

ROKAKAKAHI RIVER SCENIC RESERVE & SURROUNDS

Survey no.	O05/052
Survey date	16 January 1995
Grid reference	O05 399 543
Area	250 ha (120 ha forest, 127 ha shrubland, 3 ha wetland)
Altitude	20-190 m asl

Ecological unit

- (a) Kanuka shrubland on steep hillslope
- (b) Kanuka forest on moderate to steep hillslope
- (c) Taraire forest on moderate to steep hillslope
- (d) Mixed broadleaf-podocarp forest on ridge
- (e) Kanuka-totara-towai forest on moderate to steep hillslope
- (f) Manuka shrubland on hillslope
- (g) Towai secondary forest on hillslope
- (h) Taraire-towai secondary forest on hillslope
- (i) Raupo reedland in stream valley

Landform/geology

Stream catchments and hillslopes in dissected hill country bordering the Rotokakahi River on Mangakahia Complex sandstone and adjoining a wetland in the Awaiti Stream valley.

Vegetation

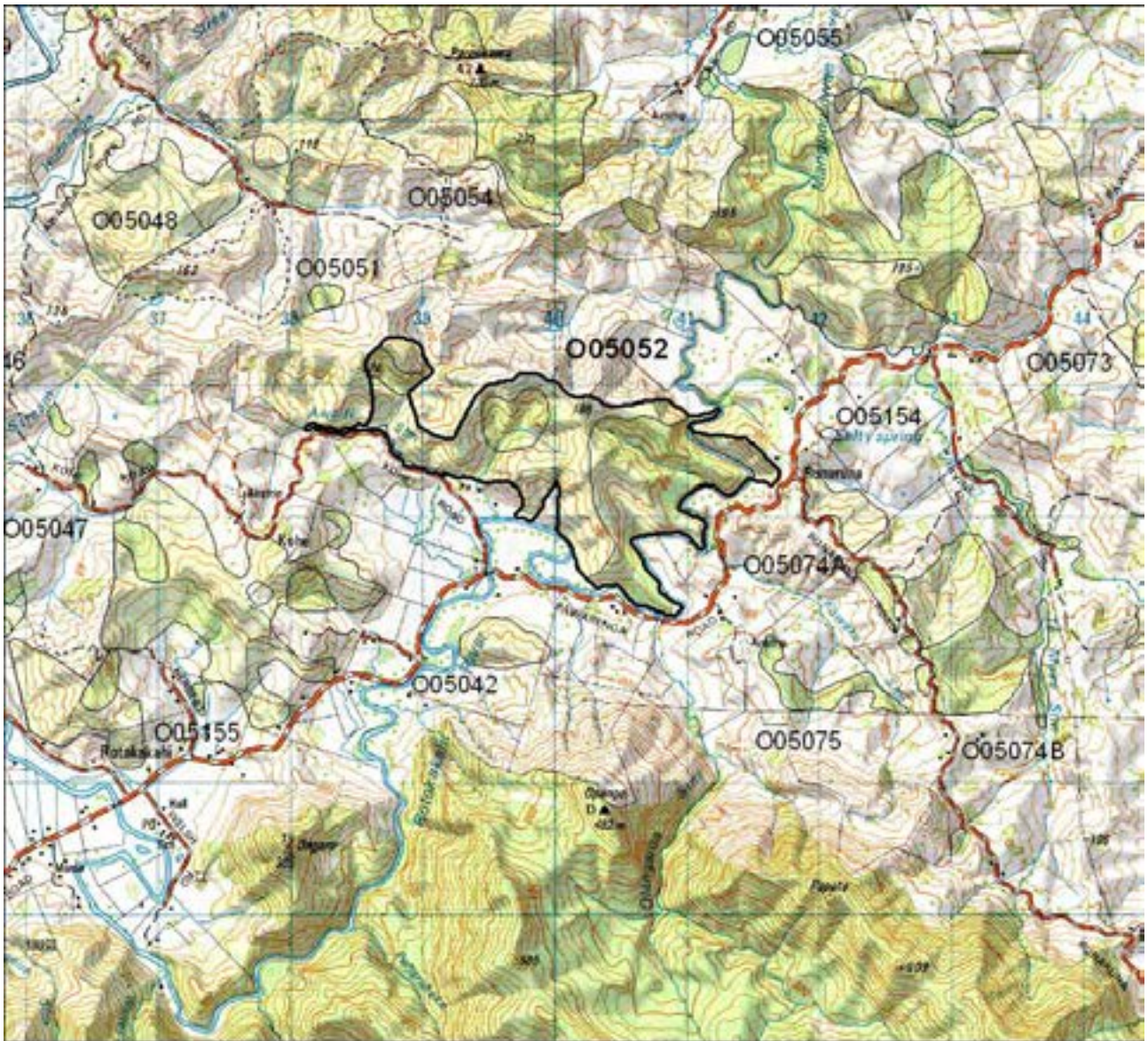
- (a) On the east bank of the river is kanuka shrubland to 6 m tall with frequent towai and mamaku.
- (b) On the edge of the main bush is secondary kanuka forest with occasional towai, rewarewa, rimu and kauri.
- (c) The main forest contains abundant taraire with frequent towai and kanuka. Rimu and northern rata are occasionally emergent and tawa, puriri, kahikatea, karaka, rewarewa and totara are also present.
- (d) There are two small pockets of mixed broadleaf-podocarp vegetation types (< 2% of the site):
 - (i) Frequent rimu, northern rata, tanekaha, kanuka and taraire.
 - (ii) Frequent rimu, northern rata, kauri and occasional towai and totara.

Kawaka occurs rarely.

- (e) Above the river, kanuka is abundant with common towai and totara. Mamaku is frequent with occasional kahikatea, rimu and rewarewa.

In the understorey nikau, kohekohe and mahoe occur over *Asplenium* fern species and filmy ferns.

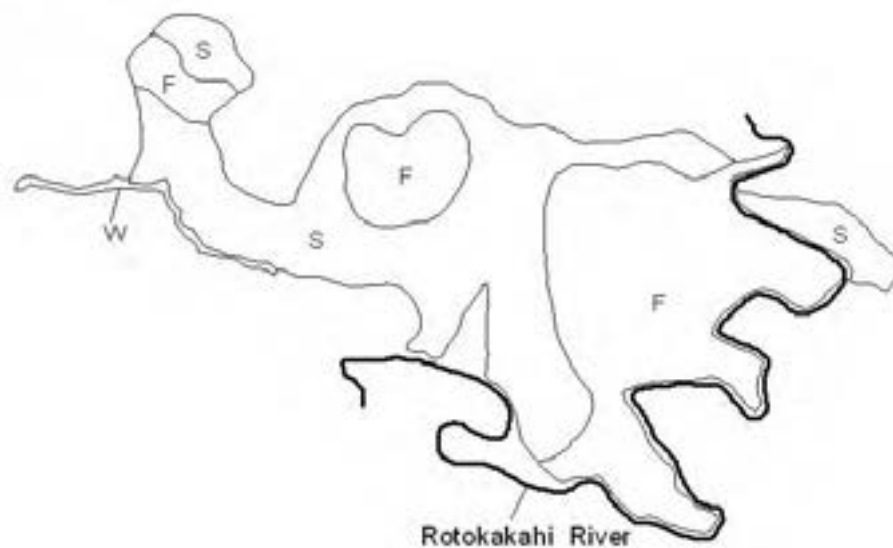
- (f) North of Kohe Rd is an extensive area of regeneration, from low manuka, to 3-4 m tall containing occasional mamaku, ti kouka, totara, towai and pine.
- (g) Secondary towai with frequent manuka and scattered mamaku and kahikatea also occurs here.
- (h) On the northwestern edge is a small remnant of taraire and towai with occasional rimu, tawa, rewarewa, totara, lancewood and emergent kauri.



Rotokakahi River & Surrounds O05/052

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

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



(i) Along the Awaiti Stream, adjoining the shrubland, raupo is abundant, with occasional honeysuckle.

On the roadside 2–3 m tall manuka occurs, with mahoe and *Coprosma* spp.

Land upstream has been cleared for forestry (1994/95).

Fauna

Birds: NI brown kiwi (Serious Decline) (in low numbers), kukupa (Gradual Decline) and kauri snail (Gradual Decline).

Fish: short-finned eel and inanga recorded in 2001 from Rotokakahi River.

Significance

A large contiguous area encompassing the Rotokakahi Scenic Reserve exhibiting several different vegetation types, including some unusual associations.

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

The site rises steeply above the Rotokakahi River and Awaiti Stream fulfilling a catchment protection function.

The Rotokakahi Scenic Reserve, 47 ha, is administered by the Department of Conservation.

PAREOKAWA BUSH

Survey no.	O05/054
Survey date	10 January 1995
Grid reference	O05 388 578, O05 392 576, O05 394 567, O05 378 567
Area	132 ha (90 ha forest, 42 ha shrubland)
Altitude	40–235 m asl

Ecological unit

(a) Taraire forest on moderate to steep hillslope

(b) Taraire-towai forest on moderate to steep hillslope

(c) Manuka-towai shrubland on moderate to steep hillslope

Landform/geology

Dissected hill country, on Mangakahia Complex sandstone, including headwaters of some stream catchments.

Vegetation

A large area of forest and shrubland and three small forest areas. Pine plantations occur on the margins.

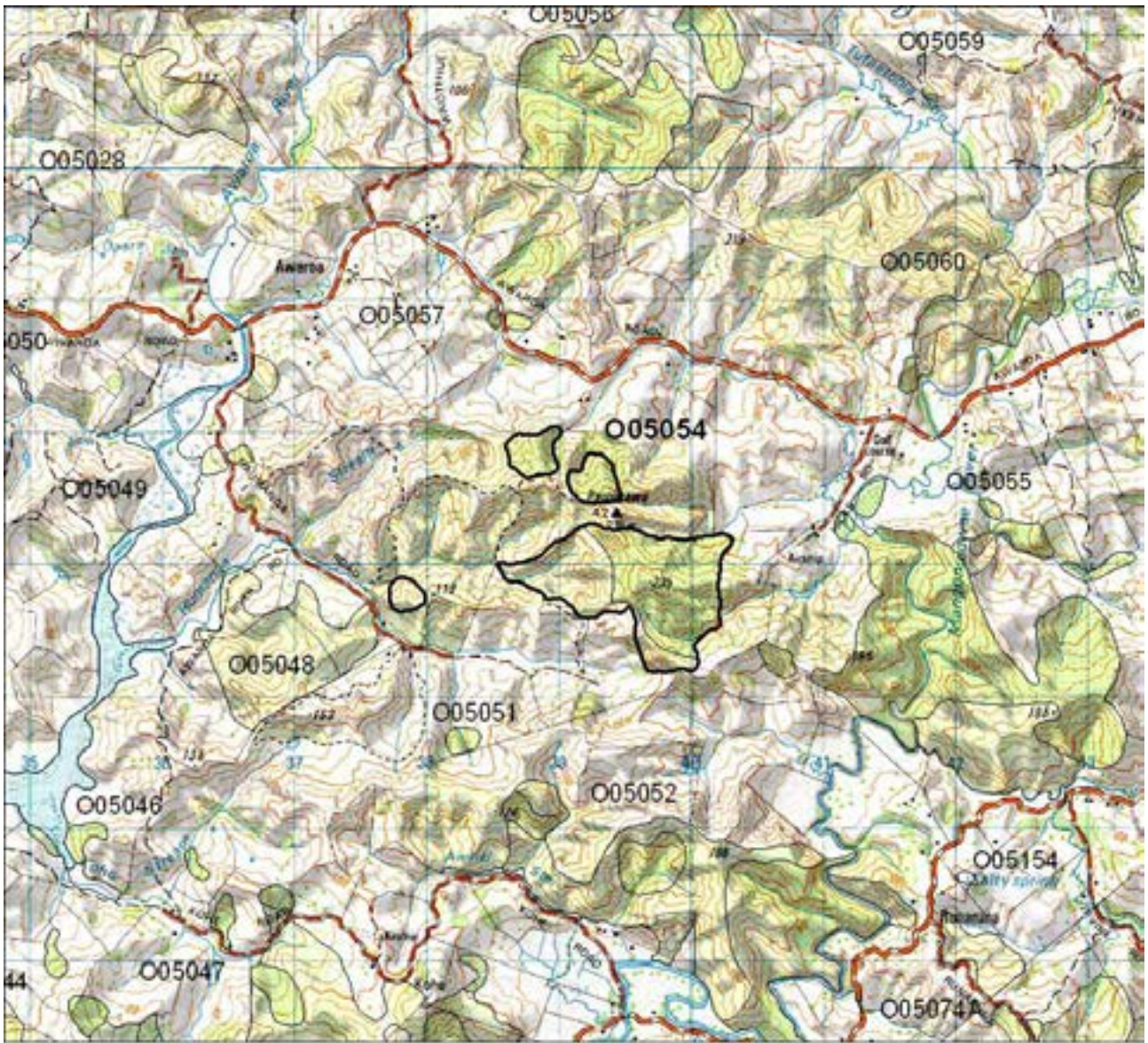
(a) About 5% of the area is tall taraire with frequent kahikatea and occasional emergent rimu.

(b) Taraire and towai are generally common. Rimu and totara are often frequent. Other species occurring are puriri, kahikatea, northern rata, pukatea, rewarewa, and kauri. Rimu and totara are sometimes emergent.

(c) On the southern side is an area of manuka with towai 2–6 m tall. Puriri, rewarewa and mamaku occasionally occur and there are some open patches.

Fauna

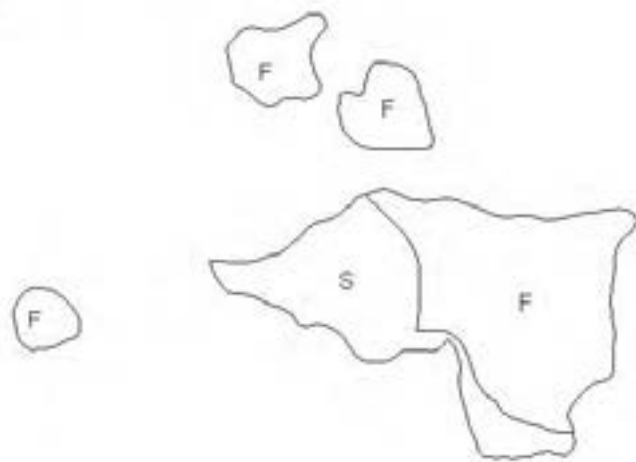
Not surveyed by the Department of Conservation. NI brown kiwi (Serious Decline) has been reported from this site.



Pareokawa Bush O05/054

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

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



Significance

A large area of tall forest with emergents. Forests with an emergent tier are now rare in the Ecological District. Emergents (generally old mature trees) have been shown to be significant to bird and bat abundance.

Representative site for type (a) taraire forest and type (b) taraire-towai forest in the Ecological District.

Department of Conservation administered Scenic Reserve protects 69 ha (52%) of this site.

MANGONUWAE BUSH

Survey no.	O05/055
Survey date	10 January 1995
Grid reference	O05 420 563, O05 406 562, O05 413 575 O05 422 574, O05 431 569, O05 437 566
Area	322 ha (254 ha forest, 68 ha shrubland)
Altitude	50-195 m asl

Ecological unit

- (a) Kahikatea-taraire-totara forest on alluvium
- (b) Taraire forest on hillslope
- (c) Taraire-towai forest on hillslope
- (d) Manuka shrubland on hillslope
- (e) Kahikatea-manuka-totara treeland in gully
- (f) Totara-kahikatea secondary forest on hillslope
- (g) Secondary totara-towai forest on hillslope

Landform/geology

Hill country on Mangakahia Complex sandstone, including stream catchments and riparian zone alluvial flats near Hicks Rd.

Vegetation

One large forest and shrubland with five small outlying remnants.

(a) On the edge of the Broadwood Golf Course, kahikatea, taraire and totara are common. Kowhai, rewarewa, titoki and pukatea occur occasionally.

(b) Further up the ridge, taraire is abundant with frequent totara and kanuka. Kahikatea, rimu, nikau, towai, rewarewa and ti kouka also occur. The Mangonuiwae River runs through this area, with many weeds along the river bank.

In the understorey ponga, *Adiantum* sp., *Blechnum fraseri*, and *Coprosma spathulata* are abundant with mingimingi and mapou occurring frequently with kiekie, mamangi, *Alseuosmia* sp., nikau, *Gabnia* sp., heketara and occasional putaputaweta, hangehange, small-leaved milk tree and pigeonwood.

To the east is an outlier of abundant taraire (type b) with frequent kahikatea, and occasional rimu, rewarewa, puriri, totara, nikau and northern rata.

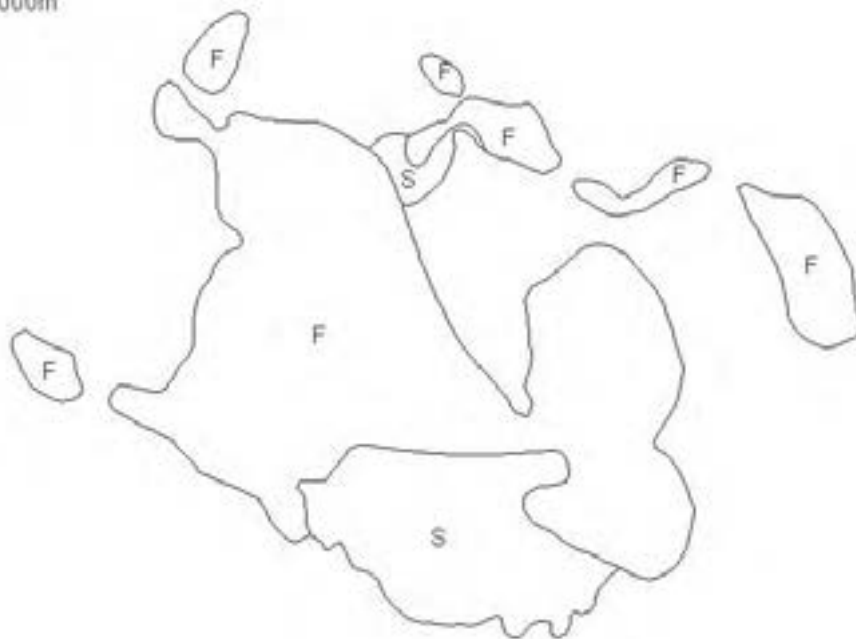
(c) Taraire and towai are common and kahikatea frequent on the eastern side. Rewarewa, nikau, totara and emergent rimu and northern rata occur occasionally.



Mangonuiowae Bush O05/055

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

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(d) To the south is an extensive area of tall manuka shrubland with frequent totara and towai. Rewarewa, kahikatea and mamaku occur occasionally.

(e) A gully of abundant kahikatea with common manuka and totara runs west to join another outlying area to the north of type (b) taraire forest with towai and kahikatea and type (f) kahikatea-totara with frequent taraire. This latter area contains kawaka.

(g) To the southwest (over the ridge) is an area of secondary totara and towai with kahikatea and manuka.

Significant flora

Olearia albida (Regionally significant species).

Fauna

NI brown kiwi (Serious Decline), kukupa (Gradual Decline) and kauri snail (Gradual Decline).

Significance

Large and diverse site including forested riparian areas. Presence of three threatened species and the regionally significant *Olearia albida* occurs away from a coastal influence.

Representative site for type (a) kahikatea-taraire-totara forest which is one of only two sites recorded in the District and the only example on alluvium, type (b) taraire forest, type (c) taraire-towai forest and type (d) manuka shrubland. Government Purpose Reserve of 123 ha and 1 ha of Stewardship Land, both administered by the Department of Conservation, protects 38.5% of this site.

WAIOTEHUE RD BUSH

Survey no.	O05/056
Survey date	18 November 1994
Grid reference	O05 395 604, O05 401 609
Area	157 ha (129 ha forest, 28 ha shrubland)
Altitude	30-140 m asl

Ecological unit

- (a) Taraire forest on hillslope
- (b) Kanuka-totara forest on hillslope
- (c) Kanuka/manuka shrubland on hillslope
- (d) Manuka shrubland on hillslope
- (e) Taraire-towai forest on hillslope

Landform/geology

Headwater catchments on dissected hill country on Mangakahia Complex sandstone.

Vegetation

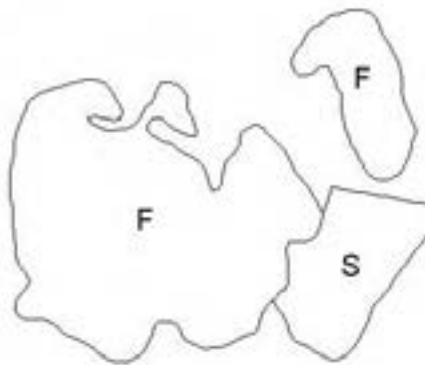
- (a) Half of the main area is taraire-dominant with scattered totara, puriri, kahikatea, towai and rimu.
- (b) The other half is divided between secondary kanuka and totara with frequent towai and occasional rimu, kahikatea and puriri, and type (c) 3-4 m tall kanuka/manuka shrubland.



Waiohewa Rd Bush O05/056

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

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- (d) Over the ridge is a large area of low manuka shrubland with isolated puriri.
- (e) The northern remnant which is almost contiguous contains taraire and towai forest with frequent kahikatea. Puriri, rewarewa, and emergent rimu and northern rata are occasional.

Fauna

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

Significance

Large semi-contiguous area which provides habitat for threatened species and is a potential linkage between Raetea Forest via pine plantations to Pareokawa and Mangonuiowae.

TUTAETOHIA STREAM REMNANT

Survey no.	O05/059
Survey date	16 January 1995
Grid reference	O05 418 614
Area	25 ha (10.5 ha forest, 14.5 ha shrubland)
Altitude	80-160 m asl

Ecological unit

- (a) Manuka-towai shrubland on hillslope
- (b) Puriri-taraire forest on hillslope

Landform/geology

Dissected hill country on Mangakahia Complex siliceous mudstone (Ngatituri) on the lower hillslopes and Mangakahia Complex sandstone on the upper hillslopes with alluvium in the valley floor.

Vegetation

- (a) About half of the area is manuka and towai shrubland varying between 3-8 m in height, in which rewarewa, kahikatea, rimu and totara occur occasionally.
- (b) On the southern side puriri and taraire occur with frequent kahikatea and rare emergent rimu and northern rata.

Fauna

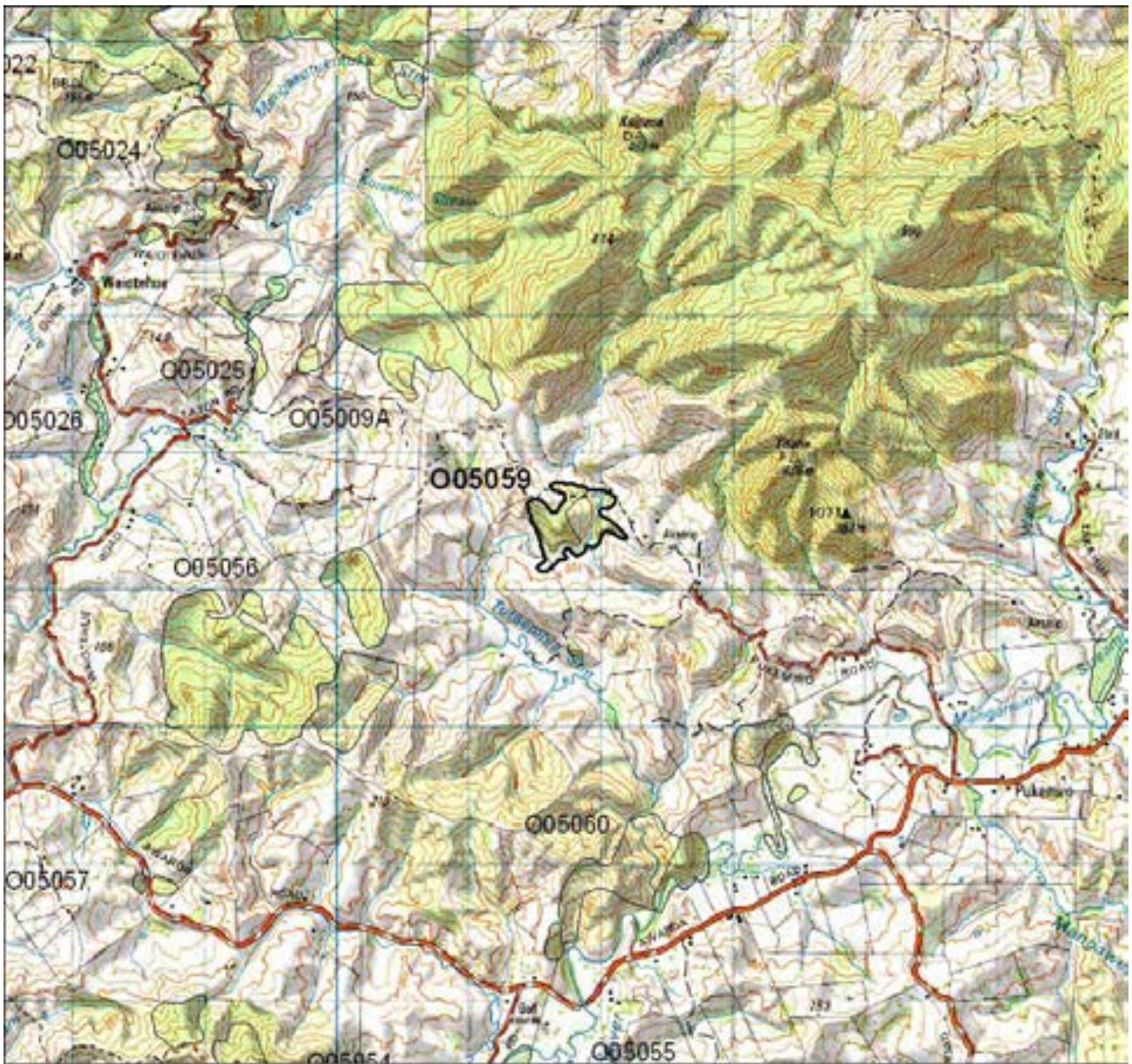
Kauri snail (Gradual Decline) and likely presence of NI brown kiwi (Serious Decline).

Significance

Partial linkage between Warawara and Raetea Forests. An important refuge as the surrounding land becomes developed by plantation forestry.

Presence of a threatened species and likely to support kiwi.

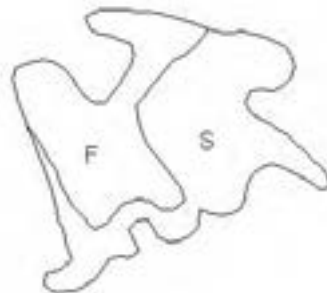
Representative site for type (a), manuka-towai shrubland, which is one of the best examples of its type in the Ecological District.



Tutaetohia Stream Remnant O05/059

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

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PUKEMIRO REMNANTS

Survey no. O05/060
Survey date 16 January 1995
Grid reference O05 421 588, O05 432 595, O05 434 595
Area 71 ha (26 ha forest, 45 ha shrubland)
Altitude 60-160 m asl

Ecological unit

- (a) Manuka shrubland on hillslope
- (b) Taraire forest on alluvium
- (c) Kanuka-rimu forest on gentle hillslope

Landform/geology

Valley alluvial flats and hill slope on Mangakahia Complex sandstone.

Vegetation

- (a) A hillside of 3-4 m tall manuka shrubland with frequent mamaku and occasional totara, towai and pine adjoins broadleaf-podocarp forest on the river flats.
- (b) Taraire is common and totara and kahikatea frequent. Puriri, kowhai, rewarewa, pukatea, willow, poplar and emergent northern rata are present. Downstream, another lowland remnant occurs, in which taraire is abundant, type (b), and rimu, towai, puriri, kahikatea and mamaku occur occasionally.
- (c) There is also a small outlying remnant of secondary kanuka and rimu with occasional totara and kahikatea.

Fauna

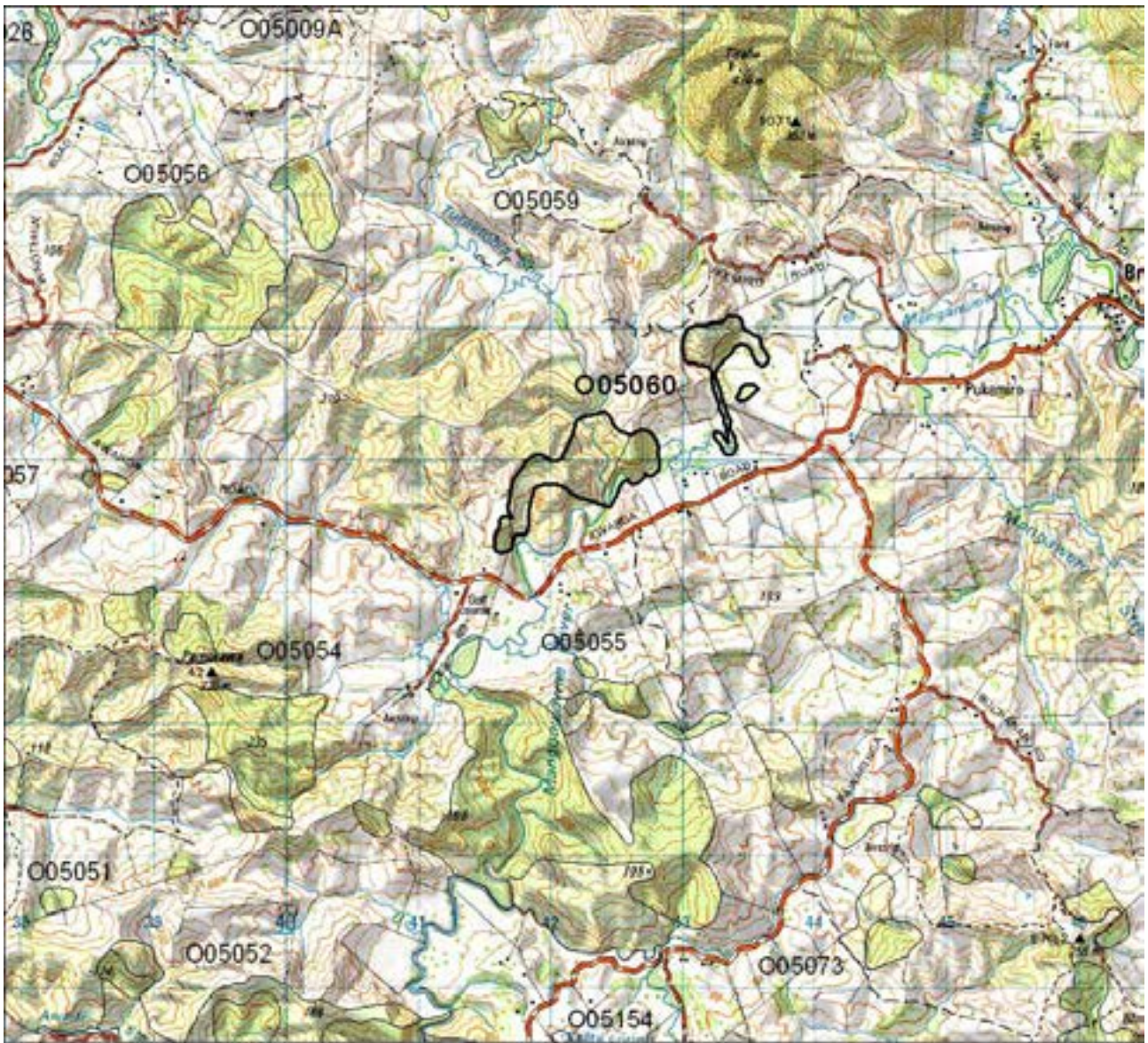
Not surveyed by the Department of Conservation. NI brown kiwi (Serious Decline) has been reported from this site.

Significance

Representative site for taraire forest on alluvium, a nationally uncommon vegetation type.

Presence of NI brown kiwi.

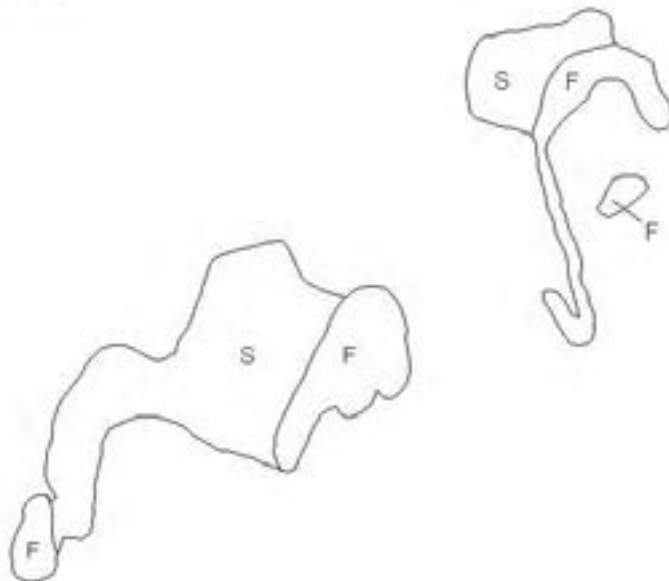
The only site in the Ecological District where type (c), kanuka-rimu forest is recorded.



Pukemiro Remnants O05/060

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

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BROADWOOD RIPARIAN REMNANTS

Survey no.	O05/061
Survey date	23 January 1995
Grid reference	O05 482 597, O05 463 598, O05 473 598, O05 466 597 O05 463 602, O05 478 599, O05 458 604
Area	25 ha
Altitude	80 m asl

Ecological unit

- (a) Taraire forest on alluvium
- (b) Kahikatea-towai secondary forest on alluvium
- (c) Kahikatea-taraire forest on alluvium

Landform/geology

Valley alluvium with adjoining Mangakahia Complex sandstone hillside at Broadwood.

Vegetation

A series of broadleaf and broadleaf/podocarp habitats along Manganuiowae Stream.

(a) The Broadwood Scenic Reserve is a small taraire-dominant remnant with frequent kahikatea and occasional titoki, puriri, northern rata, totara and kowhai.

The sub-canopy contains nikau in abundance with frequent wheki and ponga. Large-leaved mahoe, ti kouka, rangiora, pate, mapou, tarata and kohuhu also occur.

The invasive weed wandering willy, is frequent on the ground, along with kiekie, kahikatea, nikau and hen and chicken fern.

(b) The Broadwood Church Bush consists of abundant secondary kahikatea and towai with frequent taraire. Nikau, puriri, pukatea, matai, ti kouka, karaka, kowhai and kohuhu also occur.

Nikau dominates the sub-canopy. The shrub layer consists of mahoe, mapou and tree ferns. The ground cover is sparse and largely made up of terrestrial weeds including wandering willy, African club moss and wild ginger.

Further upstream are riparian remnants where type (c) kahikatea and taraire are common and towai and manuka occur frequently. Titoki, and pukatea are present.

Fauna

Kukupa (Gradual Decline) and kauri snail (Gradual Decline).

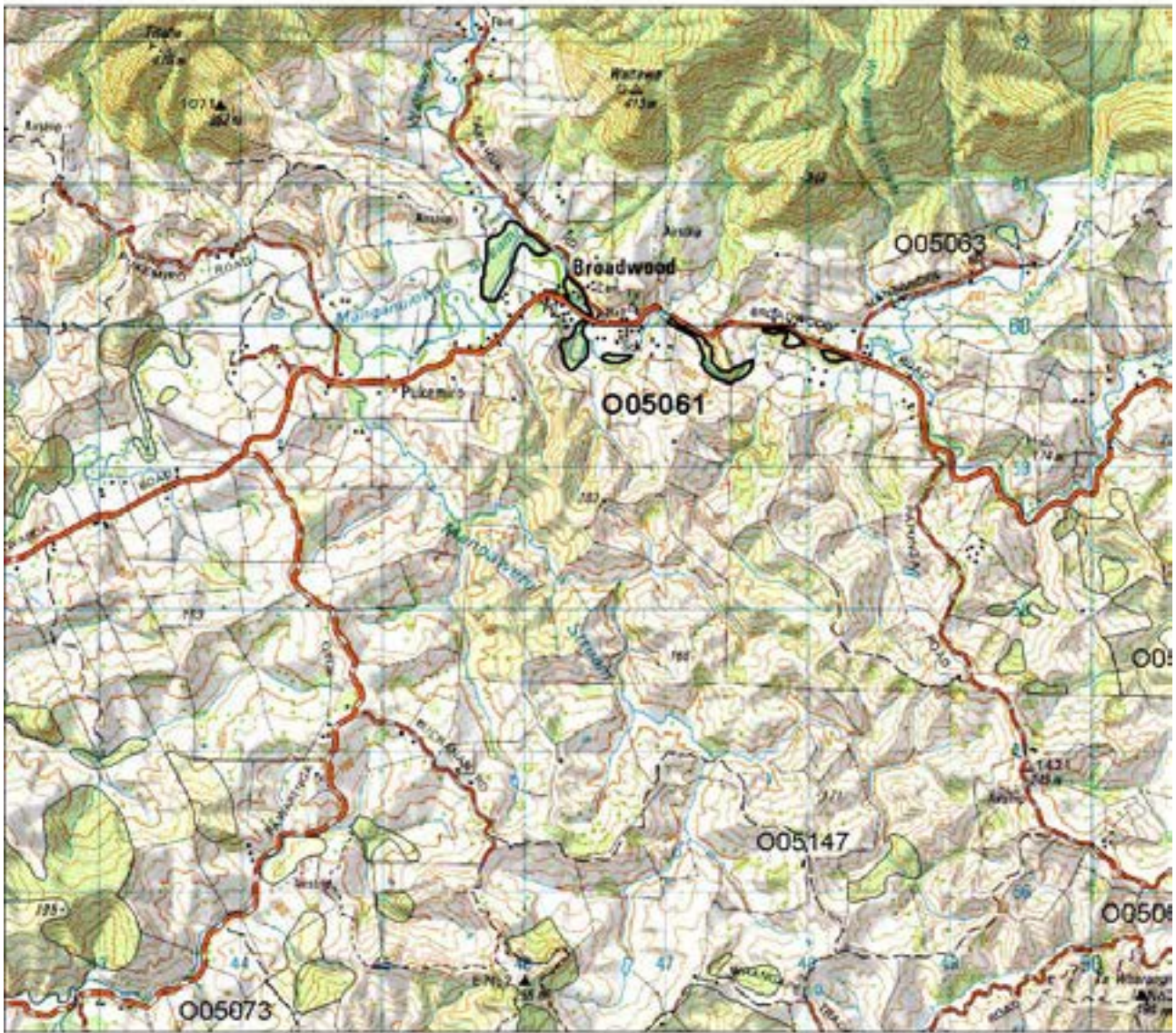
Significance

Representative site. Riparian broadleaf-podocarp forest on river flats is a nationally uncommon habitat type.

Presence of threatened species.

Management of invasive weeds at the site will greatly enhance the ecological health and integrity of the site.

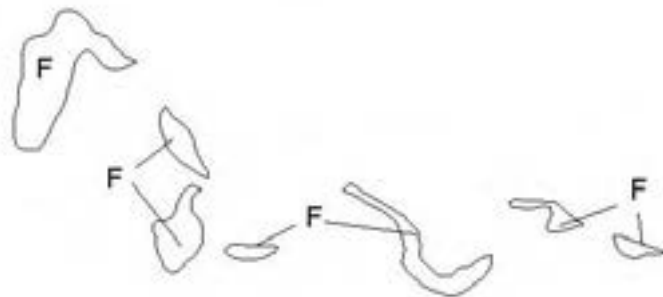
Scenic Reserve of 7 ha and Marginal Strip of 2 ha is contained within this site and is administered by the Department of Conservation.



Broadwood Riparian Remnants O05/061

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and = 100 ha

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- E = estuarine
- D = duneland

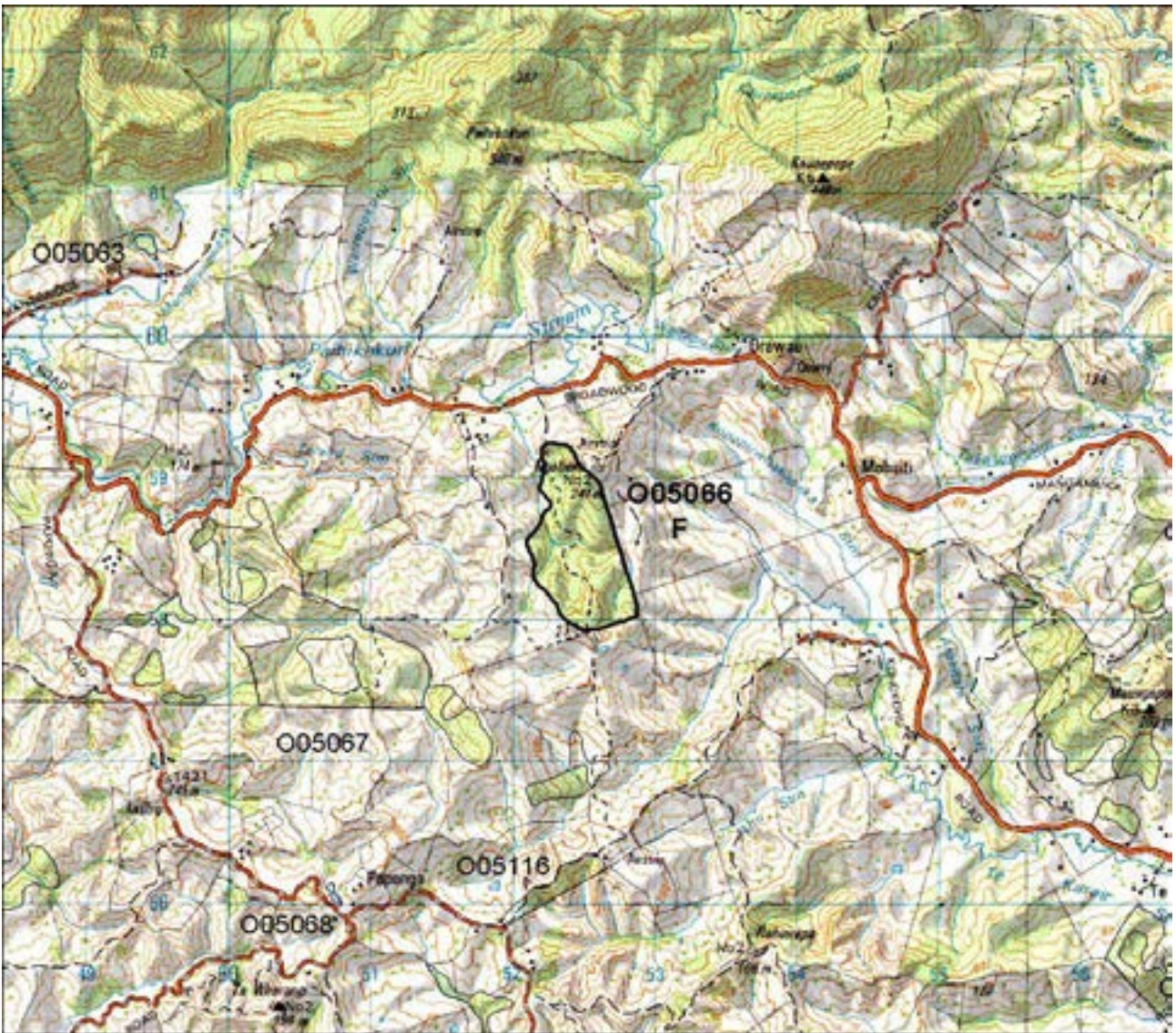


NGATIEKE AIRSTRIP BUSH

Survey no. O05/066
Survey date 20 February 1995
Grid reference O05 524 585
Area 63 ha
Altitude c. 150-240 m asl

Ecological unit

(a) Taraire-towai forest on hillslope



Ngatieke Airstrip Bush O05/066

Each grid is 1000m x 1000m
and = 100 ha
S = shrubland
F = forest
W = wetland
E = estuarine
D = duneland

Landform/geology

Dissected hill country on Mangakahia Complex sandstone.

Vegetation

Taraire and towai form an even canopy with occasional totara, rewarewa, hinau, kahikatea, rimu, puriri and emergent northern rata. Tanekaha, miro and tawa are also present.

In the sub-canopy *Coprosma* spp. are common with kohekohe, totara, lancewood, large-leaved mahoe, rangiora, hangehange, mapou, pigeonwood, ponga and supplejack.

Fauna

1978 record of NI brown kiwi (Serious Decline) and kukupa (Gradual Decline).

Significance

A large representative area of diverse vegetation forming a partial linkage between Raetea Forest, Tapuwae Scenic Reserve and the Hokianga Harbour. Presence of threatened species.

LANDCORP PAPONGA REMNANTS

Survey no.	O05/067
Survey date	27 February 1995
Grid reference	O05 496 574, O05 494 576, O05 495 580, O05 507 579
Area	119 ha (29 ha forest, 90 ha shrubland)
Altitude	100-200 m asl

Ecological unit

- (a) Taraire secondary forest on hillslope
- (b) Manuka shrubland on hillslope
- (c) Manuka-towai shrubland on hillslope
- (d) Totara secondary forest on hillslope
- (e) Taraire-towai secondary forest on hillslope

Landform/geology

Dissected hill country on Mangakahia Complex sandstone.

Vegetation

(a) The southeastern remnant is taraire-dominant with frequent towai, totara and kahikatea. Puriri, pukatea and rewarewa are occasional.

(b) In the larger shrubland area manuka to 3 m tall occurs with scattered towai, totara and mamaku.

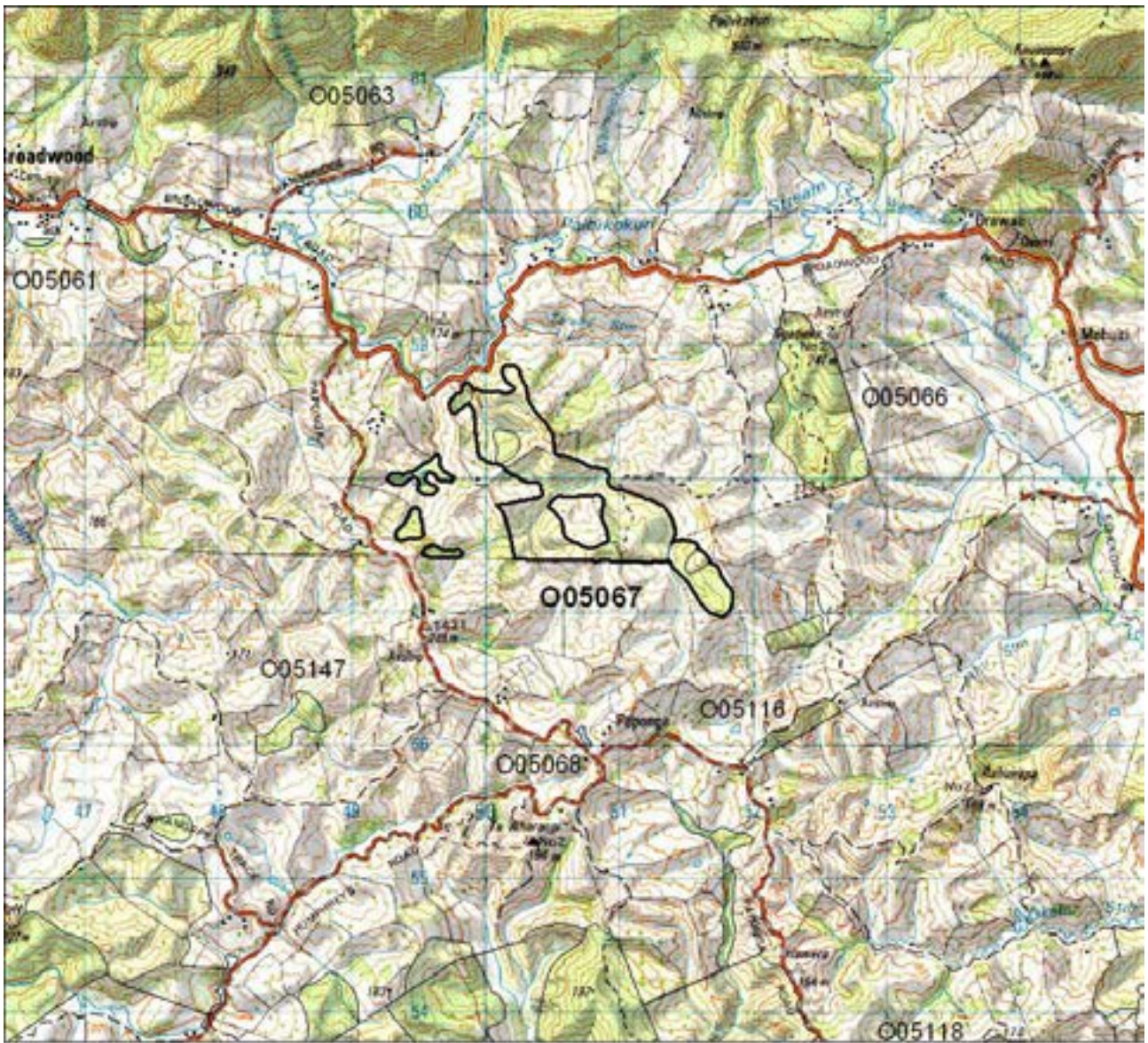
(c) Tall manuka and towai shrubland also occurs here with frequent totara, and occasional mamaku and kahikatea.

In the western remnants taraire, type (a), occurs with frequent towai and kahikatea. Rimu, puriri, pukatea, and rewarewa are occasional.

The site also contains abundant totara, type (d) and type (e) common taraire and towai with frequent kahikatea and occasional puriri, rewarewa and totara.

Fauna

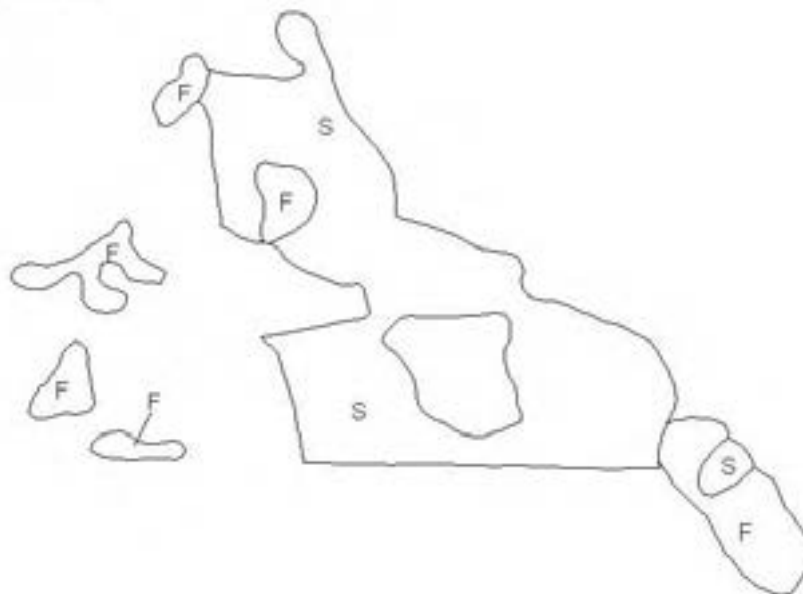
Not surveyed by the Department of Conservation. NI brown kiwi (Serious Decline) has been reported from this site.



Landcorp Paponga Remnants O05/067

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

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



Significance

Gully and riparian protection. A partial linkage between Tapuwae and Raetea Forests.

Presence of NI brown kiwi.

Stewardship Land administered by the Department of Conservation protects 9 ha of this site.

HUMPHREYS BUSH

Survey no.	O05/071
Survey date	16 and 23 January, 27 February 1995
Grid reference	O05 461 555, O05 469 545, O05 473 554 O05 476 553, O05 458 531
Area	438 ha (187 ha forest, 250 ha shrubland, 2 ha wetland)
Altitude	c.100-256 m asl

Ecological unit

- (a) Raupo reedland on alluvium in stream valley
- (b) Kanuka/manuka shrubland on hillslope
- (c) Kanuka-manuka-towai forest on hillslope
- (d) Taraire forest on hillslope
- (e) Taraire-towai forest on hillslope
- (f) Manuka-totara-towai forest on hillslope
- (g) Kahikatea-totara secondary forest on hillslope
- (h) Manuka shrubland on hillslope

Landform/geology

Dissected hill country of Mangakahia Complex sandstone, including some headwater catchments, and running down to valley floor wetland with sandstone bluffs on the high points.

Vegetation

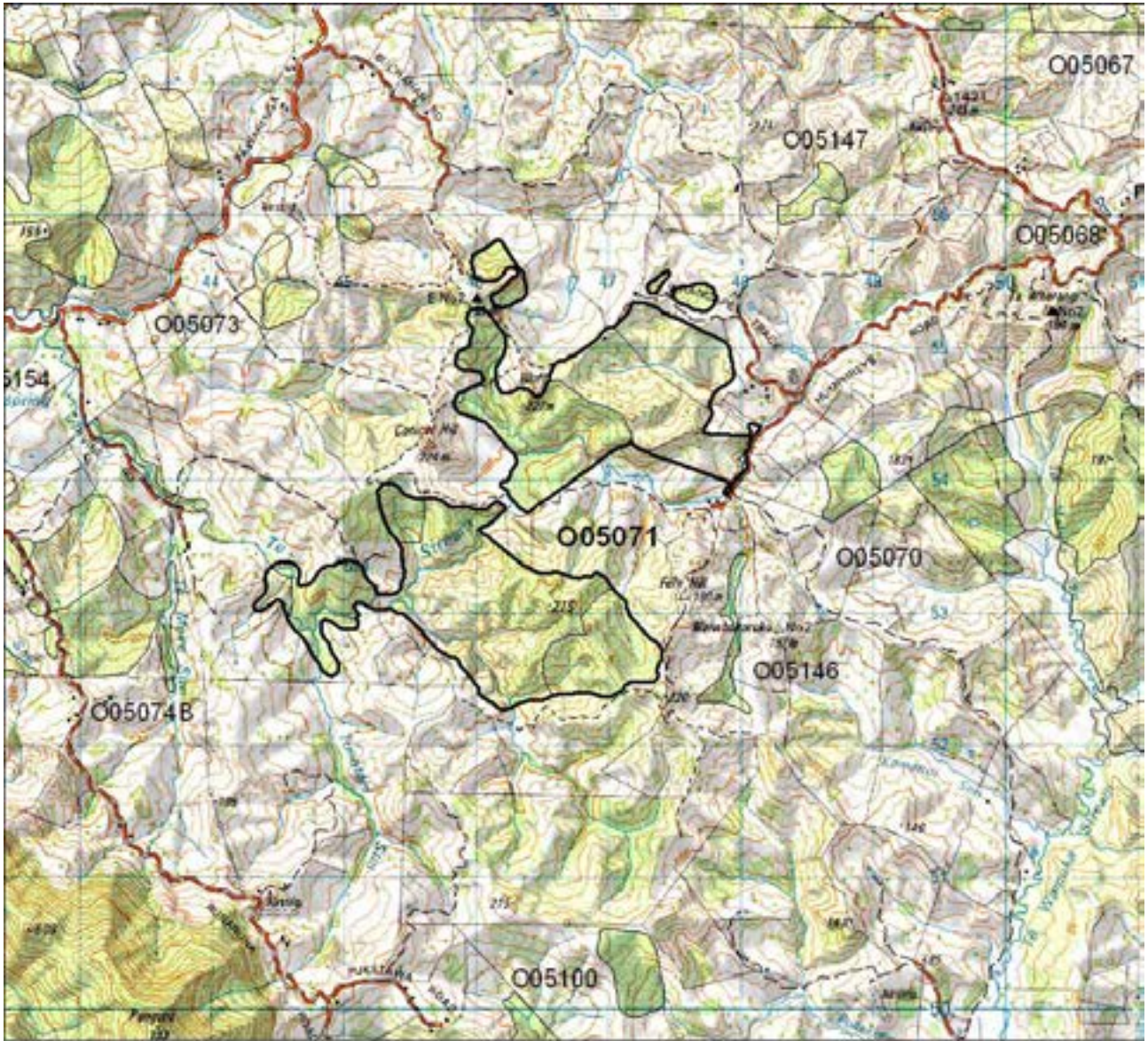
A mosaic of shrubland and forest from Humphreys Rd in the east to Irvine Rd in the west.

(a) At the end of Humphreys Rd, raupo is abundant in the Te Puia Stream. Some honeysuckle is present. There is some manuka and totara on the margin. NI fernbird may be present.

(b) Adjoining the Te Puia Stream is a large area of kanuka and manuka shrubland 4-6 m in height with occasional totara, and type (c) taller kanuka/manuka and towai forest. Totara and kahikatea also occur occasionally. Moving west, totara becomes frequent, and rewarewa and pine also occur here.

The understorey consists mainly of ponga and wheki with pate, hangehange, five-finger, mingimingi, *Lycopodium* sp., ring fern and blackberry. Some clearings with abundant bracken occur here.

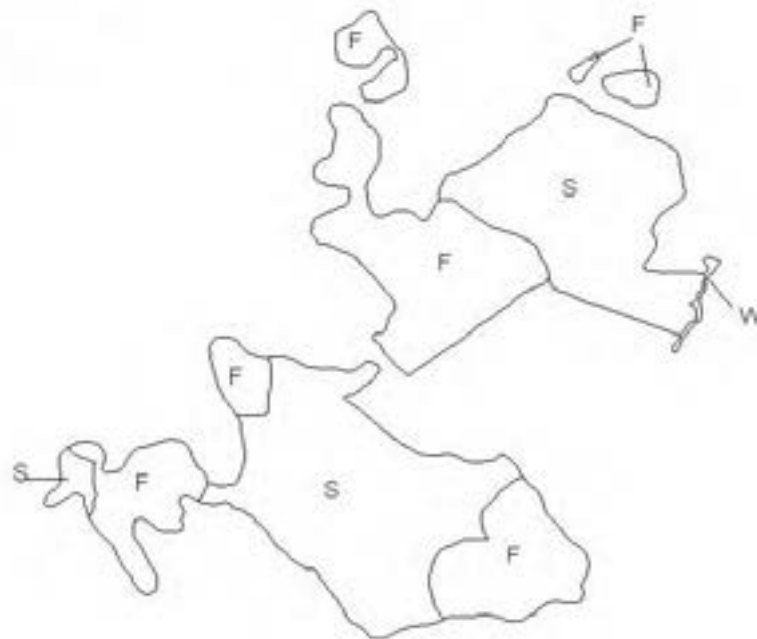
(d) The main bush in Humphreys Rd contains abundant tall taraire with frequent towai. Puriri, kahikatea, rimu, kohekohe, hinau, miro and totara also occur here. Northern rata and rewarewa are occasionally emergent.



Humphrey's Bush O05/071

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and = 100 ha

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The understorey contains vigorous kahikatea regeneration, with patches of good totara regeneration also. There is extensive supplejack and a wide range of ferns, including several filmy ferns. However the shrub layer is sparse, due to previous grazing but kohekohe, *Coprosma rhamnoides*, and putaputaweta occur.

This type also occurs in the south and west, with towai and totara being frequent. A wide variety of canopy species occur occasionally including hinau, miro, tawa, pukatea and emergent northern rata and kauri (rarely). Along the Te Puia Stream, taraire is abundant, and totara, rewarewa, pukatea, matai and emergent rimu, northern rata, and kahikatea occur occasionally. Type (g) secondary kahikatea and totara also occurs here.

(e) To the north, around Trig E No 2, taraire and towai are common with frequent totara and kahikatea. Pukatea, northern rata, rimu, rewarewa, nikau, puriri and tawa also occur here.

(f) There is also an area of manuka, totara and towai shrubland and type (h) some low manuka in this vicinity.

An extensive area of type (b), tall kanuka/manuka shrubland adjoins the forest in the south west with scattered towai, mamaku, kahikatea, totara and rewarewa. Areas of type (h), lower manuka shrubland occur on both the western and eastern sides (much of the latter since crushed).

Fauna

NI brown kiwi (Serious Decline) have been reported at this site and kukupa (Gradual Decline) and kauri snail (Gradual Decline) have been recorded.

Significance

A large, diverse habitat containing threatened fauna species. Forms a partial linkage between Hokianga Harbour and Raetia Forest and is largely adjoined by recently established pine plantations.

Presence of threatened species.

Representative site for type (d). Only one of two examples of type (f) recorded in the Ecological District.

KAWAKA STREAM REMNANT

Survey no.	O05/075
Survey date	16 January 1995
Grid reference	O05 417 528
Area	18 ha
Altitude	80-120 m asl

Ecological unit

(a) Kahikatea-totara secondary forest on moderate hillslope

Landform/geology

Hill country on Mangakahia Complex sandstone.

Vegetation

A secondary podocarp area in which kahikatea is abundant and totara common. Rimu, puriri, taraire, pukatea, rewarewa, nikau and emergent northern rata are occasional. One ricker kauri was apparent in the canopy.



Kawaka Stream Remnant O05/075

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

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

Fauna

Not surveyed.

Significance

A representative site exhibiting one of the best examples of secondary podocarp regeneration in the District.

WHAREKAUERE BUSH REMNANTS

Survey no.	O05/087
Survey date	4 May 1995
Grid reference	O05 515 425, O05 526 420, O05 532 431
Area	265 ha (76 ha forest, 189 ha shrubland)
Altitude	0-152 m asl

Ecological unit

- (a) Manuka-tanekaha-taraire forest on coastal hillslope
- (b) Manuka shrubland on coastal hillslope
- (c) Taraire-nikau forest on coastal hillslope
- (d) Manuka-nikau-taraire forest on coastal hillslope

Landform/geology

An area of dissected hill country underlain by Mangakahia Complex sandstone and a small area of Mangakahia Complex siliceous mudstone in the southeast.

Vegetation

This site is notable for its sequential gradients from hill forest into estuarine associations. Some areas within this site are in an early stage of regeneration due to repeated burning, but other areas exhibit diverse advanced secondary coastal forest with an abundance of associated species.

- (a) Manuka, tanekaha and taraire forest occurs in the eastern remnant. Rewarewa, puriri, kahikatea and towai are frequent. Occasional species include pukatea, kowhai, titoki, and nikau.
 - (b) Manuka dominates shrubland in the eastern remnant with occasional ti kouka, mamangi and tanekaha.
 - (c) The forest in the southern remnant is dominated by taraire with common nikau. Puriri, manuka and kahikatea are frequent. Rimu, totara, towai, titoki and ti kouka are rare.
 - (d) The forest area in the western remnant is defined by manuka, nikau and taraire. Kahikatea, puriri, tanekaha, and rewarewa are frequent and ti kouka, pukatea and rimu are occasional.
- Type (b) manuka shrubland also dominates the large shrubland area in the western remnant with the occasional ti kouka and mamangi.

Fauna

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

Significance

Contains coastal shrubland and forest remnants grading into the estuarine/mangrove associations of Hokianga Harbour. Presence of NI brown kiwi.

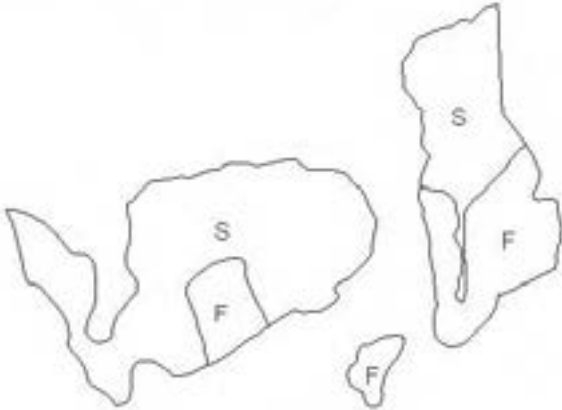
Representative site for all ecological units and the only recorded example in the Ecological District of type (a), (c) and (d).

Marginal Strip of one hectare, administered by the Department of Conservation occurs within this site.



Wharekareke Bush Remnants O05/087

Each grid is 1000m x 1000m
 and = 100 ha
 S = shrubland
 F = forest
 W = wetland
 E = estuarine
 D = duneland



TE KARAKA POINT COASTAL FOREST

Survey no.	O05/089
Survey date	28 June 1994
Grid reference	O05 472 415
Area	60 ha
Altitude	0-52 m asl

Ecological unit

- (a) Rewarewa-taraire-towai forest on coastal hillslope (30%)
- (b) Kanuka/manuka-tanekaha-totara forest on coastal hillslope (30%)
- (c) Kanuka/manuka forest on coastal hillslope (30%)
- (d) Kanuka/manuka-kowhai-mamangi forest on coastal hillslope (10%)

Landform/geology

This site is a coastal headland underlain by Mangakahia Complex sandstone and adjoins estuarine sediments supporting mangrove forest and saltmarsh.

Vegetation

One of the best examples of coastal forest associations remaining within the Hokianga Ecological District. It is largely secondary forest that has not been burnt for many years and is again approaching a climax plant community association. Unfortunately kahili ginger has become established and requires urgent action if the site is to avoid future viability problems. Cattle also have unrestricted access and will be spreading weeds throughout the site as well as damaging the habitat.

- (a) Rewarewa, taraire and towai are common with frequent puriri, kahikatea and occasional tanekaha, kowhai, pukatea, tawa, matai, miro and emergent northern rata.
- (b) An association of kanuka/manuka, tanekaha and totara occurs with occasional rewarewa, rimu, puriri, and pohutukawa.
- (c) Tall kanuka/manuka forest occurs with frequent totara, kahikatea, and kowhai. Occasional species include puriri, kohuhu, kauri and pohutukawa.
- (d) A smaller area of forest is defined by kanuka/manuka, kowhai and mamangi. Karaka, pohutukawa, and ti kouka are frequent. Puriri, harakeke and hangehange are also present.

Fauna

NI tomtit (Regionally significant species). NI brown kiwi (Serious Decline) has been reported at this site.

Significance

One of the largest and best-quality examples of coastal forest associations remaining within this Ecological District, representative site for all ecological units with type (a) and (d) unrecorded elsewhere in the Ecological District.

Presence of a threatened and regionally significant species.



Te Karaka Point Coastal Forest O05/089

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

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

LOWER WAIHOU SWAMP & SHRUBLAND

Survey no. O05/090
Survey date 28 June 1994
Grid reference O05 443 432, O05 455 426
Area 95 ha (11 ha forest, 64 ha shrubland, 20 ha wetland)
Altitude < 20-107 m asl

Ecological unit

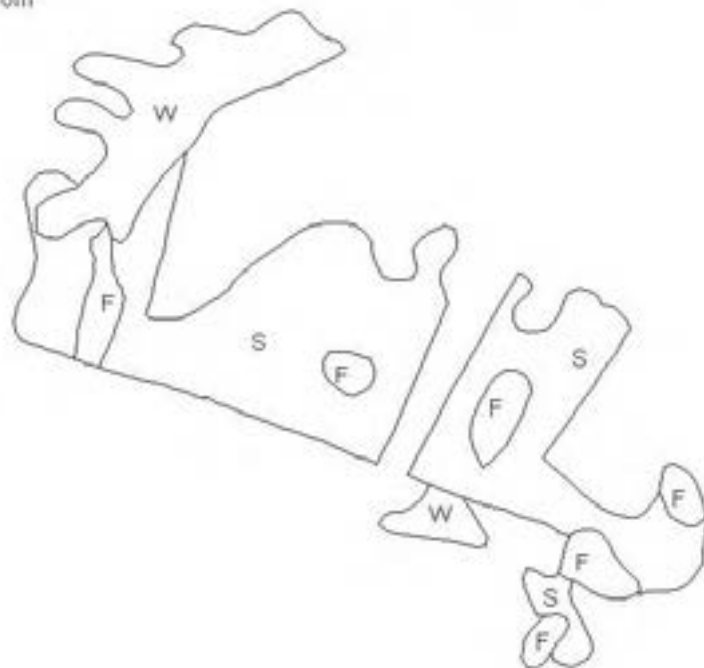
- (a) Raupo reedland in swamp (40%)
- (b) Kanuka/manuka shrubland on hillslope (40%)



Lower Waihou Swamp & Shrubland O05/090

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

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



(c) Kahikatea-ti kouka swamp forest on alluvium (5%)

(d) Puriri-taraire-towai forest on hillslope (15%)

Landform/geology

Alluvial/estuarine deposits on the floor of a wide valley. The hill country is underlain by Mangakahia Complex sandstone and siliceous mudstone.

Vegetation

(a) Raupo-dominant wetland.

The remainder is a diverse mix of secondary forest and advanced shrubland separated into two blocks but now re-linked by a strip of pine.

(b) Kanuka/manuka shrubland with occasional totara, tanekaha, mamangi and ti kouka.

(c) Kahikatea and ti kouka are commonly associated with frequent nikau, and kanuka/manuka. Mamangi, pukatea and houhere are occasional.

(d) Puriri, taraire and towai are commonly associated with frequent rimu. Miro and kahikatea are also present.

Fauna

Birds: NI fernbird and high numbers of spotless crane (both Sparse).

Fish: 2001 record of inanga and the pest fish *Gambusia* were also recorded.

Significance

One of the largest remnants of a mineralised freshwater wetland within the Hokianga Ecological District. It contains a rare swamp forest association and has riparian values. At least two threatened wetland birds have been recorded here.

Representative site for all ecological units.

MOTUTI COASTAL REMNANTS

Survey no.	O05/091
Survey date	27 June 1994
Grid reference	O05 470 445, O05 487 453
Area	203 ha (36 ha forest, 167 ha shrubland)
Altitude	0-142 m asl

Ecological unit

(a) Kanuka/manuka-kahikatea forest on terrace and coastal hillslope

(b) Nikau-taraire forest on coastal hillslope

(c) Kanuka/manuka shrubland on terrace and coastal hillslope

(d) Kahikatea forest on alluvial terrace

(e) Rimu forest on alluvial terrace

(f) Kanuka/manuka-kahikatea forest on alluvial terrace

(g) Raupo reedland in small depression

(h) *Baumea rubiginosa* sedgeland in swamp

(i) *Coprosma propinqua* swamp shrubland in brackish zone

(j) *Baumea articulata*-kikuyu association on alluvium

Landform/geology

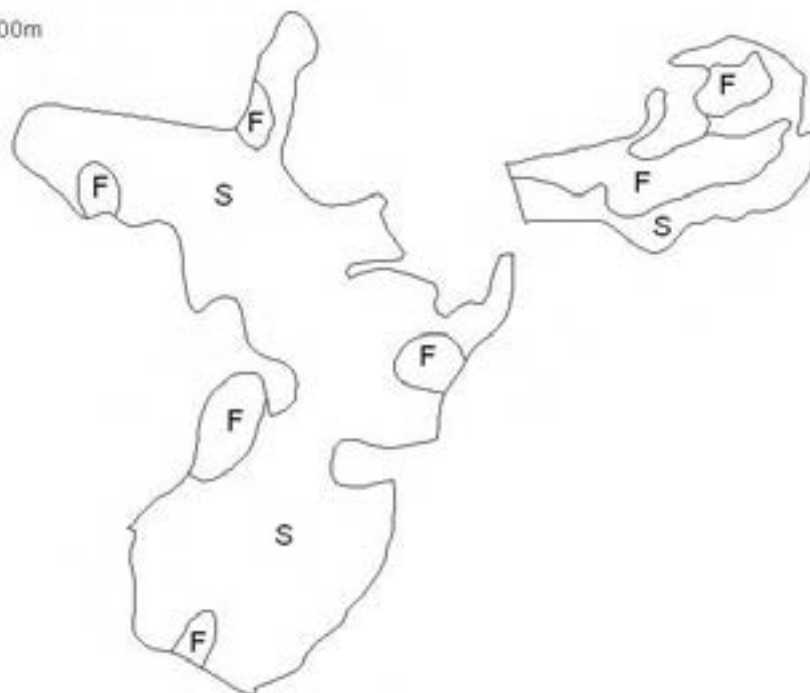
The larger dissected coastal headland is underlain by Mangakahia Complex sandstone and is more typical of secondary coastal forest/shrubland remnants



Motiti Coastal Remnants O05/091

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

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



within the Hokianga Harbour than the smaller remnant. The eastern arm is situated on a quarternary terrace and Holocene estuarine deposits exhibit attributes which are largely absent from the remainder of this Ecological District.

Vegetation

Composed of two slightly separate forest/shrubland remnants, the Motuti Coastal Remnants exhibit a great range of forest and coastal ecotones and species diversity.

The larger western area contains:

Type (a) Kanuka/manuka and kahikatea are common while puriri and titoki are frequent and pukatea, ti kouka, kowhai and emergent northern rata are occasional.

(b) Abundant nikau with common taraire occurs with frequent puriri and kahikatea. Occasional species include ti kouka, titoki and emergent kauri and rimu.

(c) Most of this western area is dominated by kanuka/manuka shrubland with occasional ti kouka, totara, puriri and kahikatea.

The eastern arm contains:

(d) Abundant kahikatea with occasional rimu, puriri and ti kouka.

(e) A small area of dominant rimu occurs with frequent kahikatea and occasional totara.

(f) Kanuka/manuka is dominant with common kahikatea and frequent towai and puriri. Occasional species include titoki, tanekaha, rimu and wattle.

Type (c) kanuka/manuka dominates the shrubland area here with isolated kahikatea.

(g) A very small area of raupo occurs with the occasional ti kouka.

(h) In a swampy area *Baumea rubiginosa* occurs with frequent swamp millet.

(i) An area of *Coprosma propinqua* also occurs.

(j) Heavily grazed *Baumea articulata* occurs on the foreshore and is being invaded by kikuyu and paspalum.

Significant flora

Korthalsella salicornoides (Sparse), *Olearia solandri* and black maire (both Regionally significant species).

Fauna

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

Significance

The site contains examples of rare forest types, podocarp forest, of high quality, and a relatively unmodified sequence from estuarine associations to alluvial forest, being a very gradual sequential transition from dry land to estuary.

Representative site for type (a), (b), (c), (d), (e), (h) and (i) with the site containing the only examples recorded in the Ecological District of type (a), (b), (f), (h), and (e). It is the only site in the Ecological District where *Baumea* dominant vegetation occurs.

Presence of threatened and regionally significant species.

PANGURU/PUKEPOTO SHRUBLANDS

Survey no.	O05/094
Survey date	28 June 1994
Grid reference	O05 446 451, O05 450 462
Area	125 ha (4 ha forest, 121 ha shrubland)
Altitude	0-c. 100 m asl

Ecological unit

- (a) Kowhai-puriri-taraire forest on coastal hillslope (2%)
- (b) Kanuka/manuka shrubland on coastal hillslope (98%)

Landform/geology

A shrubby peripheral extension of the Warawara Forest tract, the Panguru/Pukepoto Shrublands are within a different Ecological District than the 'parent' block of Warawara. This is evidenced by the different geological base on which it occurs - Mangakahia Complex sandstone as opposed to the Tangihua Complex volcanics of the Warawara Forest.

Vegetation

- (a) A small area of kowhai, puriri and taraire occurs with frequent tawa, kahikatea, kohekohe, totara, kanuka and occasional titoki, northern rata, nikau, karaka, rewarewa and pukatea.
- (b) Most of the site is kanuka/manuka shrubland with occasional kahikatea and puriri.

Fauna

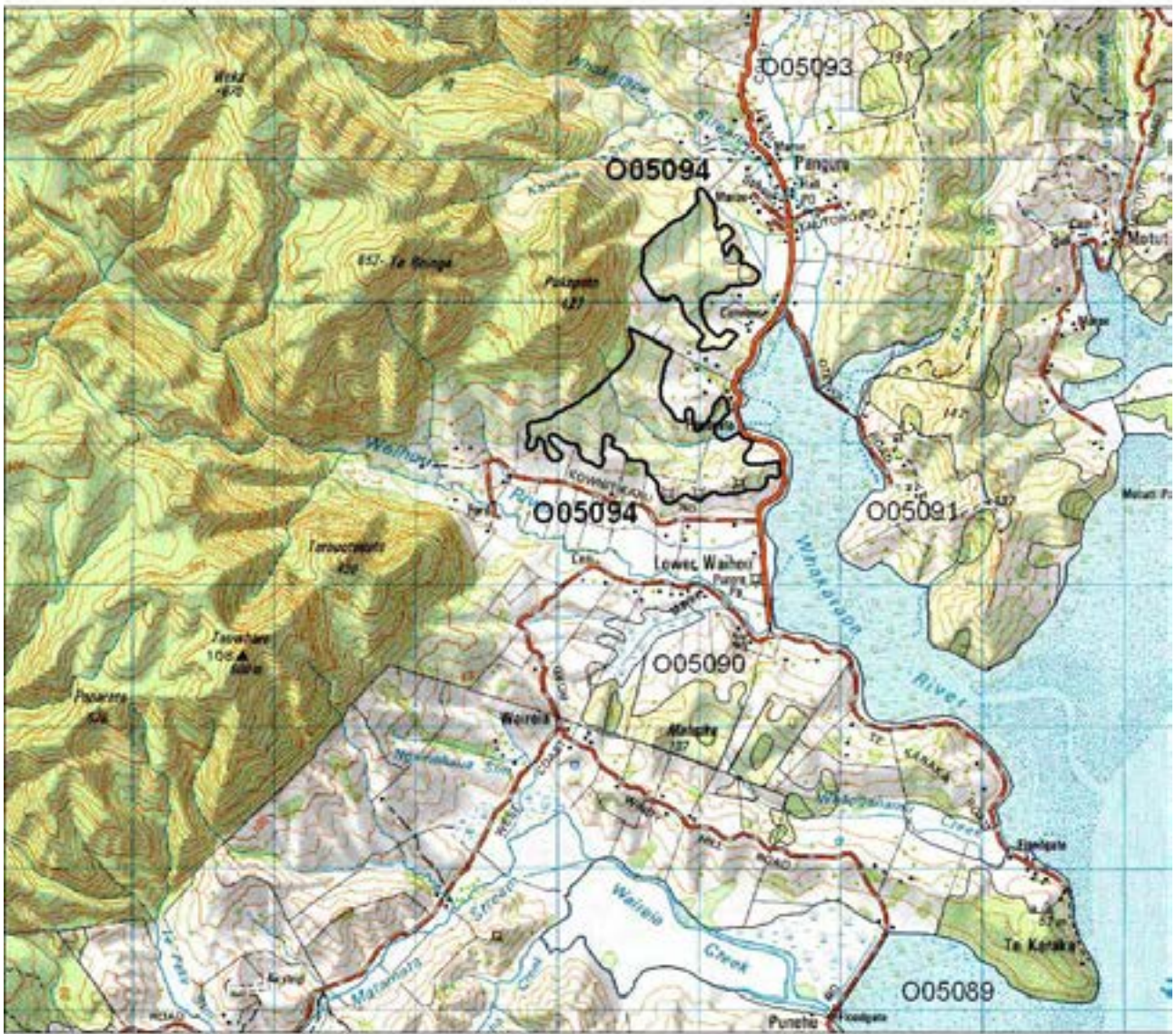
Several threatened and regionally significant animals are found within Warawara Forest and as this site is contiguous some of these species would be present such as: NI brown kiwi (Serious Decline), kukupa (Gradual Decline) and NI tomtit (both Regionally significant species).

Significance

Panguru/Pukepoto Shrublands is contiguous with Warawara Forest and therefore by association shares the values of the greater forest with the likely presence of threatened species.

A representative site for both ecological units displaying one of the very few sites within the Warawara Forest tract where the full altitudinal sequence is retained to sea level.

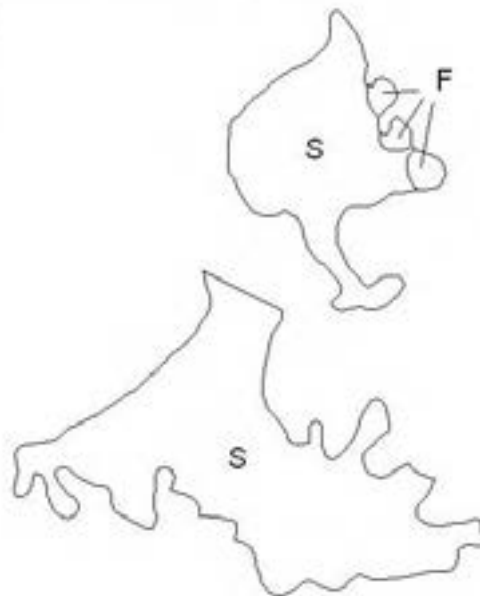
Type (a) kowhai-puriri-taraire is the only one of its type recorded in the Ecological District.



Panguru / Pukepoto Shrublands O05/094

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

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



MATAWERA RD BUSH

Survey no. O05/096
Survey date 24 June 1994
Grid reference O05 490 470, O05 501 472, O05 486 476, O05 500 472
Area 160 ha (55 ha forest, 105 ha shrubland)
Altitude 0-120 m asl

Ecological unit

- (a) Kanuka/manuka shrubland on hillslope
- (b) Tanekaha-taraire-towai forest on hillslope

Landform/geology

It is dissected hill country underlain with Akarua Supergroup conglomerate and Mangakahia Complex sandstone which contains altitudinal sequences running from sea level up to 120 m asl.

Vegetation

This site is comprised of several secondary and logged forest remnants linked by kanuka/manuka shrubland and plantation forest. They are an important part of the chain of forest remnants which loosely link the Warawara Forest tract to that of Tapuwae Forest.

- (a) Kanuka and manuka shrubland occurs with frequent towai and occasional mamaku, ti kouka and pate.
- (b) The rest of the site is comprised of a tanekaha, taraire, towai association with several frequently occurring species including puriri, kahikatea, rewarewa, mamangi, nikau, and emergent kauri. Occasional species include northern rata, rimu, matai, totara, puka and whau. Tanekaha is locally dominant on one ridge.

Fauna

NI brown kiwi (Serious Decline), kukupa (Gradual Decline) and common forest birds are present.

Significance

Some coastal riparian margin, and almost contiguous with Tapuwae Scenic Reserve.

A representative site for both ecological units and the only occurrence of type (b) recorded in the Ecological District.

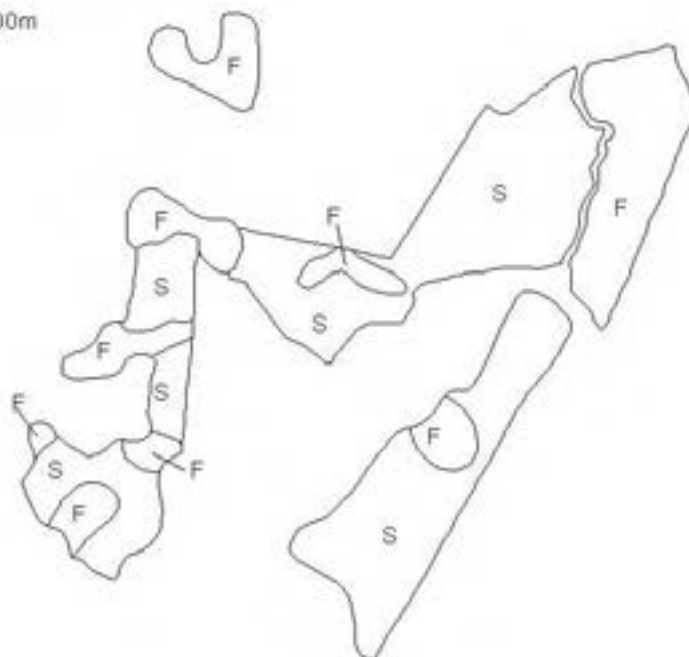
Habitat for threatened species.



Matakera Rd Bush O05/096

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

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



TAPUWAE SCENIC RESERVE

Survey no. O05/097
Grid reference O05 522 467
Area 406 ha
Survey date 24 June 1994
Altitude 0-140 m asl

Ecological unit

- (a) Kanuka/manuka forest on coastal hillslope (40%)
- (b) Kanuka/manuka-tanekaha-towai forest on coastal hillslope (58%)



Tapuwae Scenic Reserve O05/097

Each grid is 1000m x 1000m
and = 100 ha
S = shrubland
F = forest
W = wetland
E = estuarine
D = duneland

(c) Kahikatea-kowhai-puriri forest on coastal hillslope (2%)

Landform/geology

Dissected hill country underlain with Mangakahia Complex sandstone.

Vegetation

Centred around the Tapuwae Scenic Reserve, this large site is in a successional stage being dominated by kanuka/manuka associations. The site exhibits a zonation from hill country through to mangrove forest on estuarine deposits in the Tapuwae River channel and is linked via this estuarine forest and remnant riparian forest to Tapuwae Forest and the Motukaraka Scenic Reserve to the north.

(a) Dominant kanuka/manuka with frequent tanekaha and kahikatea. Rewarewa, puriri and totara are occasional.

(b) Kahikatea, kowhai and puriri are co-dominant while taraire, totara, nikau, kahikatea, rewarewa and emergent kauri are frequent. Matai, miro, kohekohe, karaka and emergent northern rata and rimu are occasional.

(c) A very small area comprises kahikatea, kowhai and puriri, kanuka/ manuka is frequent and rewarewa occasional.

Significant flora

Kawaka and wharangi are uncommon in this Ecological District.

Fauna

NI brown kiwi (Serious Decline), kukupa (Gradual Decline), banded rail and NI fernbird (both Sparse).

Significance

A relatively large site with altitudinal sequences and riparian values.

Representative site for all ecological units with the only record of type (c) and only one of two records of type (b) in the Ecological District.

Presence of threatened species.

Scenic Reserve of 208 ha, administered by the Department of Conservation, protects 51% of this site.

TAPUWAE RIVER BUSH

Survey no.	O05/098
Survey date	24 June 1994
Grid reference	O05 522 481
Area	78 ha
Altitude	0-c. 120 m asl

Ecological unit

(a) Kanuka/manuka-totara forest on coastal hillslope

Landform/geology

This site is composed of dissected hill country adjoining the Tapuwae River estuary and which is underlain by Mangakahia Complex sandstone.

Vegetation

Abundant kanuka/manuka occurs with common totara. Canopy species include frequent kowhai, tanekaha, kahikatea, towai, and rewarewa and occasional matai, houhere, emergent northern rata and kauri.



Tapuwae River Bush O05/098

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

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

It is apparent from aerial photographs that an older growth forest type is present, but was not described due to the difficulty in gaining a good view.

Fauna

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

Significance

Representative site with its significance due to its coastal riparian nature.

Presence of a threatened species.

A forested link between the larger forests to the north and south.