitat.

Representative site for all ecological units.

The site provides an upper catchment and riparian protection function and adds to the altitudinal range of eastern Mataraua.

Presence of threatened species.

TAUMATAWHAUWHAU FOREST OUTLIER

Survey no.	P06/023
Survey date	2 May 1994
Grid reference	P06 746 294
Area	262 ha
Altitude	80-420 m asl

Ecological unit

- (a) Kauri-rewarewa-taraire forest on hillslope
- (b) Taraire forest on hillslope
- (c) Manuka shrubland on hillslope

Landform/geology

Unlike the majority of the Mataraua Forest, this northern outlier contains areas of Otaua Group sandstone and conglomerate as well as the more common Waipoua basalt and basalt talus downslope.

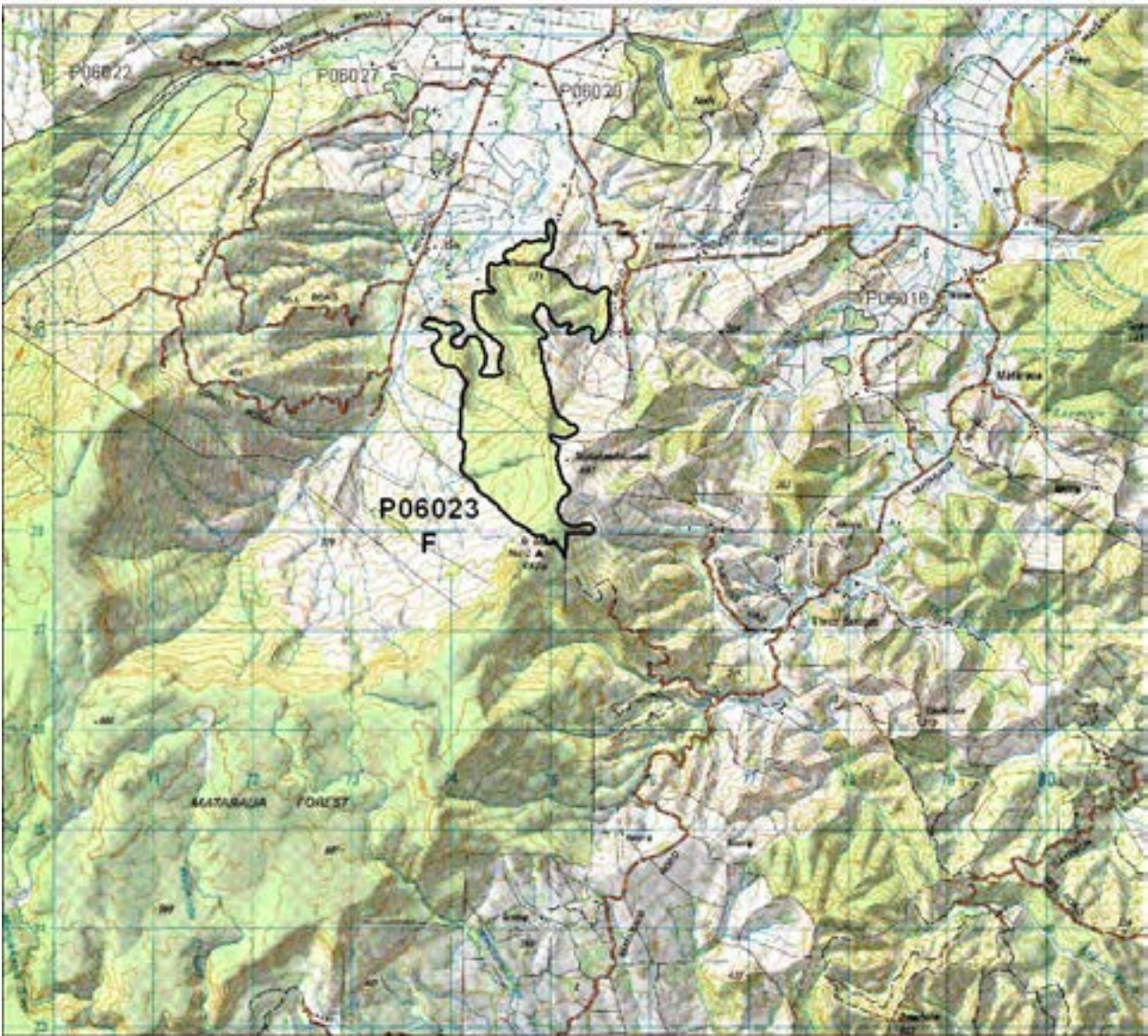
Vegetation

This large outlier to Mataraua Forest contains unmodified taraire/kauri forest with some emergent kahikatea, rimu and northern rata. The manuka dominant shrubland is mainly restricted to the periphery and serves as an effective buffer to the old-growth forest.

- (a) Kauri (emergent), rewarewa and taraire association with frequent kahikatea (some emergent) and occasional rimu, kohekohe, puriri and tanekaha.
- (b) Taraire forest with frequent nikau, mamaku, rewarewa, kahikatea and emergent rimu with occasional miro, tawa, puriri, kohekohe and emergent northern rata.
- (c) Periphery of manuka shrubland with occasional totara, tanekaha and kahikatea fulfils an important role in linking the forest types and augmenting the podocarp element.

Fauna

NI brown kiwi (Serious Decline) has been reported in this habitat.



Taumatawhauwhau Forest Outlier P06/023

Each grid is 1000m x 1000m
and = 100 ha.

- S = shrubland
- F = forest
- W = wetland
- E = estuarine
- D = duneland

Significance

It is physically linked to the largest contiguous forest tract in Northland, the Waipoua-Waima-Mataraua Forest tract which supports many threatened and regionally significant plants and animals.

Representative site for all ecological units with type (a) the only example recorded in the Ecological District.

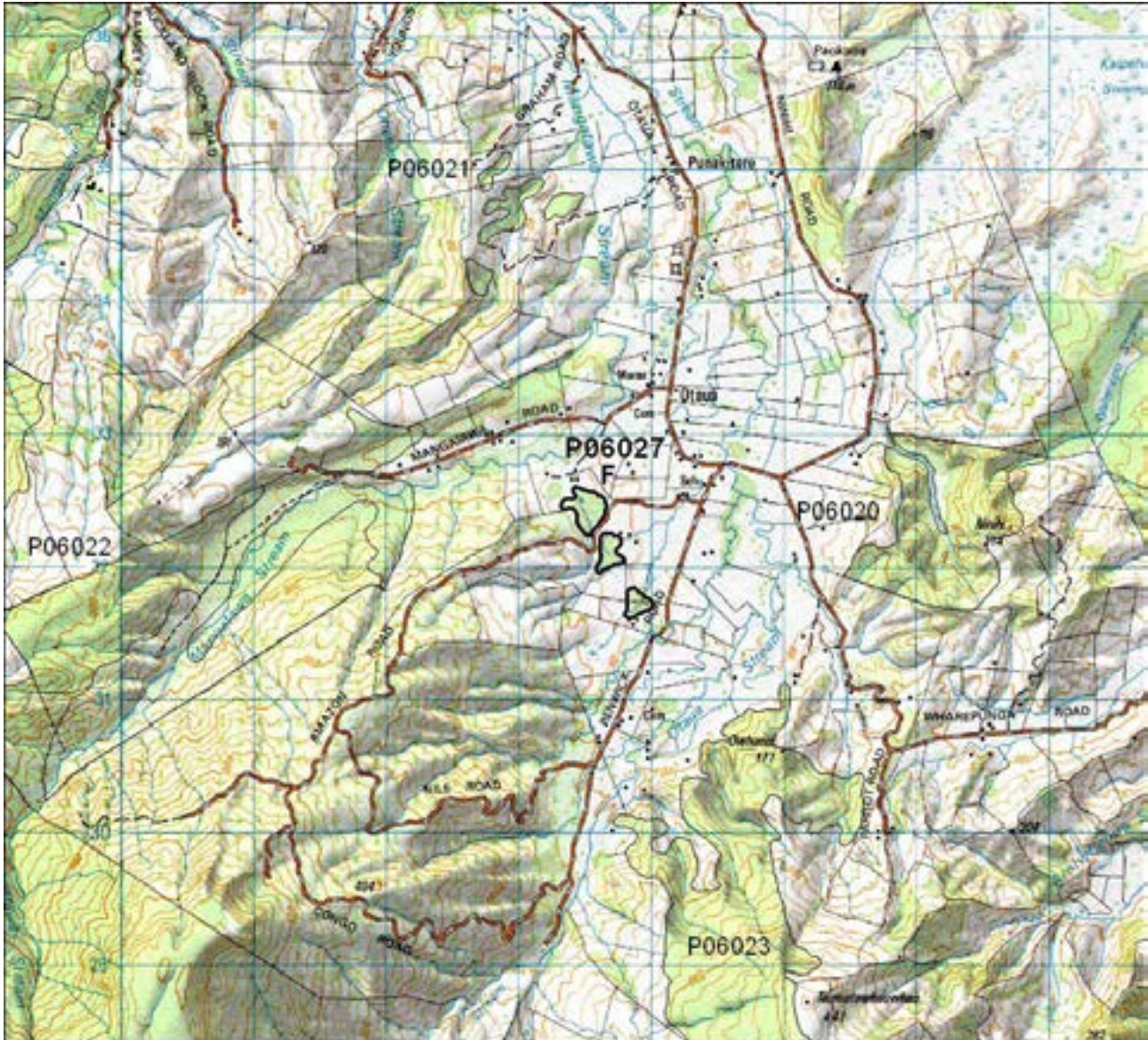
A small area of this site, 5 ha, is a Conservation Covenant administered by the Department of Conservation.

AMAZON RD FOREST

Survey no. P06/027
Survey date 2 May 1994
Grid reference P06 734 324, P06 736 320, P06 739 317
Area 14 ha
Altitude 60-80 m asl

Ecological unit

(a) Kahikatea forest on alluvial terrace



Amazon Rd Forest P06/027

Each grid is 1000m x 1000m
and = 100 ha.

S = shrubland
F = forest
W = wetland
E = estuarine
D = duneland

Landform/geology

Situated on elevated alluvial terraces.

Vegetation

Three kahikatea dominant forest remnants. At least one of the remnants is partly fenced, containing some understorey species and adjoins a plantation forest which provides a tenuous link between these lowland remnants and the higher altitude forest of the Mataraua Plateau. Associated canopy species include frequent rimu and totara with occasional taraire, rewarewa, miro, tanekaha and pukatea.

Fauna

Not surveyed.

Significance

A representative site for kahikatea forest which was once common in parts of this Ecological District, but which is now very uncommon mainly due to past land clearance for pastoral farming.