

TE RIPANGA STREAM

Survey no. O04/013
Survey date 14 September 1994
Grid reference O04 444 727
Area 13.7 ha
Altitude 40-60 m asl

Ecological unit

- (a) Secondary kanuka forest on gentle hillslope
- (b) Secondary kahikatea forest on alluvium

Landform/geology

Ridge of Mangakahia Complex sandstone bounded by Holocene alluvial flats.

Vegetation

Type (a) Secondary kanuka forest. Most of the area is tall kanuka with towai and occasional kahikatea and cabbage tree.

Type (b) Secondary kahikatea forest. With frequent cabbage tree. Comprises about 20% of the site.

Fauna

Not surveyed.

Significance

Representative site for lowland kahikatea on alluvium which is an uncommon vegetation type in the Ecological District and Region.

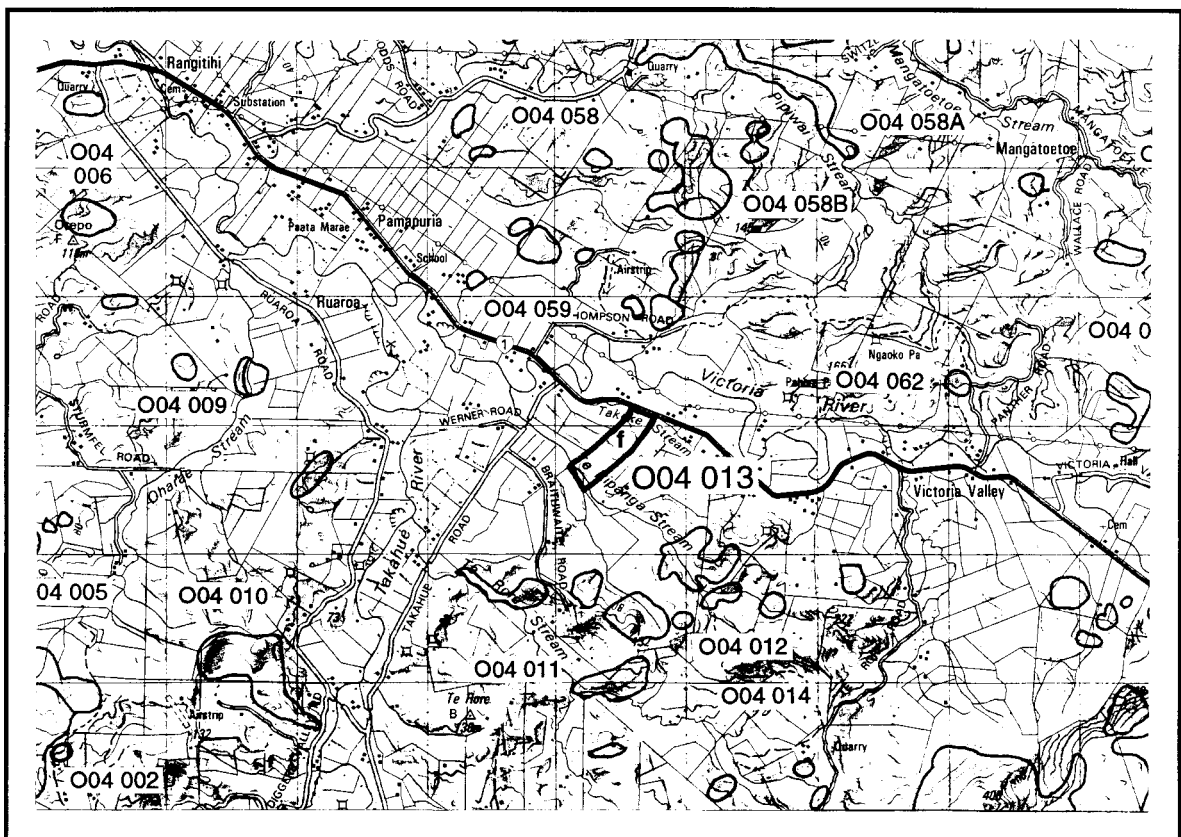


Figure 28. Te Ripanga Stream, O04 013

Each grid is 1000 m x 1000 m and equals 100 ha. f = forest.

CHURCH RD SWAMP FOREST

Survey no. O04/018
Survey date 1 November 1994
Grid reference O04 366 778
Area 30.9 ha
Altitude up to 20 m asl

Ecological unit

- (a) Kahikatea forest on alluvium
- (b) Totara forest on toeslope

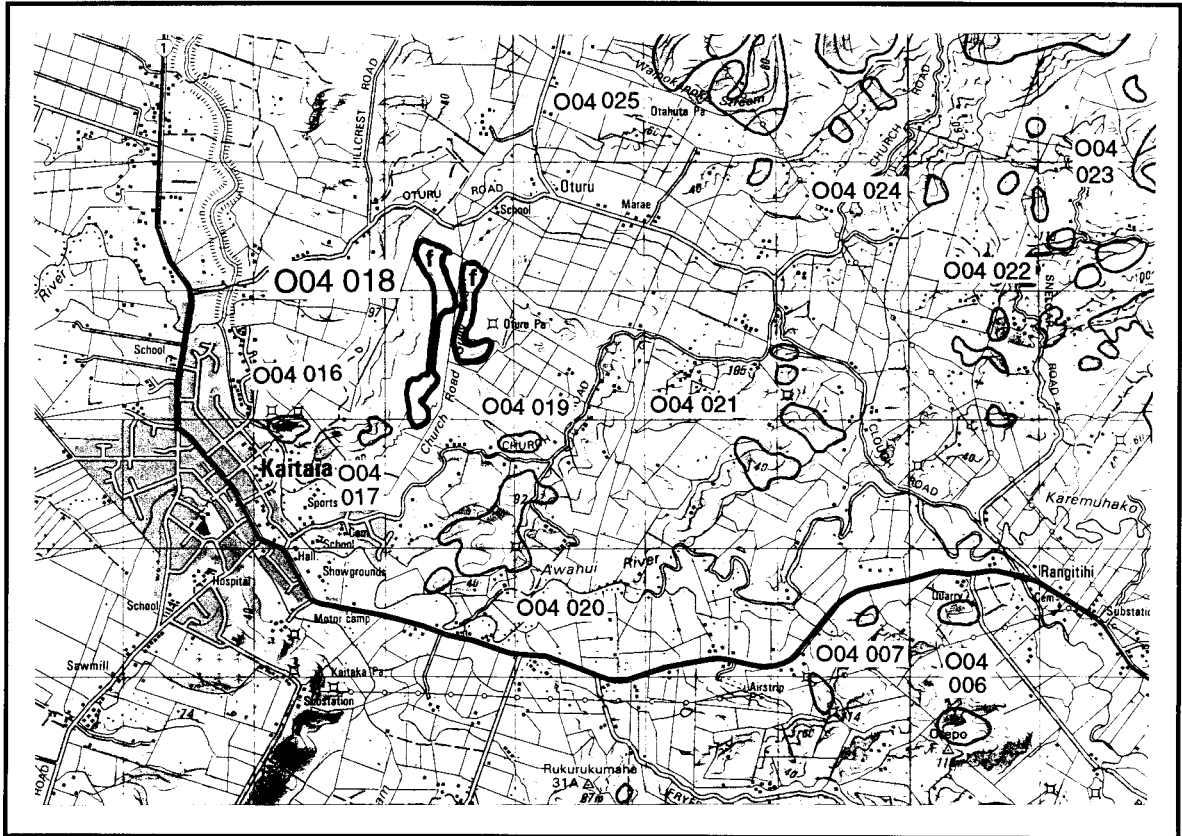
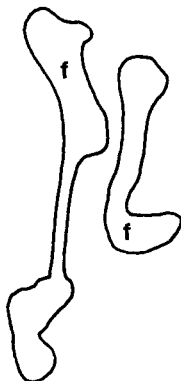


Figure 29. Church Road Swamp Forest, O04 018

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

f = forest.



Landform/geology

Holocene valley-fill alluvium.

Vegetation

This area is mostly on a flat, alluvial floodplain with drainage channels running through it. Much of it is still poorly drained and under water during flooding.

Type (a) Secondary kahikatea forest. A discontinuous area of kahikatea with some puriri and occasional cabbage tree. Titoki, pukatea, and lowland ribbonwood are also present. The understorey contains small-leaved mahoe, kaikomako, *Coprosma rigida*, *C. rotundifolia*, *Melicope simplex* and small-leaved milk tree. There are some large kahikatea in nearly pure stands.

Type (b) Totara forest. Comprises about 10% of the area. Kahikatea and kanuka are frequent with occasional cabbage tree and puriri.

Significant flora

Kaikomako and *Coprosma rotundifolia* are regionally significant. Lowland ribbonwood is uncommon in the Ecological District and *C. rigida* exhibits an unusual form.

Fauna

Australasian bittern (1978 record) (Category O threatened species).

Significance

A rare remnant swamp forest which was formerly common in this part of the Ecological District. Despite modification and fragmentation, this site is now one of the best stands of lowland kahikatea forest in the District. It contains a wide range of divaricating shrubs including one uncommon and one unusual *Coprosma*.

MATTHEWS MISSION BUSH

Survey no.	O04/020
Survey date	9 November 1994
Grid reference	O04 368 764
Area	37.9 ha
Altitude	20-90 m asl

Ecological unit

(a) Taraire-puriri forest on hillslope

(b) Taraire forest on hillslope

Landform/geology

Hill slope and gullies in Mangakahia Complex mudstone.

Vegetation

Type (a) Taraire-puriri forest. Comprises most of the area. Other species occurring are northern rata, pukatea, totara, kahikatea, rimu, lancewood, towai, kauri, rewarewa, kohekohe, and titoki.

Type (b) Taraire forest. Near the river is a taraire remnant with towai and occasional kahikatea, totara, rewarewa and northern rata.

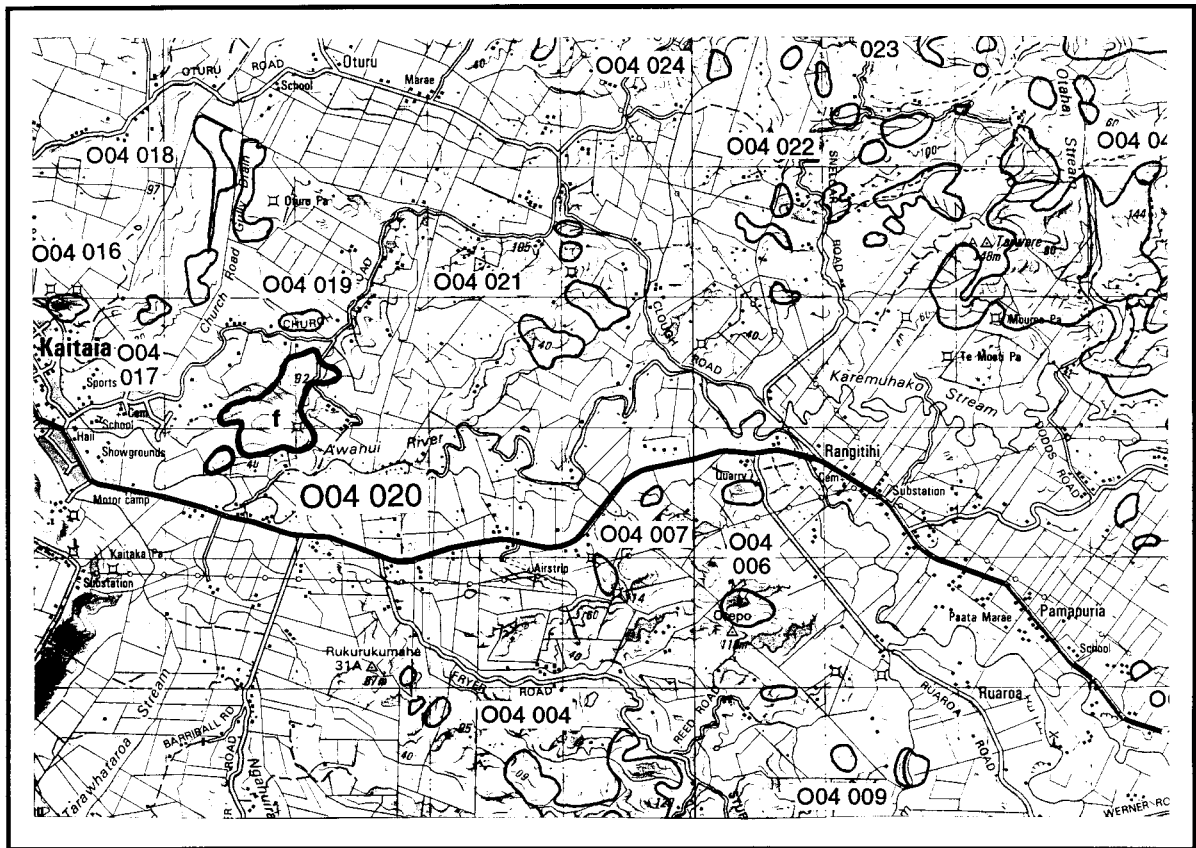
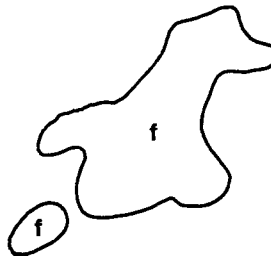


Figure 30. Matthews Mission Bush, O04 020
 Each grid is 1000 m x 1000 m and equals 100 ha.
 f = forest.



Fauna

Kauri snail (Category C threatened species). Likely to provide important habitat for the NZ pigeon.

Significance

A representative site for taraire and puriri-taraire forest and habitat for a threatened species.

Part of this site (6.7 ha) is owned by the Far North District Council, and is administered as a Council reserve, although not formally designated as such.

It is also a regionally significant soil site:

- (i) Contains good examples of Hukerenui soils, which are uncommon.
- (ii) Many Riponui soils have been developed for agriculture (Arand et al. 1993).

CLOUGH ROAD BUSH

Survey no. O04/021
Survey date 10 October 1994
Grid reference O04 392 767
Area 23.9 ha
Altitude 20-60 m asl

Ecological unit

- (a) Taraire forest on hillslope
- (b) Secondary totara-manuka forest on hillslope
- (c) Manuka-kanuka shrubland on hillslope

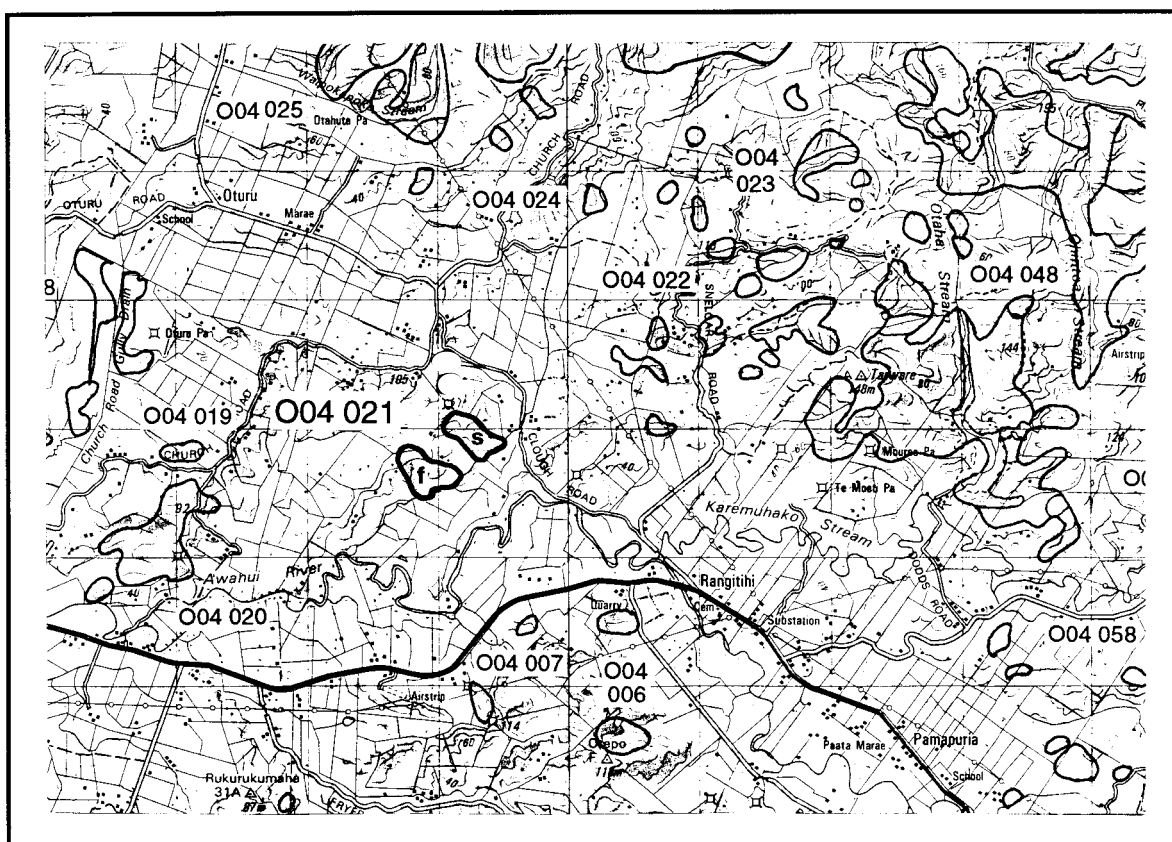
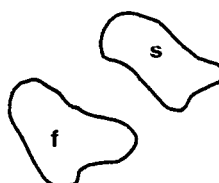


Figure 31. Clough Road Bush, O04 021

Each grid is 1000 m × 1000 m and equals 100 ha.

f = forest; s = shrubland.



Landform/geology

Hill slopes of Motatau Complex calcareous mudstone, running down to Holocene alluvial flats.

Vegetation

Type (a) Taraire forest. Puriri is frequent and kahikatea, totara and rimu occasional.

Type (b) Totara-kanuka forest. With rimu.

Type (c) Manuka-kanuka shrubland. With mamaku.

The bush has been whittled away over the years and is no longer contiguous, although the areas are linked by scattered kahikatea and cabbage tree.

Fauna

NI brown kiwi (Category A threatened species). NZ pigeon (Category B threatened species).

Significance

Food source for threatened species in an area important for pigeon populations.

SNELGAR ROAD

Survey no.	O04/022
Survey date	5 October 1994
Grid reference	O04 415 778
Area	43.6 ha
Altitude	40-80 m asl

Ecological unit

- (a) Taraire forest on hillslope
- (b) Puriri-taraire forest on hillslope
- (c) Puriri forest on hillslope
- (d) Puriri-kahikatea forest on hillslope
- (e) Kanuka-totara forest on hillslope
- (f) Puriri-totara forest on hillslope
- (g) Kahikatea forest on hillslope

Landform/geology

Hill slopes and gullies in Motatau Complex calcareous mudstone and sandstone lithofacies.

Vegetation

Numerous small broadleaf-podocarp remnants.

Type (a) Taraire Forest. With puriri, kahikatea or totara frequent.

Type (b) Puriri-taraire forest.

Type (c) Puriri forest.

Type (d) Puriri-kahikatea forest. Occurs in an isolated instance with taraire frequent.

Type (e) Kanuka-totara forest. A small stand.

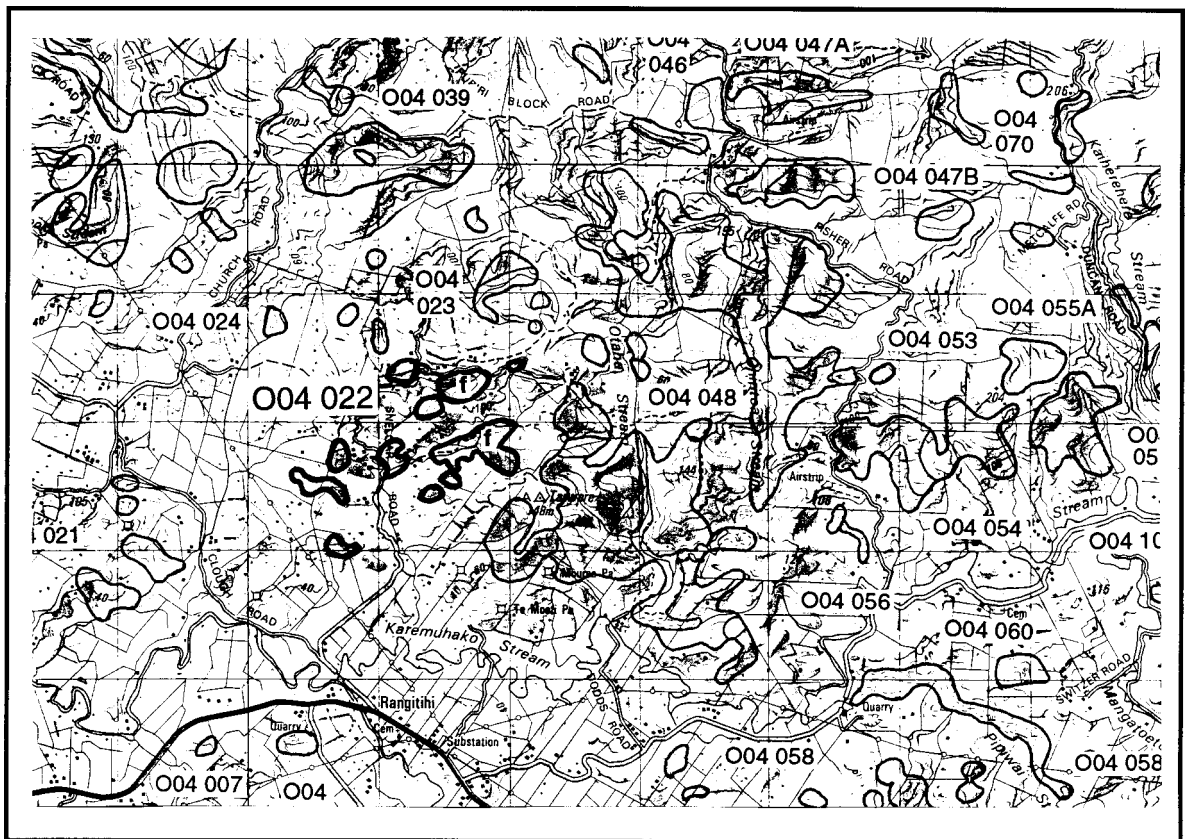


Figure 32. Snelgar Road, O04 022

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

f = forest.



Type (f) Puriri-totara forest. A tiny remnant with occasional kahikatea, taraire, cabbage tree and miro.

Type (g) Kahikatea forest. Comprises half of a remnant between Snelgar and Clough Roads.

Other species occurring in these remnants are kohekohe, rewarewa, nikau, kanuka, towai, pukatea, northern rata, tawa, karaka, cabbage tree, lacebark, matai and kowhai.

Fauna

NZ pigeon (Category B threatened species). NI brown kiwi (Category A threatened species).

Significance

Important representation of puriri, in a variety of ecological units.

Although some stands are very small, the remnants are collectively significant in providing a seasonal food source in an area known to have good numbers of NZ pigeon.

Altogether, there is a wide variety of tree species in the area.

COWELL

Survey no.	O04/023
Survey date	5 October 1994
Grid reference	O04 422 790
Area	13.6 ha
Altitude	60-140 m asl

Ecological unit

- (a) Taraire-puriri forest on hillslope
- (b) Taraire forest on hillslope
- (c) Manuka-kanuka shrubland on hillslope
- (d) Puriri forest on hillslope

Landform/geology

Gullies in Motatau Complex calcareous mudstone and sandstone lithofacies.

Vegetation

Mostly taraire remnants, with puriri common or frequent. Totara, kahikatea and nikau are also sometimes frequent. Other species occurring are rimu, and rewarewa.

Manuka-kanuka shrubland occurs in the gully, some 3-4 m tall with scattered cabbage tree and mamaku, and some taller, with occasional puriri, totara, towai and five-finger.

Fauna

NI brown kiwi (Category A threatened species).

Significance

Small unfenced remnants which provide a seasonal food source in an area known to have good numbers of NZ pigeon.

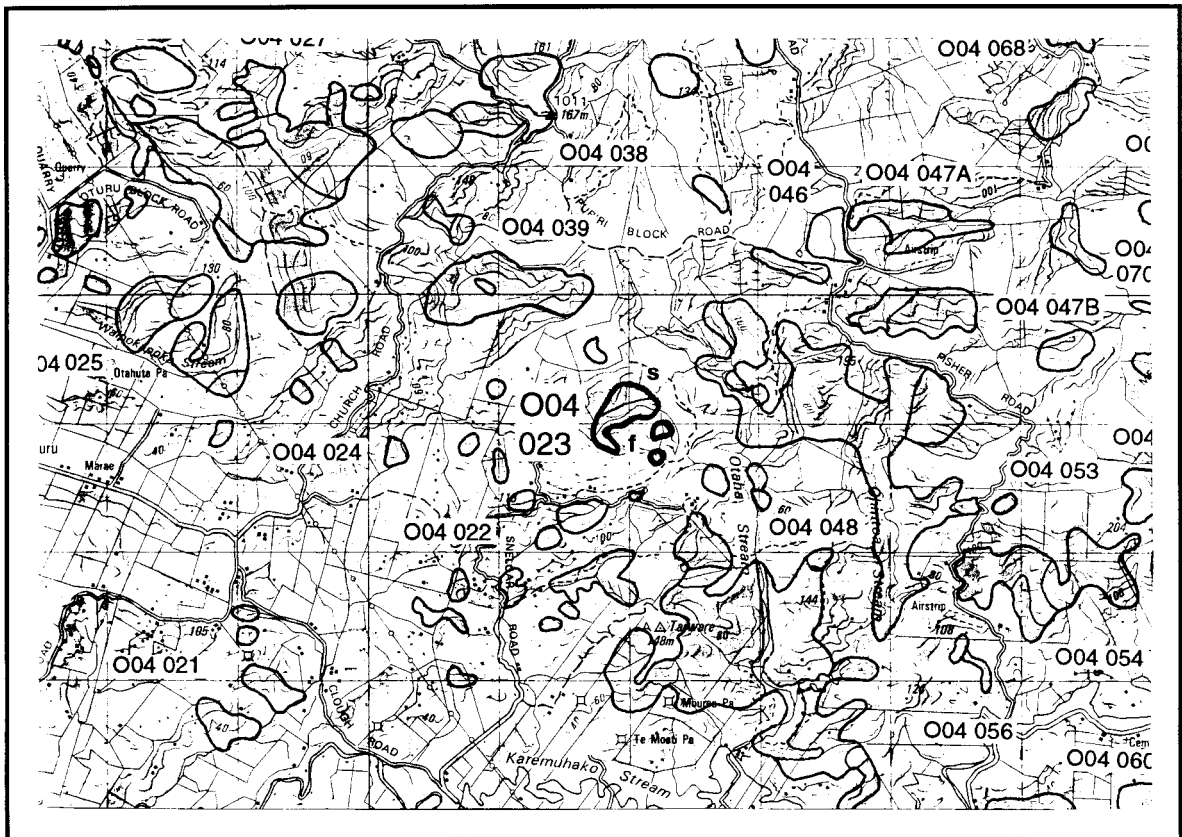
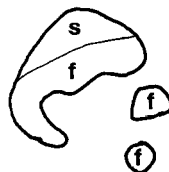


Figure 33. Cowell, O04 023
 Each grid is 1000 m x 1000 m and equals 100 ha.
 f = forest; s = shrubland.



CHURCH ROAD REMNANTS

Survey no.	O04/024
Survey date	10 October 1994
Grid reference	O04 450 790
Area	21 ha
Altitude	60-100 m asl

Ecological unit

- (a) Puriri-tarairé forest on hillslope
- (b) Tarairé forest on hillslope
- (c) Puriri forest on hillslope

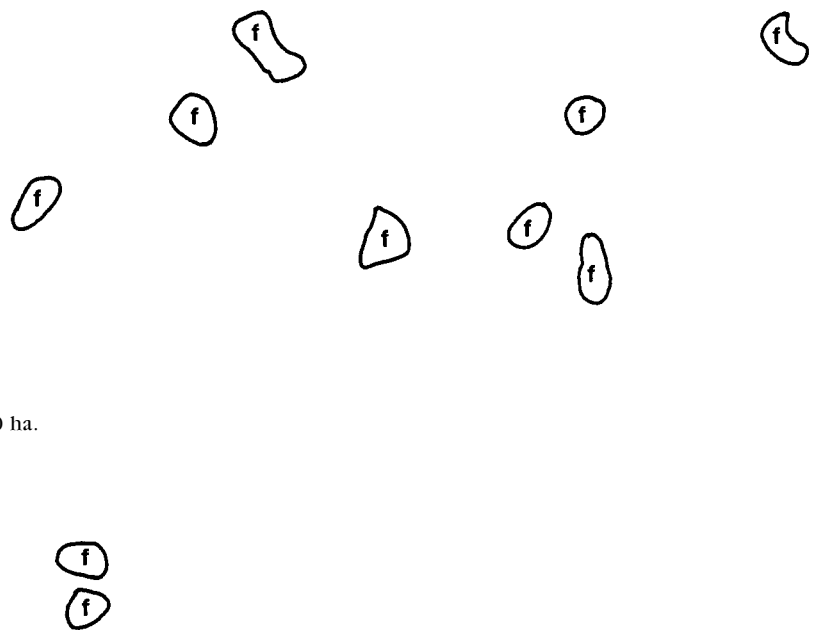
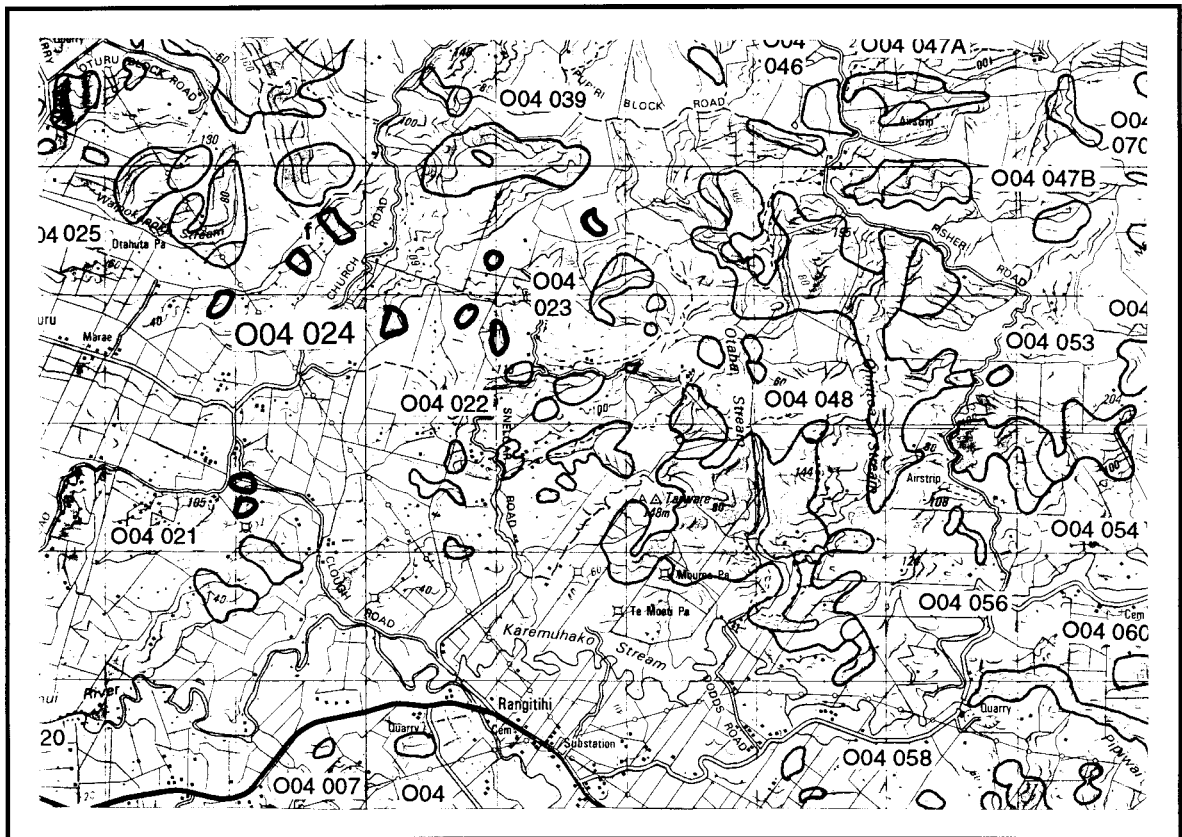


Figure 34. Church Road Remnants, O04 024

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

f = forest.

Landform/geology

Hill slopes and gullies in Motatau Complex calcareous mudstone and sandstone lithofacies, and minor Holocene valley alluvium.

Vegetation

Numerous small puriri-taraire remnants scattered over several square kilometres. Totara occurs frequently. Other species present are nikau, pukatea, rewarewa, kahikatea, towai and rimu.

The Clough Rd remnants are puriri dominant; one has frequent taraire and occasional totara and rimu, and the other has occasional kahikatea, totara, towai and cabbage tree.

Fauna

NZ pigeon (Category B threatened species). NI brown kiwi (Category A threatened species).

Significance

These remnants are small but are presently fulfilling an important ecological role in providing a seasonal food source for NZ pigeon which is threatened in the District but in good numbers in this vicinity.

The block at O04 402 788 (1.8 ha) is protected by a Queen Elizabeth II National Trust covenant.

WAIPOKAPOKA STREAM

Survey no.	O04/025
Survey date	10 October 1994
Grid reference	O04 385 795
Area	54.6 ha
Altitude	40-130 m asl

Ecological unit

- (a) Manuka shrubland on hillslope
- (b) Manuka-totara shrubland on hillslope
- (c) Puriri forest on hillslope
- (d) Totara-puriri forest on hillslope

Landform/geology

Valleys in Motatau Complex calcareous mudstone hill country.

Vegetation

Type (a) Manuka shrubland. At least half of the area is low manuka. Occasionally totara and puriri occur.

Type (b) Manuka-totara shrubland. With occasional puriri and kahikatea constitutes about 10% of the area.

Type (c) Puriri forest. With taraire.

Type (d) Totara-puriri forest. With kahikatea comprises approximately 5 ha.

Fauna

NI brown kiwi (Category A threatened species).

Significance

Representative site for puriri-totara forest and in close proximity to O04/026 and 027.

The broadleaf-podocarp pockets providing seasonal food source for NZ pigeon. Kiwi habitat.

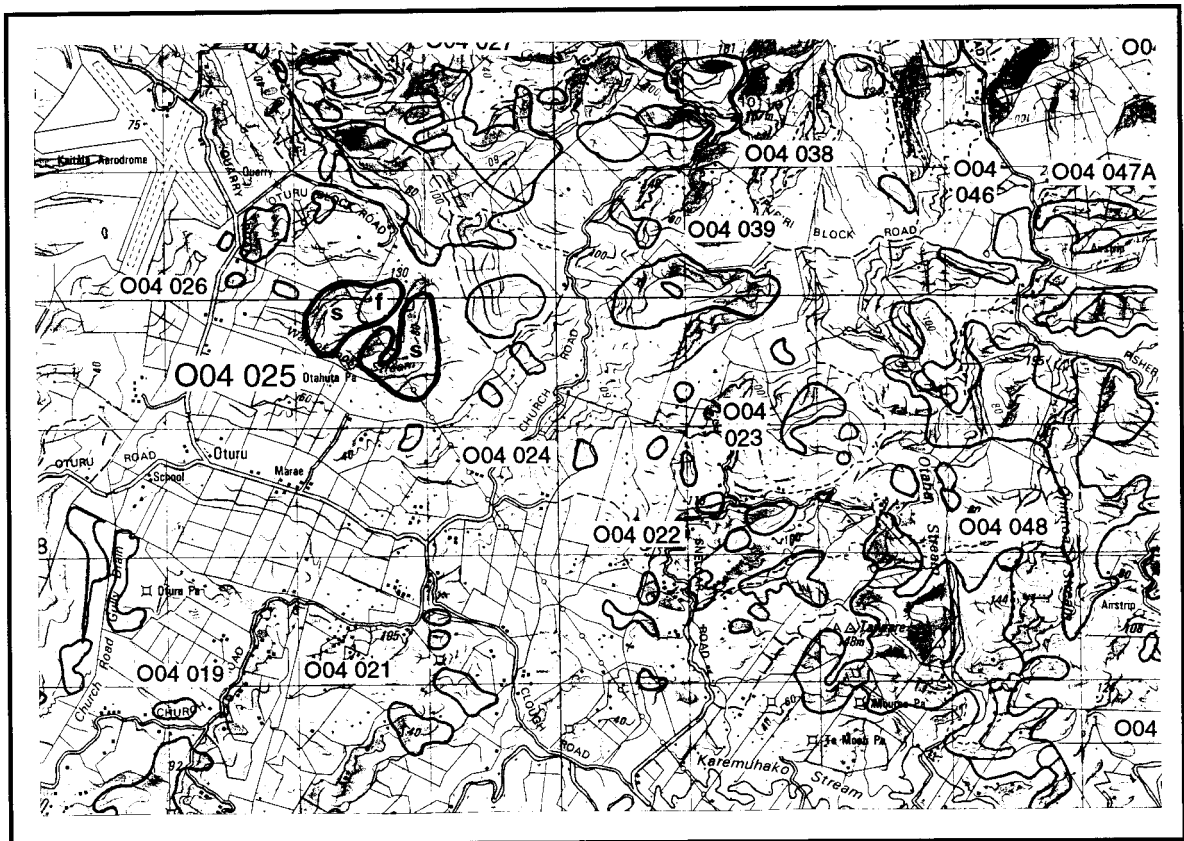
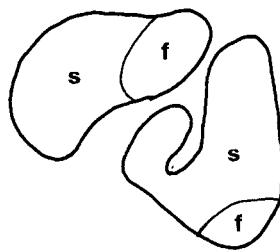


Figure 35. Waipokapoka Stream, O04 025

Each grid is 1000 m × 1000 m and equals 100 ha.

f = forest; s = shrubland.



OTURU

Survey no.	O04/027
Survey date	October-November 1994
Grid reference	O04 395 820
Area	308 ha
Altitude	20-120 m asl

Ecological unit

- (a) Manuka shrubland on hillslope
- (b) Manuka-kanuka shrubland on hillslope

- (c) Taraire forest on hillslope
- (d) Towai forest on hillslope
- (e) Kahikatea-puriri-totara forest on hillslope
- (f) Puriri forest on hillslope
- (g) Secondary kahikatea forest on hillslope and alluvium
- (h) Taraire-puriri forest on hillslope and in gullies
- (i) Kanuka forest on hillslope
- (j) Rimu-kauri-kanuka-towai association on hillslope
- (k) Kanuka-totara forest on hillslope
- (l) Raupo reedland on alluvium
- (m) Open water - constructed pond in stream valley

Landform/geology

Hill slopes, gully heads and valleys in dissected hill country of Motatau Complex calcareous mudstone and sandstone lithofacies with freshwater wetlands in upper tributaries of the Oinu Stream.

Vegetation

This area is a mosaic of contiguous or almost contiguous manuka shrubland and taraire-puriri forest with a small amount of secondary kahikatea. There are also some taller manuka shrubland and secondary broadleaf pockets.

Shrubland

Type (a) Manuka shrubland. Occurs throughout the area:

Oinu: 2-3 m with scattered puriri

Central area: between 2 and 4 m tall with little else in the canopy

Oturu Block Rd: With mamaku and tanekaha frequent and taraire, totara, cabbage tree, mapou and mahoe also occurring.

Eastern: with occasional puriri, totara and cabbage tree

North: 4-6 m tall with scattered mamaku and cabbage tree.

Type (b) Manuka-kanuka shrubland. Oinu: with frequent mamaku and occasional kahikatea, puriri, rewarewa, cabbage tree and pampas.

Forest

The forest by Oturu Block Rd is mainly either taraire dominant, puriri dominant, or puriri-taraire co-dominant. Kanuka is often frequent, as is kahikatea. Other species present are rimu, totara, rewarewa, kohekohe, nikau, tanekaha, towai, northern rata, and kauri.

There are two larger areas of forest to the east. Half of the northernmost is taraire-puriri.

Type (c) Taraire forest

- comprises most of the forest by Oturu Block Rd with towai, and apart from the species mentioned above, also contains tawa, matai, pukatea and kawaka.
- occurs within one of the pockets of forest in the northern shrubland. Totara and puriri frequent. Kahikatea, rimu, rewarewa and kauri are present.

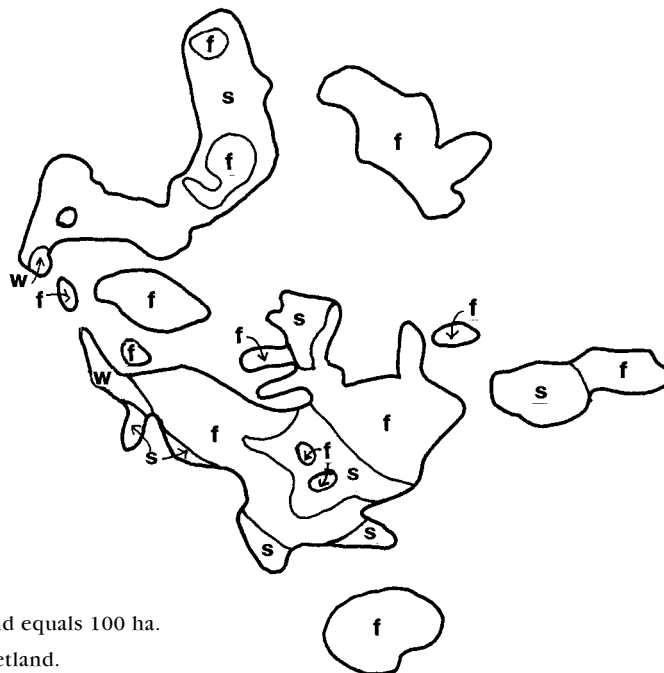
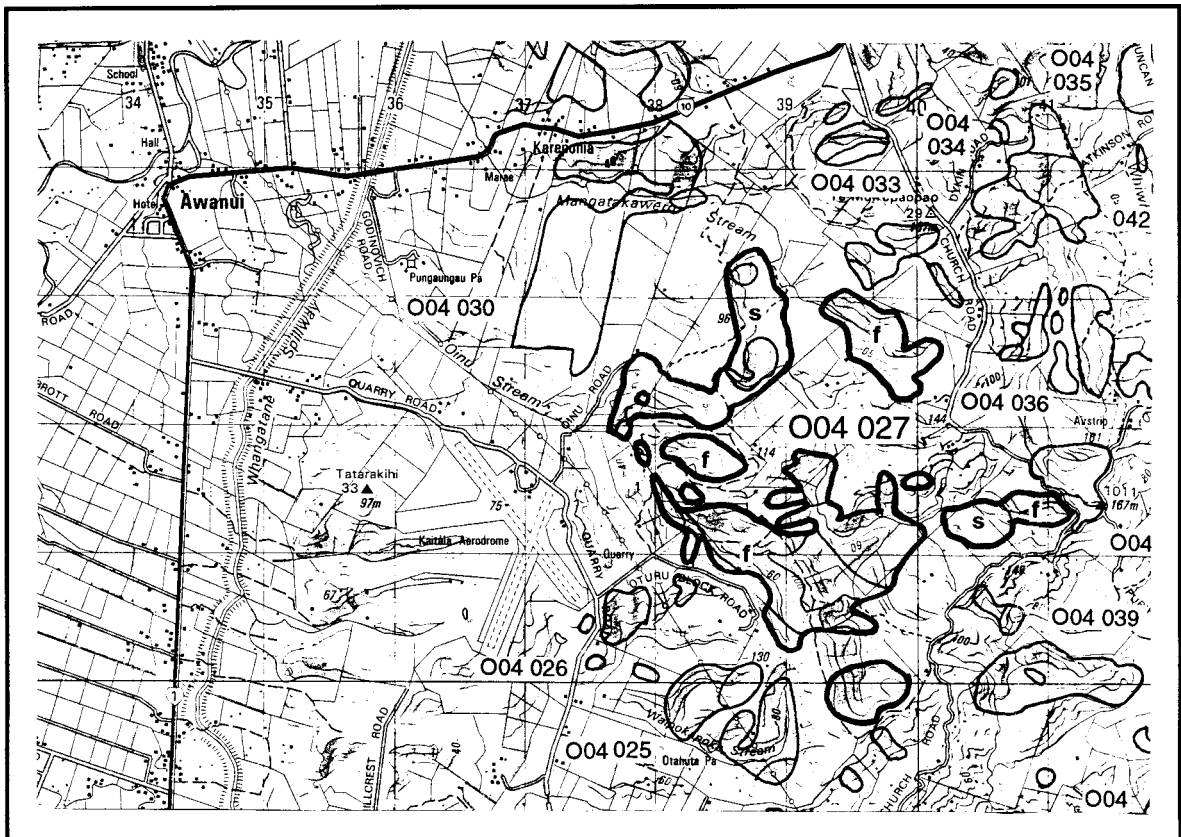


Figure 36. Oturu, O04 027

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

f = forest; s = shrubland; w = wetland.

- in the south-eastern pocket of forest. This is tall forest with a wide variety of canopy species including rimu, kahikatea, rewarewa, totara, kohekohe, tawa, miro, matai, and puriri. The understorey is generally sparse due to grazing.

Type (d) Towai forest. With kanuka. Occurs in the main forest by Oturu Block Rd.

Type (e) Kahikatea-totara-puriri forest. Occurs in the main forest by Oturu Block Rd.

Type (f) Puriri forest. There is a small pocket within the northern area of shrubland. Kahikatea is frequent, with occasional rimu and kauri.

Type (g) Secondary kahikatea. A tiny patch with frequent puriri occurs within the northern shrubland area, and in the northernmost block in the east.

Type (h) Taraire-puriri forest. Half of the northernmost block in the east contains frequent totara and kanuka. Rimu, towai, rewarewa, kauri, kahikatea, pukatea and northern rata also occur. Some very large puriri over 1 m diameter occur. The sub-canopy consists of nikau, kohekohe and mamangi, but the shrub layer is virtually non-existent, with mainly scattered small-leaved mahoe. Away from the margins and the periodically flooded valley floor, the ground layer is mostly leaf litter, with scattered seedlings.

Type (i) Kanuka forest. Occurs on the upper slopes of the northern-most block in the east with totara and towai common and occasional rimu, puriri, kahikatea, rewarewa, cabbage tree and mamaku. The understorey consists mainly of ponga, totara saplings and gorse with a ground layer of “hopeless menace” grass, rasp fern and scattered mahoe and hangehange seedlings.

Type (j) Rimu-kauri-kanuka-towai forest on hillslope. A tiny area occurring to the north of Oturu Block Rd. Rewarewa is occasional.

Type (k) Kanuka-totara forest. Occurs in a stand to the north of Oturu Block Rd.

Wetland

Type (l) Raupo reedland. On the western side are several areas of raupo and an artificial pond (Type (m)). About half the area is raupo and the remainder open water, with a small amount of the aquatic fern *Azolla* sp. About three-quarters of the area around the wetland is farmland. There is a fringe of 6-8 m manuka and totara with puriri, kahikatea and mamaku. About 5% of the margin is rushes. Downstream is a small area of raupo then some kahikatea and occasional puriri and cabbage tree. Further downstream again is another smaller area of raupo surrounded by manuka and kahikatea.

Significant flora

Kawaka - notable in the Ecological District.

Fauna

NZ pigeon (Category B threatened species), NI brown kiwi (Category A threatened species); kauri snail (Category C threatened species); banded kokopu (Category C threatened species).

Significance

A large, diverse habitat which encompasses a large proportion of the catchment. It contains many different vegetation types, including a lot of puriri (greatly diminished from its former extent) and some vigorous secondary kauri. Habitat for several threatened fauna species and especially important for kiwi.

PAIRATAHI RD

Survey no.	O04/031
Survey date	17 November 1994
Grid reference	O04 378 855
Area	125.9 ha
Altitude	20-60 m asl

Ecological unit

- (a) Flax-cabbage tree shrubland on alluvial flats
- (b) Raupo reedland on alluvium
- (c) Open water
- (d) Manuka-kanuka shrubland on raised marine terrace and slope
- (e) Sydney golden wattle-manuka shrubland on raised marine terrace
- (f) Manuka-cabbage tree shrubland on raised marine terrace and alluvium
- (g) Secondary kanuka forest in gully

Landform/geology

Hill country of Motatau Complex calcareous mudstone and sandstone lithofacies with podsolised sand deposits on erosional (marine) terrace remnants on ridge tops, Holocene alluvial flats and wetlands in the valley of an unnamed stream, and an area of consolidated parabolic dunes to the north of the valley.

Vegetation

Type (a) Flax-cabbage tree shrubland. At the confluence of the stream mouth with the Whangatane Spillway is a fairly modified wetland area in which flax and cabbage tree are common and manuka frequent. Various exotic species such as *Watsonia* and privet are also common.

Type (b) Raupo reedland. Further up the tributary is a raupo swamp with occasional flax and cabbage tree. A small amount of open water is present behind a small dam (Type (c)).

Type (d) Manuka-kanuka gumland shrubland. Occurs on the ridge tops and is between 1 and 3 m tall. *Schoenus tendo* and mingimingi are common in the understorey, with *Cassytba* being locally common. *Epacris pauciflora* and *Schoenus brevifolius* are frequent. *Dracophyllum lessonianum* occurs throughout. Comb fern and the sundew *Drosera peltata* are frequent in the ground layer. In open areas, *Thelymitra pulchella* occurs frequently as does the "coral" lichen. A northern form of the orchid *Prasopphyllum colensoi* is present near SH10 and is of significant botanical interest.

On the northeast side *Hakea* and Sydney golden wattle is locally frequent.

Type (e) Sydney golden wattle-manuka shrubland. On the slopes and in gullies, constituting almost half of the total area, Sydney golden wattle is occasionally to frequently emergent over manuka with occasional mamaku and cabbage tree.

The understorey consists of wheki, waterfern, ponga and mingimingi. Also present are cabbage tree, gorse, tobacco weed, pampas, flax, hangehange, pohuehue, rasp fern, lady fern and kiokio.

About 20% is abundant Sydney golden wattle, with manuka common.

Type (f) Manuka-cabbage tree association. Occurs in tiny pockets with an open canopy. Giant umbrella sedge and soft rush are common in the ground layer.

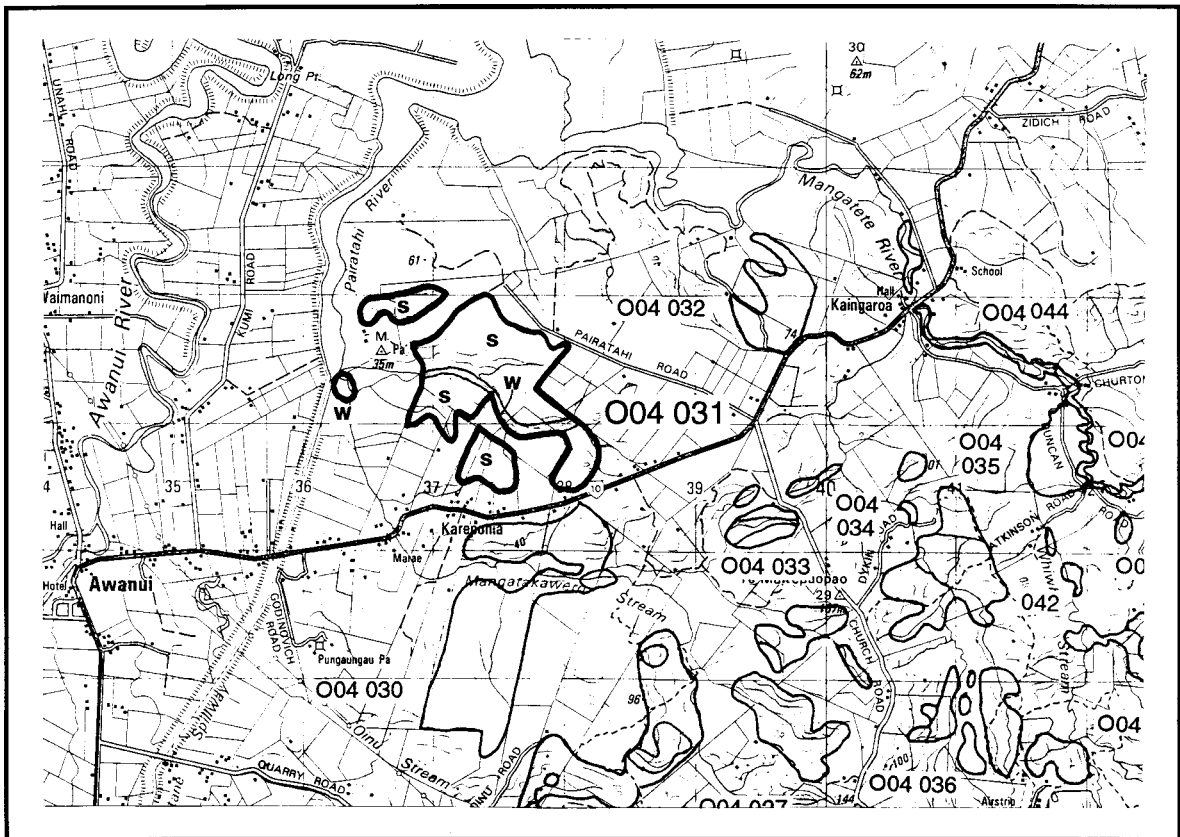
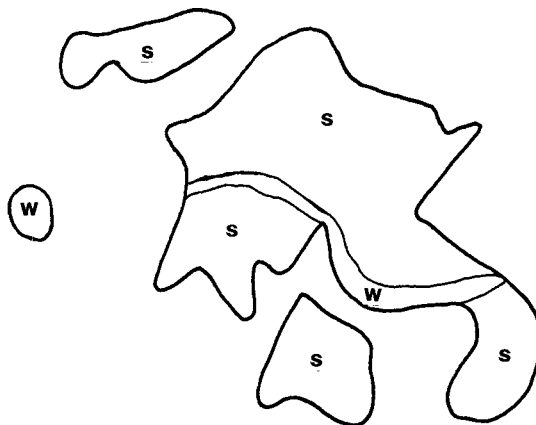


Figure 37. Pairatahi Road, O04 031

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

s = shrubland; w = wetland.



Type (g) Kanuka forest (not mapped). Near the head of the main valley are small areas of regenerating kanuka forest with occasional towai, puriri, cabbage tree and mamaku on gully sides. Such areas have a dense understorey of hangehange, mingimingi, mapou, bracken, ponga, wheki and water fern.

Significant flora

Prasophyllum aff. *colensoi* - a northern form of botanical interest.

Fauna

NI fernbird (R. Pierce pers. comm.) (regionally significant species). Banded kokopu (Category C threatened species). Presence of NI brown kiwi (Category A threatened species) probable but not confirmed.

Significance

A semi-contiguous sequence from wetland to gumland scrub.

A representative site for kanuka forest and manuka-kanuka shrubland on this type of landform and rock type in the Ecological District. Orchids are common in the more open areas of gumland soils.

Habitat for the regionally significant NI fernbird.

The site has potential for restoration in the areas where exotics are common.

TE MAIREPAOPAO

Survey no.	O04/033
Survey date	5 October 199
Grid reference	O04 395 845
Area	41.1 ha
Altitude	20-120 m asl

Ecological unit

- (a) Secondary kahikatea forest in gully
- (b) Secondary totara forest on hillslope
- (c) Manuka shrubland on hillslope
- (d) Taraire forest on hillslope
- (e) Totara-kahikatea-puriri forest on hillslope
- (f) Totara-manuka-kanuka shrubland on hillslope

Landform/geology

Gullies in hill country of Motatau Complex calcareous mudstone and sandstone lithofacies.

Vegetation

This site consists of several discontinuous areas of manuka shrubland, secondary podocarp and broadleaf-podocarp remnants.

Type (a) Secondary kahikatea forest. Comprises approximately two-thirds of the remnant on the eastern side of the Church Rd. Puriri is frequent, and totara, kanuka and cabbage tree occasional.

Type (b) Secondary totara forest. Comprises the remainder of the remnant on the eastern side of the Church Rd. Towai and kanuka are frequent.

Type (c) Manuka-kanuka shrubland. Occurs in the main valley and is of low height. Further up the valley, opposite Dykin Rd, is another extensive area.

Type (d) Taraire forest. Occurs in a gully within Type (c) with puriri and totara. This area also contains kawaka, towai, rewarewa and putaputaweta.

Type (e) Totara-kahikatea-puriri forest. A small pocket with taraire occurring further up the valley, opposite Dykin Rd, within Type (c). Rewarewa and rimu are occasional.

At the head of the valley kahikatea and totara dominate with occasional puriri, or puriri and totara are dominant with frequent taraire and occasional kahikatea and rimu.

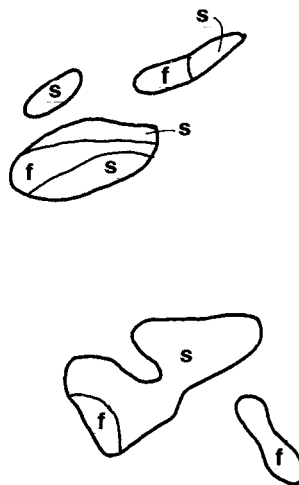
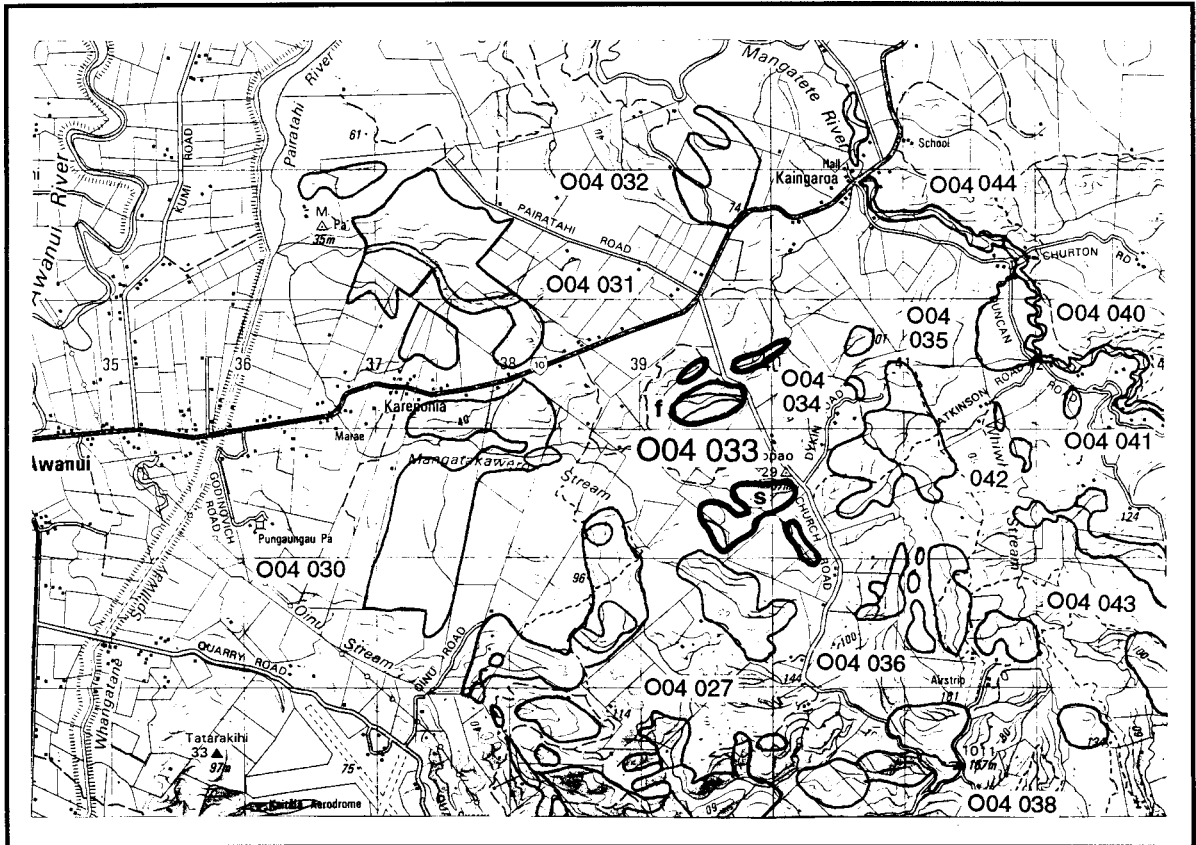


Figure 38. Te Mairepaopao, O04 033

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

f = forest; s = shrubland.

Type (f) Totara-manuka-kanuka shrubland. Cabbage tree and kahikatea are occasional.

Significant flora

Kawaka - notable in the Ecological District.

Fauna

NI brown kiwi (Category A threatened species).

Significance

A representative site for kahikatea forest and an important site for retaining the range of kiwi.

DYKIN RD BUSH

Survey no.	O04/035
Survey date	10 October 1994
Grid reference	O04 407 840
Area	59 ha
Altitude	20-90 m asl

Ecological unit

- (a) Kanuka forest on hillslope
- (b) Taraire forest on hillslope
- (c) Puriri forest on hillslope
- (d) Tanekaha-totara forest on hillslope
- (e) Manuka-kanuka shrubland on hillslope
- (f) Puriri-taraire forest on hillslope
- (g) Totara-kanuka shrubland on hillslope

Landform/geology

Valley in Motatau Complex calcareous mudstone and sandstone lithofacies.

Vegetation

The main forest area contains several vegetation types.

Type (a) Kanuka forest. Comprises about one-third of the main forest, with totara and kahikatea and occasional rimu.

Type (b) Taraire forest. With puriri and occasional kahikatea, rimu, totara, rewarewa, kohekohe and kawaka. A slightly smaller area than (a).

Type (c) Puriri forest. About 10% is puriri with occasional kahikatea and rimu.

Type (d) Totara-tanekaha forest. Occurs at the bottom of Dykin Rd with occasional kauri, kawaka, rewarewa and kahikatea.

Type (e) Manuka-kanuka shrubland. Occurs in the north of the site and on margins with mamaku, totara, tanekaha, cabbage tree, puriri, kahikatea, mahoe, wattle and tobacco weed scattered through it. To the northwest of this is an isolated stand of manuka-kanuka shrubland between 4 and 6 m tall with occasional puriri, mamaku, kahikatea and mahoe.

Type (f) Puriri-taraire forest remnant. On the western side of Dykin Rd is a small remnant with frequent totara as well as kahikatea, kohekohe, rimu and rewarewa.

Type (g) Totara-kanuka shrubland. Comprises about 10% of the main area.

Significant flora

Kawaka - notable in the Ecological District.

Fauna

NZ pigeon (Category B threatened species), NI brown kiwi (Category A threatened species).

Significance

Contains a range of vegetation types and is a representative site for totara-tanekaha forest and kanuka-totara shrubland. It is notable for the presence of kawaka, and is important habitat for threatened bird species.

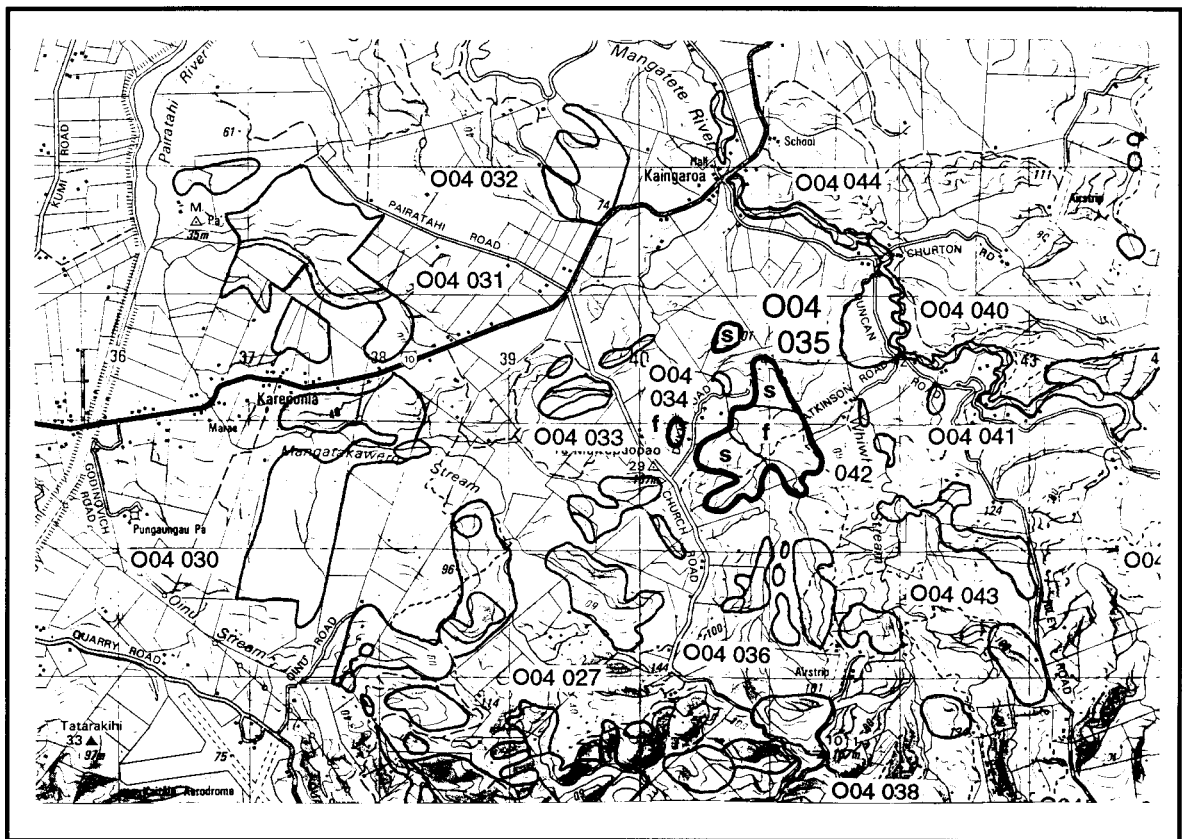
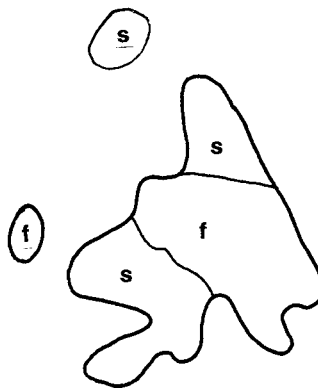


Figure 39. Dykin Road Bush, O04 035

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

f = forest; s = shrubland.



UPPER MANGATETE VALLEY

Survey no.	O04/036
Survey date	10 October 1994
Grid reference	O04 412 825
Area	36 ha [c. 15 ha cleared since survey]
Altitude	30-100 m asl

Ecological unit

- (a) Manuka shrubland on hillslope
- (b) Secondary totara forest on hillslope

PURIRI BLOCK RD BUSH

Survey no. O04/038
Survey date 5 October 1994
Grid reference O04 413 816
Area 82.2 ha
Altitude 120-160 m asl

Ecological unit

- (a) Taraire forest on hillslope
- (b) Manuka-kanuka shrubland on hillslope

Landform/geology

Gully heads in Motatau Complex calcareous mudstone and sandstone hill country.

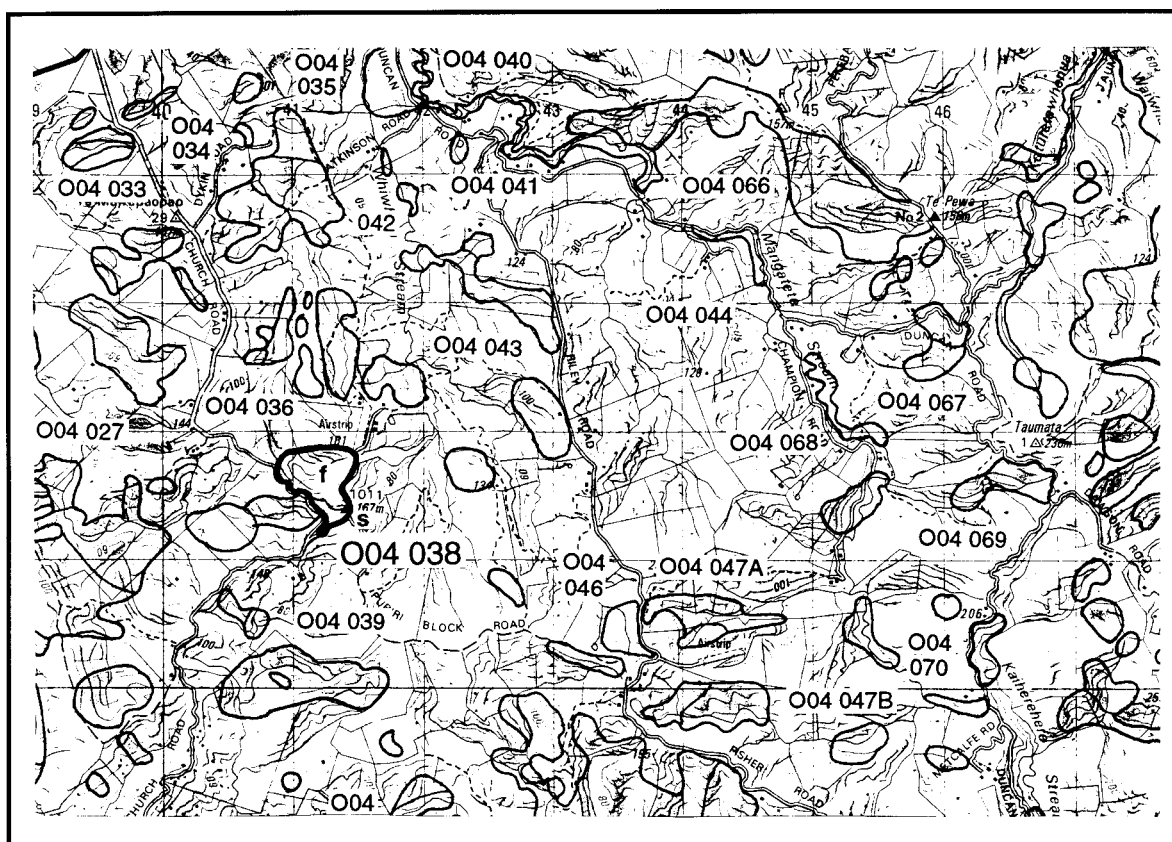


Figure 41. Puriri Block Road Bush, O04 038

Each grid is 1000 m × 1000 m and equals 100 ha.

f = forest; s = shrubland; w = wetland.



Vegetation

Type (a) Taraire forest. Comprises the main bush area with puriri, towai and totara. Other species present include kohekohe, rewarewa, rimu, kahikatea, tanekaha, pukatea, miro, kauri and kanuka.

Type (b) Manuka-kanuka shrubland. On the margins is manuka-kanuka shrubland, most with totara and emerging kauri and rimu, as well as tanekaha, towai and cabbage tree.

Fauna

NI brown kiwi (Category A threatened species).

Significance

A representative site for taraire forest containing a wide range of canopy species, and an important site for kiwi.

Part of this site is included in the 58 ha Mangatete Farm Settlement Scenic Reserve (see also O04/043 Whiwhero Stream, O04/046 Riley Rd and O04/068 Champion Rd).

CHURCH RD EAST

Survey no.	O04/039
Survey date	5 October 1994
Grid reference	O04 410 800
Area	51 ha
Altitude	40-120 m asl

Ecological unit

- (a) Kanuka-totara shrubland on hillslope
- (b) Taraire forest in gully
- (c) Puriri-manuka shrubland on hillslope

Landform/geology

Gullies in Motatau Complex calcareous mudstone and sandstone.

Vegetation

Type (a) Kanuka-totara shrubland. Comprises almost all of this area. Between 3 and 8 m tall, it contains occasional puriri, kahikatea, taraire, kohekohe, pukatea, rimu, mamaku and cabbage tree. At present there is a higher proportion of kanuka than totara in the canopy but totara is close to coming through and is likely to dominate the canopy in the medium term.

Type (b) Taraire forest. Linked by low kanuka to Types (a) and (c).

Type (c) Puriri-manuka shrubland. A small area linked to Type (b) by low kanuka.

Fauna

NI brown kiwi (Category A threatened species).

Significance

A representative site for regenerating kanuka-totara forest and threatened species habitat.

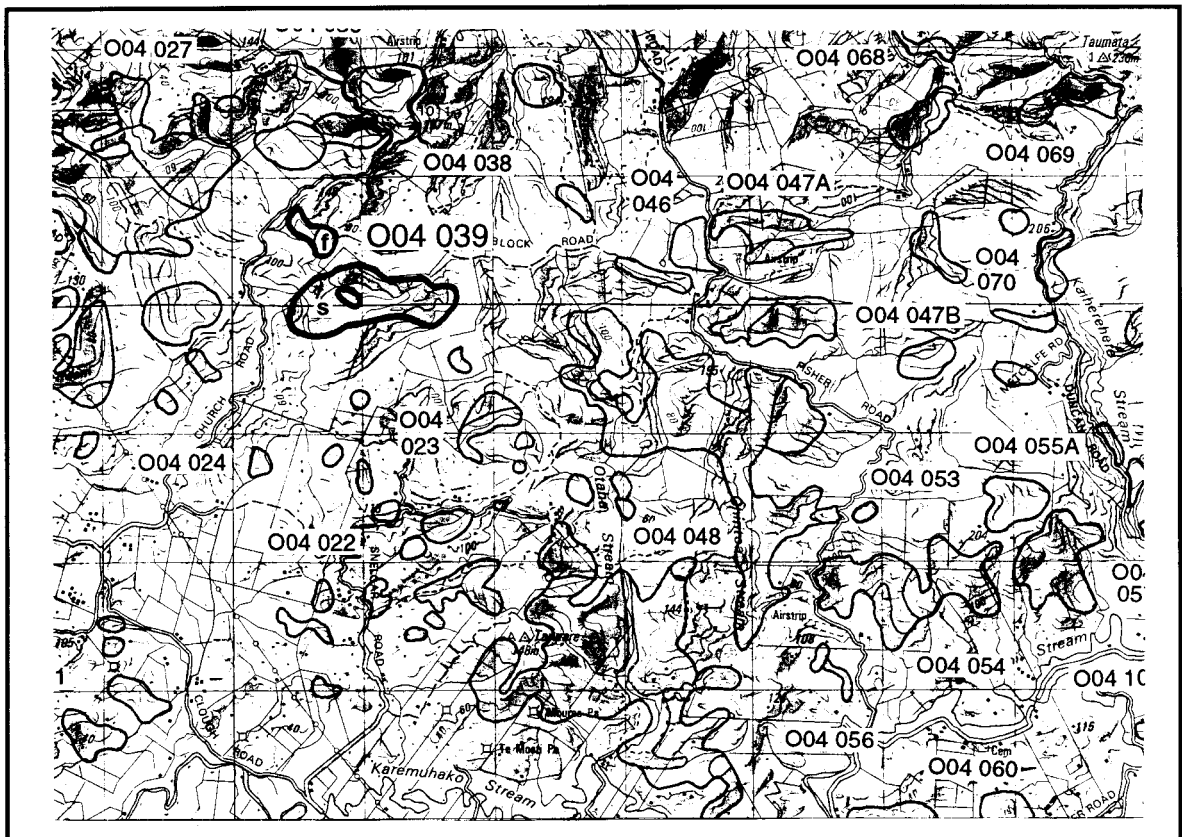
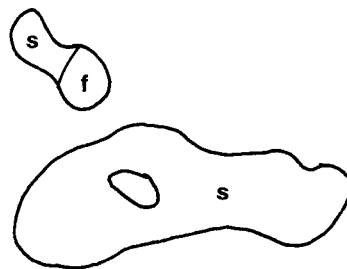


Figure 42. Church Road East, O04 039

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

f = forest; s = shrubland.



CHURTON-ATKINSON RD

Survey no.	O04/040
Survey date	29 September 1994
Grid reference	O04 418 848
Area	22 ha
Altitude	20-60 m asl

Ecological unit

- (a) Manuka-wattle shrubland on hillslope
- (b) Manuka shrubland on hillslope

Landform/geology

Holocene alluvial flats in river valley bounded by low hill country of Motatau Complex calcareous mudstone and sandstone lithofacies.

Vegetation

Type (a) Manuka-wattle shrubland. Comprises just over half this area, with totara and mamaku occurring occasionally. The canopy is open.

Type (b) Manuka shrubland. The remainder of the area is manuka between 4 and 6 m tall with occasional cabbage tree, totara and mamaku.

Fauna

NI brown kiwi (Category A threatened species).

Significance

Threatened species habitat.

The site borders both the Mangatete and Whiwhero Streams, providing a riparian buffer.

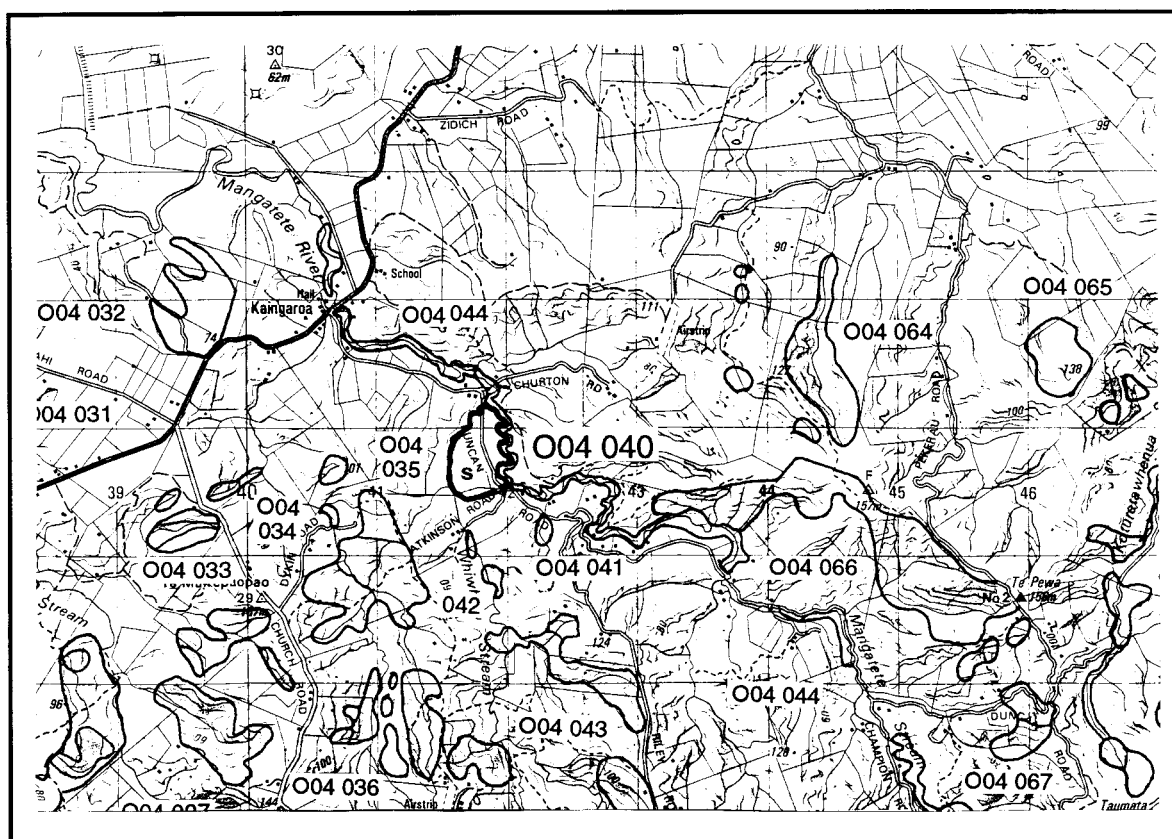


Figure 43. Churton-Atkinson Road, O04 040

Each grid is 1000 m x 1000 m and equals 100 ha. s = shrubland.

WHIWHEREO STREAM CATCHMENT

Survey no.	O04/043
Survey date	29 September 1994
Grid reference	O04 423 834
Area	71.4 ha
Altitude	20-140 m asl

Ecological unit

- (a) Puriri forest in gully
- (b) Totara forest on hillslope
- (c) Taraire-totara forest on hillslope
- (d) Manuka shrubland on hillslope
- (e) Taraire forest on hillslope
- (f) Kanuka-totara forest on hillslope
- (g) Kahikatea-totara forest on hillslope

Landform/geology

Gullies and hillslopes in Motatau Complex calcareous mudstone and sandstone lithofacies, and an area of Holocene alluvial flats in valley of Whiwhereo Stream.

Vegetation

This area consists of a number of broadleaf-podocarp remnants and adjoining shrubland.

Type (a) Puriri forest. In the valley bottom puriri is dominant with totara and taraire common or frequent. Associated species are kahikatea, rimu, kohekohe and cabbage tree.

Type (b) Totara forest. Adjoining (a) is an area of totara dominance with frequent puriri.

Type (c) Totara-taraire forest. With puriri, as well as the other associated species of Type (a). Also located in the valley bottom.

A further area is contiguous with (d), with puriri, and also contains kauri, tanekaha and northern rata.

Type (d) Manuka shrubland. Low vegetation at the head of a gully with occasional totara, cabbage tree and kahikatea.

Type (e) Taraire forest. A remnant further along Riley Rd with frequent totara and puriri. Associated species are rimu, kahikatea, rewarewa, kohekohe, cabbage tree and mamaku.

Across the valley are two smaller taraire remnants with frequent puriri.

Type (f) Totara-kanuka forest. With occasional puriri and rewarewa. This is attached to the second taraire remnant.

Type (g) Totara-kahikatea forest. A small area with puriri.

Fauna

NZ pigeon (Category B threatened species), NI brown kiwi (Category A threatened species).

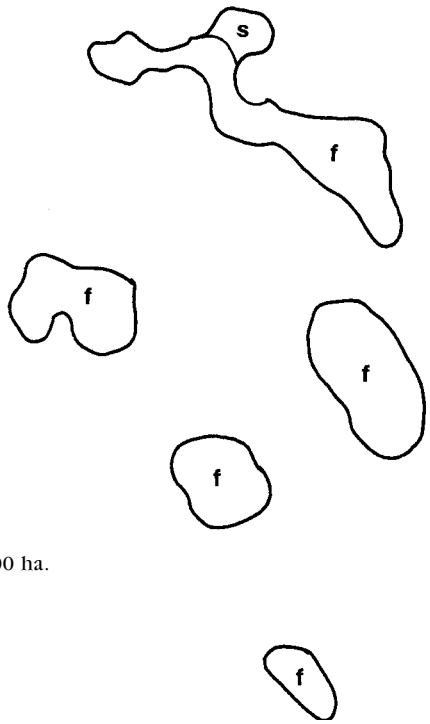
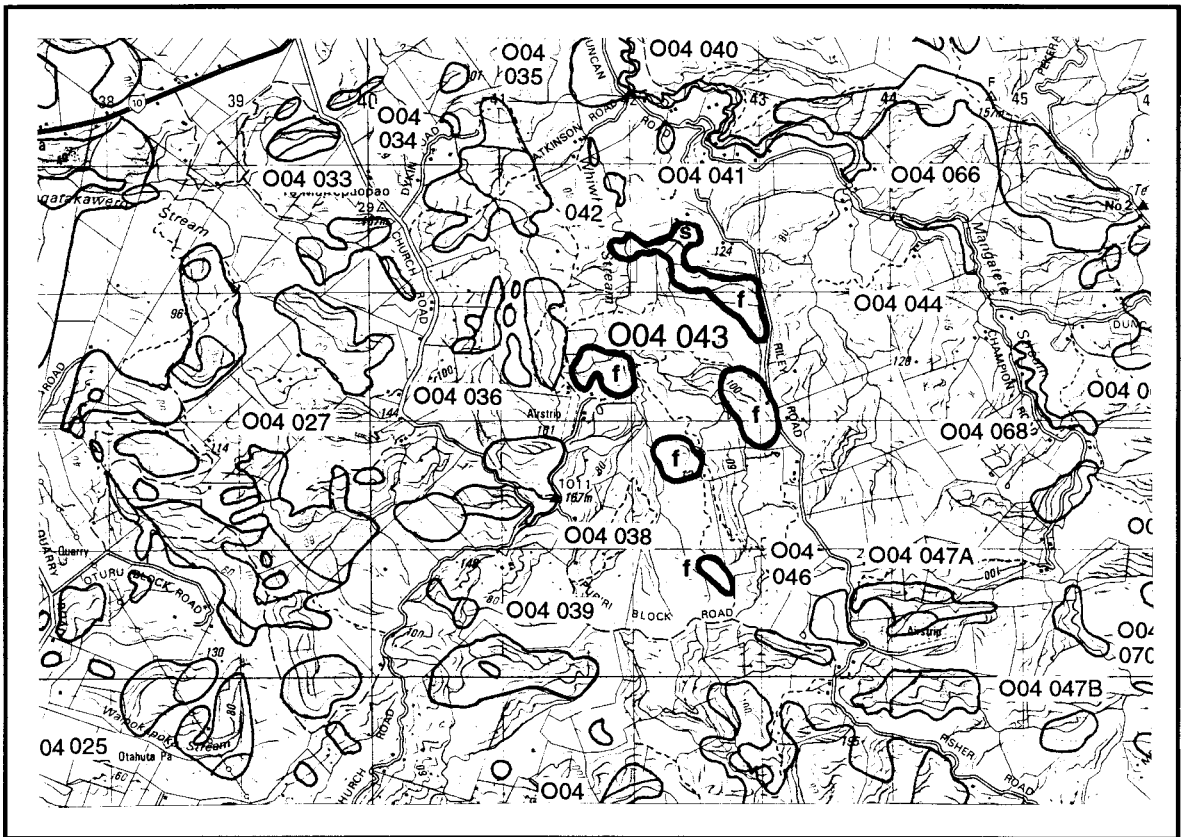


Figure 44. Whiwhero Stream, O04 043

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

f = forest; s = shrubland.

Significance

Some of this site is part of the 58 ha Mangatete Farm Settlement Scenic Reserve administered by the Department of Conservation (see also O04/038 Puriri Block Rd Bush, O04/046 Riley Rd and O04/068 Champion Rd).

A representative site for taraire and puriri forest types. Puriri is frequent throughout the site, including on alluvium.

Habitat for NZ pigeon and kiwi.

Parts of the site perform riparian protection functions.

MANGATETE STREAM

Survey no.	O04/044
Survey date	29 September 1994
Grid reference	O04 444 833
Area	27 ha
Altitude	sea level to 20 m

Ecological unit

- (a) Totara-puriri forest on alluvium
- (b) Cabbage tree forest on alluvium
- (c) Puriri treeland on alluvium
- (d) Secondary totara treeland on alluvium

Landform/geology

Holocene alluvial flats in the valley of the Mangatete Stream.

Vegetation

Scattered, semi-contiguous and contiguous vegetation containing both indigenous and exotic species, along the banks of the Mangatete River.

Near the SH10 bridge there are eucalyptus and willow. Moving upstream, there is the occasional puriri and titoki. The vegetation here is discontinuous, and there is an open area for about 300 m until Type (a) commences.

Type (a) Totara-puriri forest. With occasional cabbage tree, titoki, taraire, kanuka and tobacco weed.

Type (b) Cabbage tree forest. Almost 1 km upstream, cabbage tree becomes common, with totara and willow frequent.

Some open areas occur along the riverbank, then the river joins Churton-Atkinson Rd (Site O04/040).

Type (c) Puriri treeland. Upstream of O04/040, puriri is abundant, cabbage tree frequent and totara, macrocarpa and eucalyptus occasional.

Type (d) Totara treeland. From Type (c) to Champion Rd, the vegetation is primarily totara, sometimes with frequent taraire or kanuka. Other species occurring are rimu, kauri, puriri, cabbage tree, kahikatea, titoki, kohekohe and mamaku.

Fauna

Short-finned eel, common bully, common smelt, koura (1988), long-finned eel, torrentfish, red-finned bully (1965). An updated fish survey is recommended.

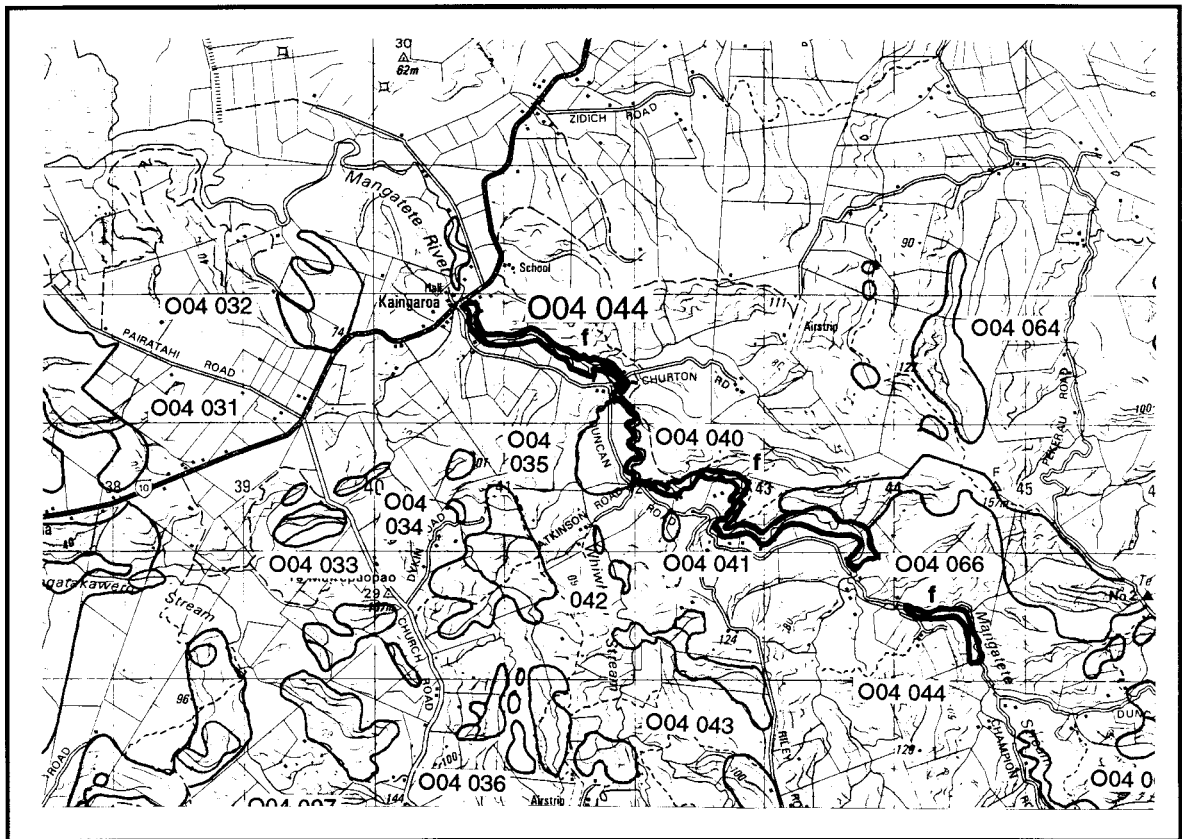


Figure 45. Mangatete Stream, O04 044
 Each grid is 1000 m x 1000 m and equals 100 ha. f = forest.

Significance

A representative site for these vegetation types on alluvium, much reduced from their former extent. Puriri and cabbage tree on alluvium are now uncommon in the Ecological District and Region.

It is one of the best examples in the Ecological District of riparian vegetation, giving > 50% shading to the stream and providing habitat for aquatic species.

RILEY RD EAST

Survey no.	O04/045
Survey date	February 1996
Grid reference	O04 435 827
Area	32.8 ha
Altitude	20-40 m asl

Ecological unit

- (a) Taraire-towai forest on hillslope
- (b) Kanuka forest and shrubland on hillslope and alluvium
- (c) Totara forest on alluvium

Landform/geology

Gullies in Motatau Complex calcareous mudstone and sandstone hill country and Holocene alluvial flats in lower reaches of the valley.

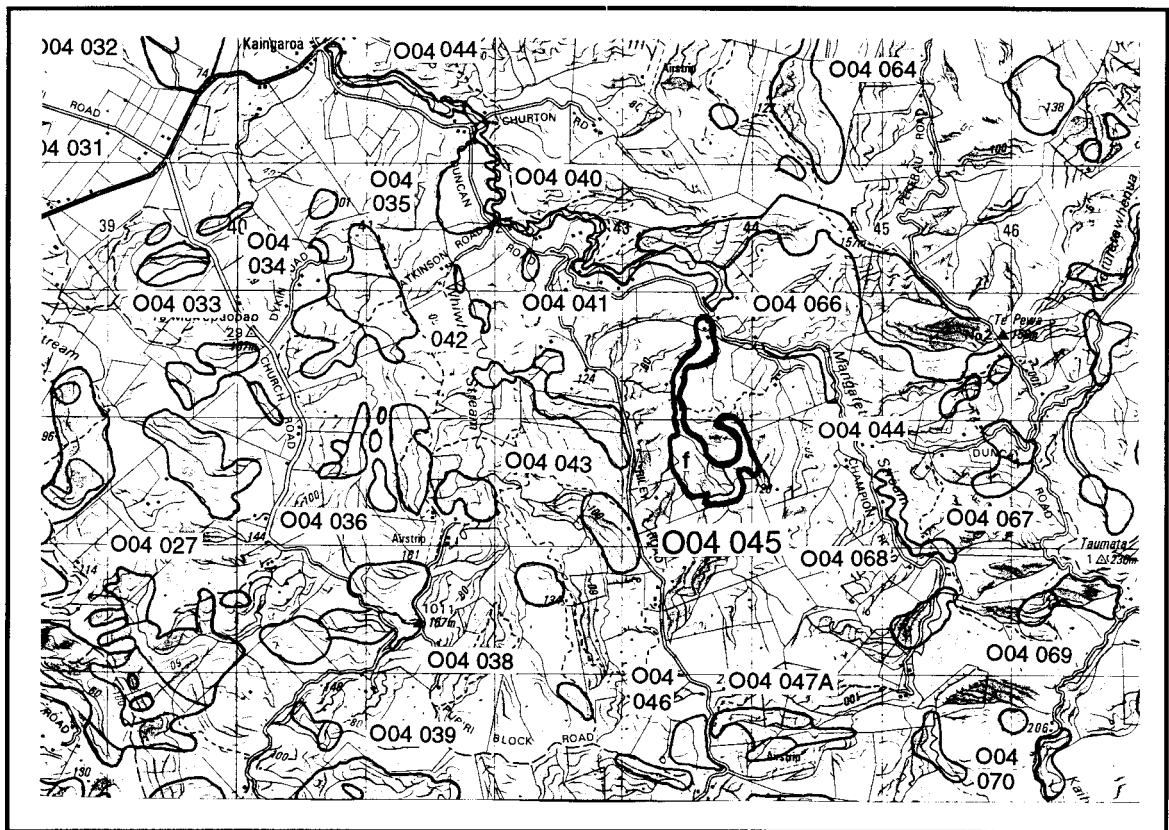
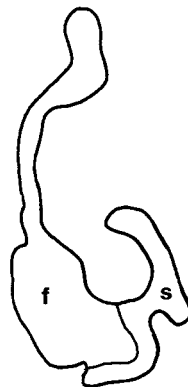


Figure 46. Riley Road East, O04 045

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

f = forest; s = shrubland.



Vegetation

Type (a) Taraire-towai forest. Tall forest comprises more than half the area with totara and scattered rewarewa, rimu, kahikatea, puriri, pukatea, tanekaha and kanuka. Kauri and kawaka occur in small numbers on the main ridge.

The understorey is still fairly open especially on the margins where stock had access until recently. The sub-canopy consists mainly of kohekohe, nikau and ponga. Kohekohe, kanuka and mahoe are locally abundant in the shrub layer. Elsewhere totara seedlings, mapou, hangehange, *Coprosma* spp and ponga are common. Seedlings of nikau, kohekohe, rewarewa, puriri and kahikatea occur throughout. Along the streams there are areas where lady fern and mistweed are locally abundant.

Type (b) Kanuka forest and shrubland. Comprises the second main vegetation type with frequent totara, particularly on the margins. Kahikatea occurs frequently and puriri and tanekaha are also present. This area has a dense understorey of ponga, bracken, hangehange and a variety of shrubs.

Both of these areas are mostly fenced.

Running up a shallow gully to the ridge parallel to the block is another area of tall kanuka with thick totara and kahikatea regeneration and with frequent mamaku. Although a number of different weed species are present in the area, none occur to any significant degree.

Along the watercourse downstream of the main block is tall kanuka shrubland, with totara and kahikatea sometimes frequent. Rimu and cabbage tree can also be found.

Type (c) Secondary totara forest. A small area near Duncan Rd with frequent puriri and occasional taraire, kahikatea, eucalyptus, pine and macrocarpa, part of which is contiguous with the vegetation along the Mangatete Stream and tributary.

Significant flora

Kawaka - notable in the Ecological District.

Fauna

NZ pigeon (Category B threatened species), NI brown kiwi (Category A threatened species).

Significance

Threatened species habitat near the head of a catchment with good regeneration and contributing to riparian protection.

RILEY RD BUSH

Survey no.	O04/046
Survey date	3 October 1994
Grid reference	O04 436 804
Area	15.9 ha
Altitude	100-200 m asl

Ecological unit

- (a) Puriri-taraire forest on hillslope
- (b) Kanuka forest on hillslope
- (c) Manuka shrubland on hillslope
- (d) Taraire forest on hillslope

Landform/geology

Gully heads in Motatau Complex calcareous mudstone and sandstone hill country.

Vegetation

Type (a) Puriri-taraire forest. With occasional rewarewa, totara, kahikatea, matai, kohekohe, nikau and mamaku, forms the majority of the largest area.

Type (b) Kanuka forest. With rimu and totara and occasional puriri and taraire.

Type (c) Manuka shrubland (not mapped). A small area of low vegetation with cabbage tree and tree fern comprises < 5% of the easternmost block.

Type (d) Taraire forest. The smaller remnant contains frequent nikau, puriri, totara and kanuka and occasional rewarewa and kahikatea.

Fauna

NZ pigeon (Category B threatened species), NI brown kiwi (Category A threatened species).

Significance

Threatened species habitat.

Some of this site is part of the 58 ha Mangatete Farm Settlement Scenic Reserve (see also O04/038 Puriri Block Rd Bush, O04/043 Whiwhero Stream and O04/068 Champion Rd).

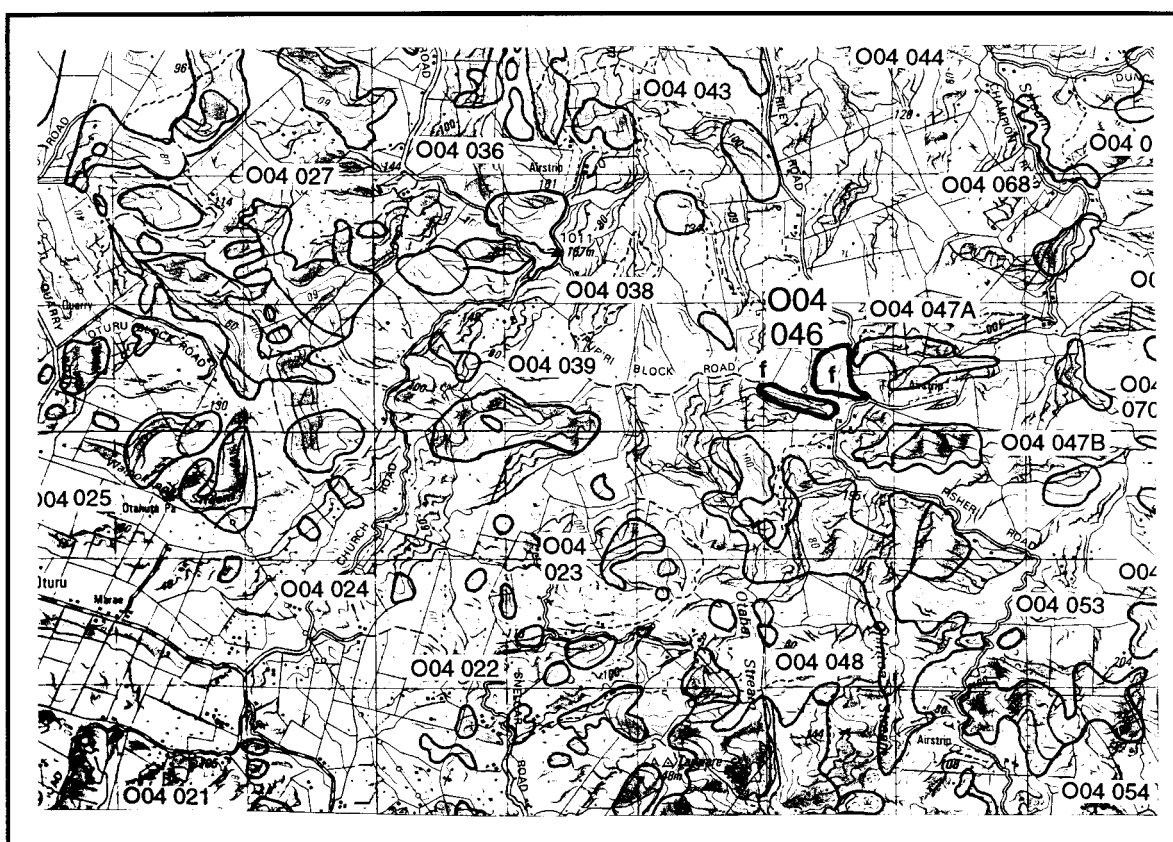
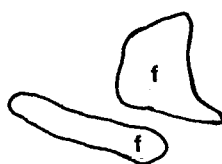


Figure 47. Riley Road Bush, O04 046

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

f = forest.



AIRSTRIP RILEY RD

Survey no. O04/047A
Survey date 3 October 1994
Grid reference O04 443 805
Area 24.4 ha
Altitude 80-160 m asl

Ecological unit

- (a) Manuka shrubland on steep hillslope
- (b) Taraire forest on steep hillslope
- (c) Cabbage tree shrubland on hillslope

Landform/geology

Valley heads in Motatau Complex calcareous mudstone and sandstone hill country.

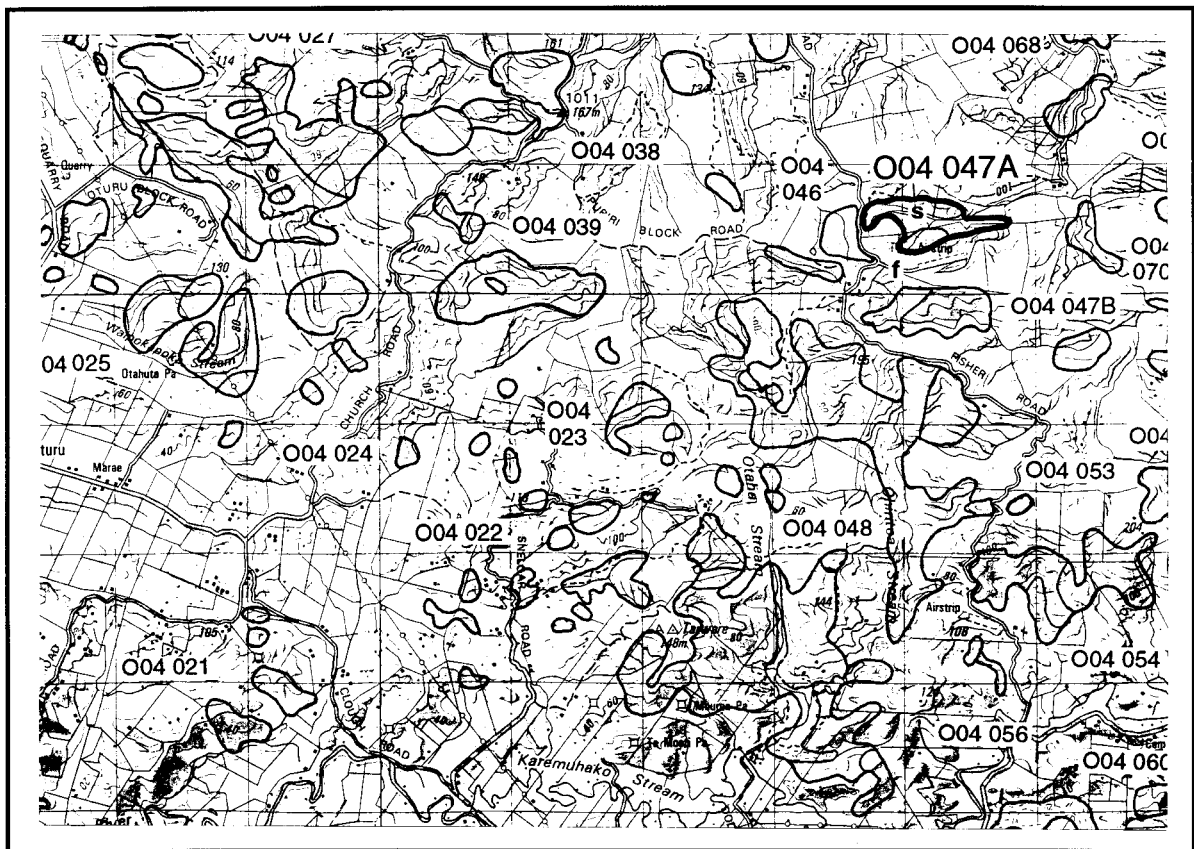
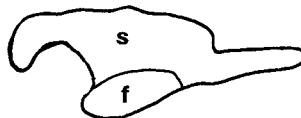


Figure 48. Airstrip Riley Road, O04 047A

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

f = forest; s = shrubland.



Vegetation

Type (a) Manuka shrubland. Occurs on steep slopes to a stream.

Type (b) Taraire forest. A small pocket on the edge of Type (a).

Type (c) Cabbage tree shrubland. A small, fairly open area at the head of the gully.

Fauna

NZ pigeon (Category B threatened species), NI brown kiwi (Category A threatened species).

Significance

Head of a steep catchment and almost contiguous with an area containing high kiwi numbers.

Representative site for cabbage tree stands which are uncommon in the Ecological District, with only three sites recorded.

FISHER RD

Survey no.	O04/047B
Survey date	3 October 1994
Grid reference	O04 444 798
Area	26 ha
Altitude	120-180 m asl

Ecological unit

- (a) Taraire forest on hillslope
- (b) Secondary manuka-totara forest on hillslope
- (c) Manuka-kanuka shrubland on hillslope
- (d) Raupo-cabbage tree swamp in valley bottom

Landform/geology

Valley head in Motatau Complex calcareous mudstone and sandstone hill country.

Vegetation

Type (a) Taraire forest. Comprises more than half of the vegetation to the south of the airstrip, with frequent towai. Puriri, kohekohe, rimu, kahikatea and northern rata are also present.

Type (b) Secondary manuka-totara forest. Also with frequent towai.

Type (c) Manuka-kanuka shrubland. Tall vegetation with occasional totara, puriri, kahikatea, cabbage tree and mamaku. Higher up the gully is some low manuka shrubland with bracken and cabbage tree.

Type (d) Raupo-cabbage tree swamp (not mapped). With manuka, in the valley floor, constitutes < 5% of the site.

Fauna

NZ pigeon (Category B threatened species), NI brown kiwi (Category A threatened species).

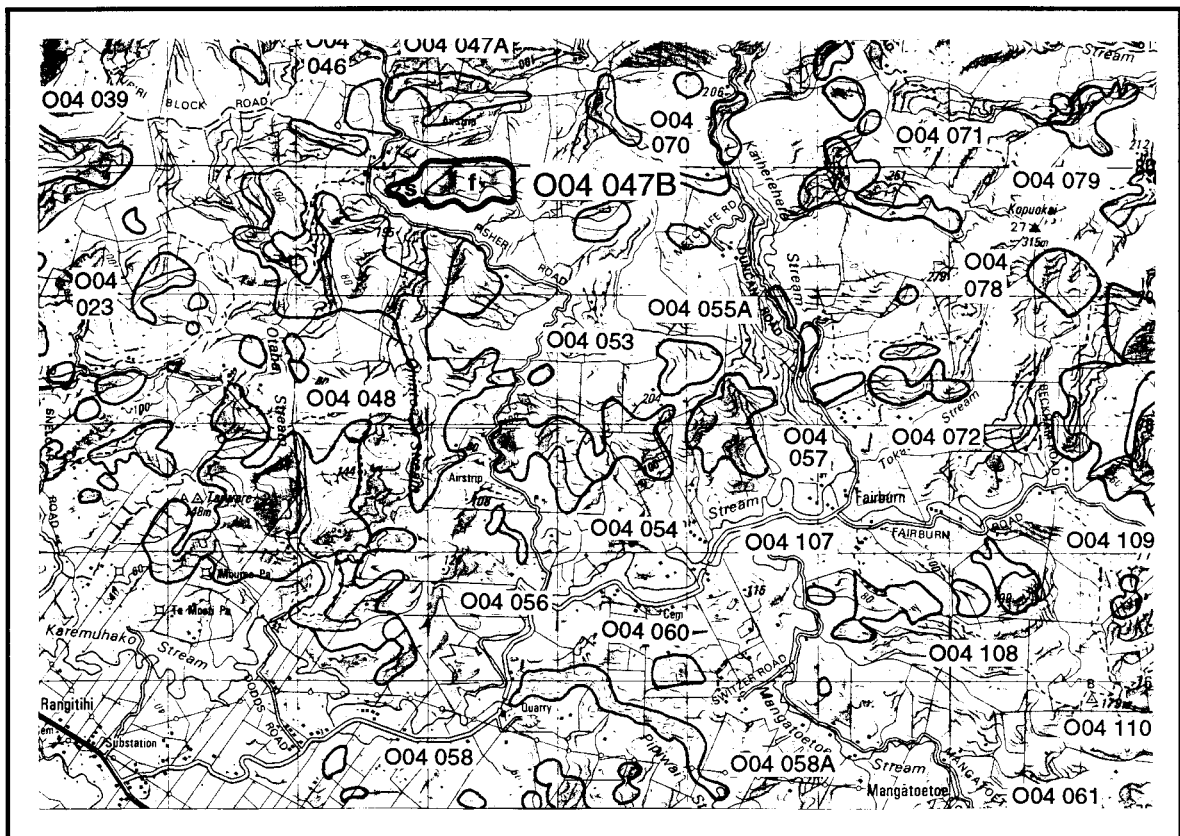


Figure 49. Fisher Road, O04 047B

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

f = forest; s = shrubland; w = wetland.



Significance

A reasonably large, diverse area and a representative site for raupo-cabbage tree swamp, being the only one of its type recorded in the Ecological District.

Habitat for threatened species.

OTAHA-OHIRITOA

Survey no.	O04/048
Survey date	3 October 1994
Grid reference	O04 435 780 [422-425 760-799]
Area	375.9 ha
Altitude	30-180 m asl

Ecological unit

- (a) Manuka-kanuka shrubland on hillslope
- (b) Kanuka-towai shrubland on hillslope
- (c) Towai shrubland on hillslope
- (d) Manuka-totara-gorse shrubland on hillslope
- (e) Taraire forest on hillslope
- (f) Puriri-tairaire forest on hillslope
- (g) Puriri-totara forest on hillslope
- (h) Totara forest on hillslope
- (i) Secondary kahikatea on alluvium
- (j) Open water - constructed pond in stream valley
- (k) Raupo reedland on alluvium

Landform/geology

Hill country of Motatau Complex calcareous mudstone and sandstone lithofacies, with Holocene alluvial flats and wetlands in the valley of Otaha and Ohiritoa streams.

Vegetation

A mosaic of shrubland of varying age and size with pockets of forest which is contiguous or almost contiguous, and including two stream valleys and a wetland system.

In the upper catchment are two types of shrubland:

Type (a) Manuka-kanuka shrubland. Occurs at the head of the catchment with locally frequent totara and towai, and scattered puriri, rimu, kahikatea and mamaku.

The vegetation on either side of Ohiritoa Stream is mostly manuka between 2 and 6 m in height. Other species occurring are cabbage tree, mamaku, totara and towai.

On the eastern side of Otaha Stream, about two-thirds of the adjoining hillside is manuka-kanuka up to 6 m with totara and occasional mamaku.

On the fringes of Tarware are a variety of forms of manuka-kanuka shrubland, from 1 m tall containing gorse, to tall secondary stands with totara, puriri, mamaku and cabbage tree.

In the south-eastern sector of the catchment is another extensive area of manuka-kanuka shrubland with totara, kahikatea, puriri and cabbage tree. About 10% of this area also contains gorse and some tobacco weed.

Type (b) Kanuka-towai shrubland. Tall vegetation in the head of the catchment with frequent totara and also containing kohekohe, mahoe, mamaku and cabbage tree.

Type (c) Towai shrubland. Occurs with scattered mamaku near the Ohiritoa Stream.

Type (d) Manuka-totara-gorse shrubland. Occurs downstream of the Otaha wetland area.

Type (e) Taraire forest. Between Fisher Rd and Ohiritoa Stream, towai and puriri are frequent. Other species occurring are rewarewa, rimu, totara, kahikatea, white maire, nikau, kohekohe, lacebark, mamangi and hinau.

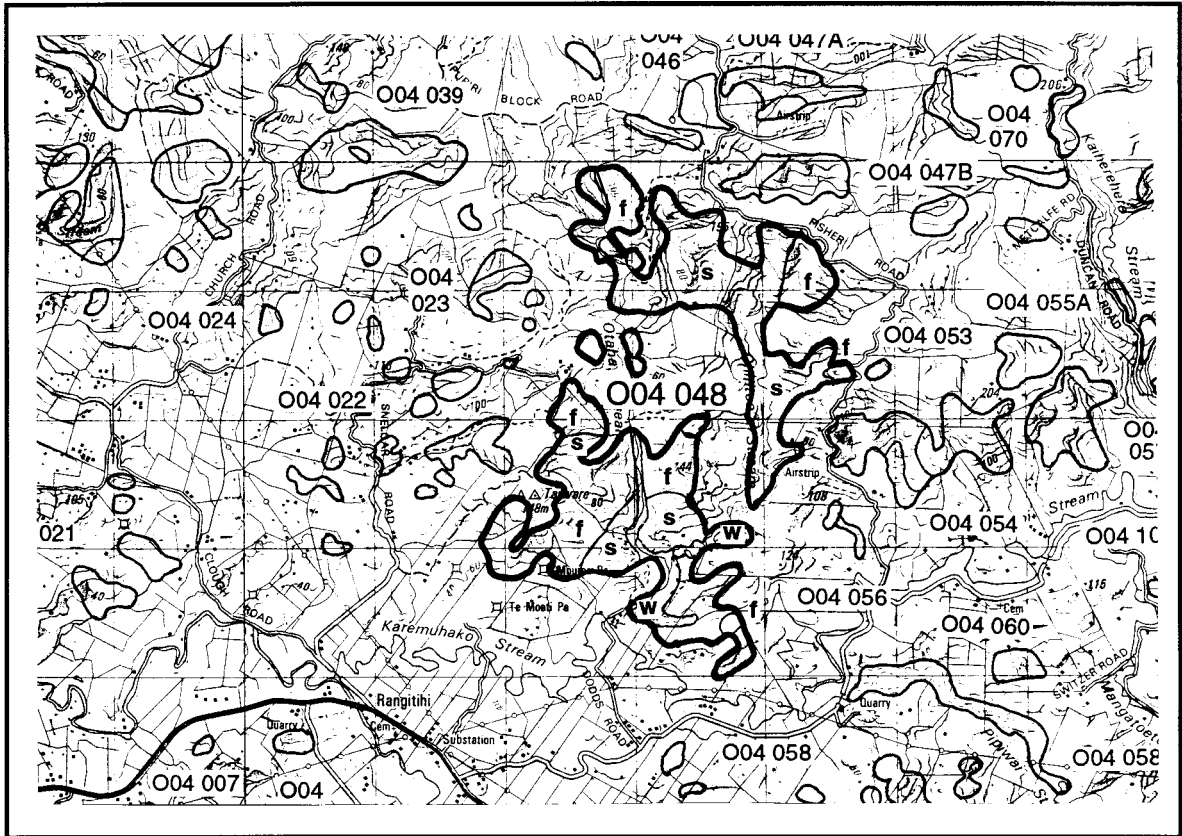
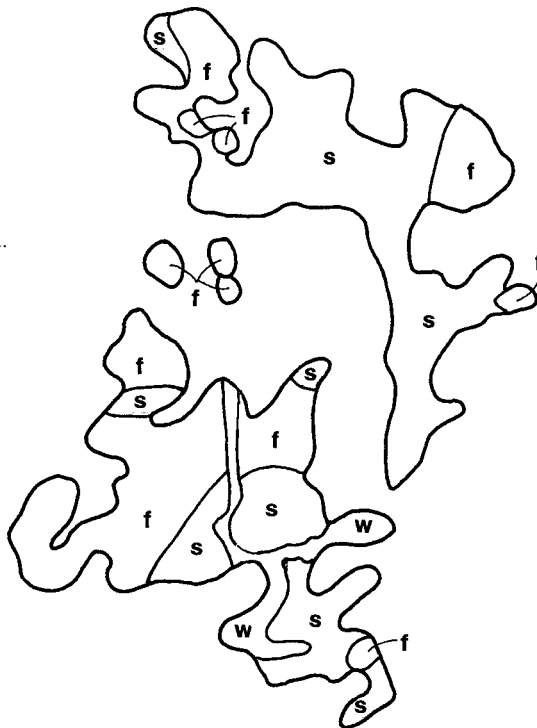


Figure 50. Otaha-Ohiritoa, O04 048
 Each grid is 1000 m x 1000 m and equals 100 ha.
 f = forest; s = shrubland; w = wetland.



Several gullies to the west, there is another area of tairare, with puriri and kahikatea, and occasional totara, nikau, kohekohe, rewarewa, pukatea and mamaku.

On the eastern side of Otaha Stream, one-third of the vegetation is taraire with kahikatea and occasional rimu, totara, nikau, mamaku, rewarewa, cabbage tree, miro, and matai (this adjoins Tarware).

To the west is a further extensive area of indigenous vegetation below the Tarware trig, more than half of which contains taraire forest. In about 20% on the northern side and in a pocket on the edge of the Otaha Stream, puriri is common or frequent. Kahikatea is frequent on the northern side.

To the south, taraire is abundant, puriri only occasional, and towai and kahikatea frequent. On the western side, kanuka, puriri and kahikatea are all frequent with taraire still being common. Other species occurring are rimu, totara, pukatea, kauri, kohekohe, northern rata, rewarewa, nikau and mamaku.

There is also a pocket of taraire with totara and rimu with isolated kauri and puriri in the south-eastern sector of the catchment adjoining the shrubland.

Type (f) Puriri-taraire forest. Comprises about 20% of the area at Tarware with frequent kahikatea and occasional rimu and totara.

Type (g) Puriri-totara forest. Occurs in a gully at the end of Snelgar Rd. Taraire and kahikatea are frequent and rewarewa occasional.

Type (h) Totara forest. Occurs with taraire, puriri and towai on a hillside south of Tarware. Also present are kahikatea, cabbage tree, kohekohe, kanuka and karaka. Nikau is common in the sub-canopy. Other species present include manuka, lacebark, mapou, hangehange, mahoe, mingimingi, *Coprosma parviflora* and *Astelia* sp.

Type (i) Secondary kahikatea forest. In the south-eastern sector of the catchment a small area of secondary kahikatea adjoins the shrubland.

Type (j) Open water. Upstream of the confluence of the Ohiritoa and Otaha Streams are two adjoining constructed lakes which are about 60% open water.

Type (k) Raupo reedland. Comprises about 40% of the beds of the lakes.

The southeastern side of the lakes is in pasture, with the remaining margins in shrubland with a thicket of willow at the outlet.

Upstream of the lakes on the Otaha Stream, is an extensive area of raupo with occasional swamp maire, pukatea, wheki, sedge and kiokio.

The surrounding vegetation is manuka with kahikatea and putaputaweta. Below the outlet raupo also occurs. Surrounding vegetation here is willow, eucalyptus, kahikatea, rewarewa, taraire, nikau, mamaku and tawa, and Type (d).

In addition there are extensive areas of what has at one time been pasture which is reverting to raupo with aquatic herbs, kahikatea and the occasional swamp maire and wheki.

Significant flora

Swamp maire - uncommon in the Ecological District.

Fauna

A high number of kiwi calls (Category A threatened species) were recorded from Fisher Rd in 1992 (18 calls per hour); NZ pigeon (Category B threatened species), Australasian bittern (Category O threatened species); spotless crane, NI fernbird (both regionally significant species); kauri snail (Category C threatened species).

Significance

A large contiguous area covering a range of habitat types and including the upper catchment, corridors and buffers of several wetland and freshwater ecosystems. It contains a variety of forms of regeneration as well as a reasonably diverse area of forest.

It is a representative site for taraire and totara forest types and raupo swamp, and is the best and largest example of open water habitat in the Ecological District.

In addition, it contains good numbers of kiwi, especially in the northern section, and is important for several other significant species.

It includes one of the most extensive wetland systems remaining in the district. It is the largest open freshwater habitat in the Ecological District and the largest such habitat between Aupouri and Kaikohe Ecological Districts.

Although modified, there is considerable potential for restoration, especially as the upper catchment has a considerable amount of native vegetation remaining in it, although apparently grazed.

TE PUHI SWAMP #1 AND BUSH

Survey no.	O04/054
Survey date	3 October 1994
Grid reference	O04 452 776
Area	56.2 ha
Altitude	30-180 m asl

Ecological unit

- (a) Manuka shrubland on hillslope
- (b) Taraire forest on hillslope
- (c) Secondary kahikatea forest on toeslope
- (d) Raupo reedland in valley bottom

Landform/geology

Dissected hill country of Motatau Complex calcareous mudstone and sandstone, and adjoining area of Holocene valley alluvium and wetland along tributary of Te Puhi Stream.

Vegetation

Type (a) Manuka shrubland. More than half of the area is manuka shrubland about 3 m tall with occasional kahikatea, rewarewa, totara, cabbage tree, and mamaku.

Type (b) Taraire forest. Consists of a pocket near the road with occasional rewarewa, puriri, rimu, totara, kahikatea, pukatea, towai and cabbage tree. In some places taraire is less abundant and kahikatea frequent.

Type (c) Secondary kahikatea forest. In the valley bottom a remnant of secondary kahikatea, with manuka and occasional cabbage tree adjoining the swamp.

Type (d) Raupo reedland. With scattered cabbage tree, kahikatea, wheki and willow. Farmland and some pines occur on the wetland margin.

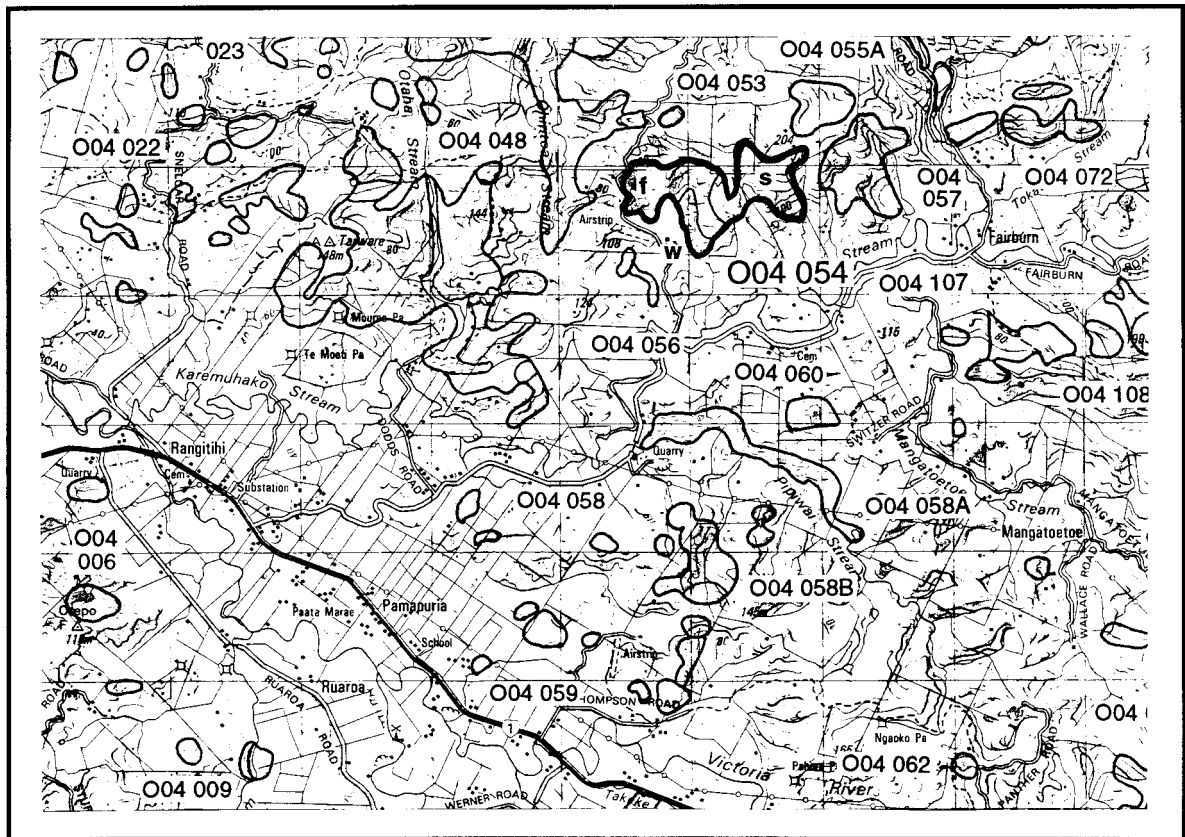
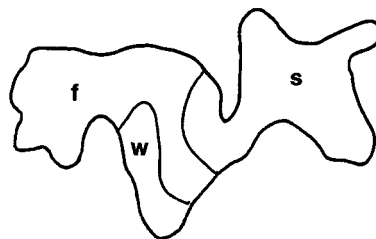


Figure 51. Te Pahi Swamp #1 and Bush, O04 054
 Each grid is 1000 m x 1000 m and equals 100 ha.
 f = forest; s = shrubland; w = wetland.



Fauna

NI brown kiwi (Category A threatened species), NZ pigeon (Category B threatened species).

Significance

A diversity of habitats from wetland to forest, supporting threatened species.

The kahikatea is an uncommon vegetation type.

The remainder of the area acts as a corridor almost linking this area to Foley O04/057 and Fairburn 204 O04/055A.

FAIRBURN 204

Survey no. O04/055A
Survey date 20 March 1995
Grid reference O04 460 785
Area 14.1 ha
Altitude 160-200 m asl

Ecological unit

(a) Manuka shrubland on hillslope

Landform/geology

Dissected hill country of Motatau Complex calcareous mudstone and sandstone lithofacies.

Vegetation

Manuka shrubland between 3 and 4 m tall with occasional totara and mamaku.

Fauna

NI brown kiwi (Category A threatened species).

Significance

Kiwi habitat.

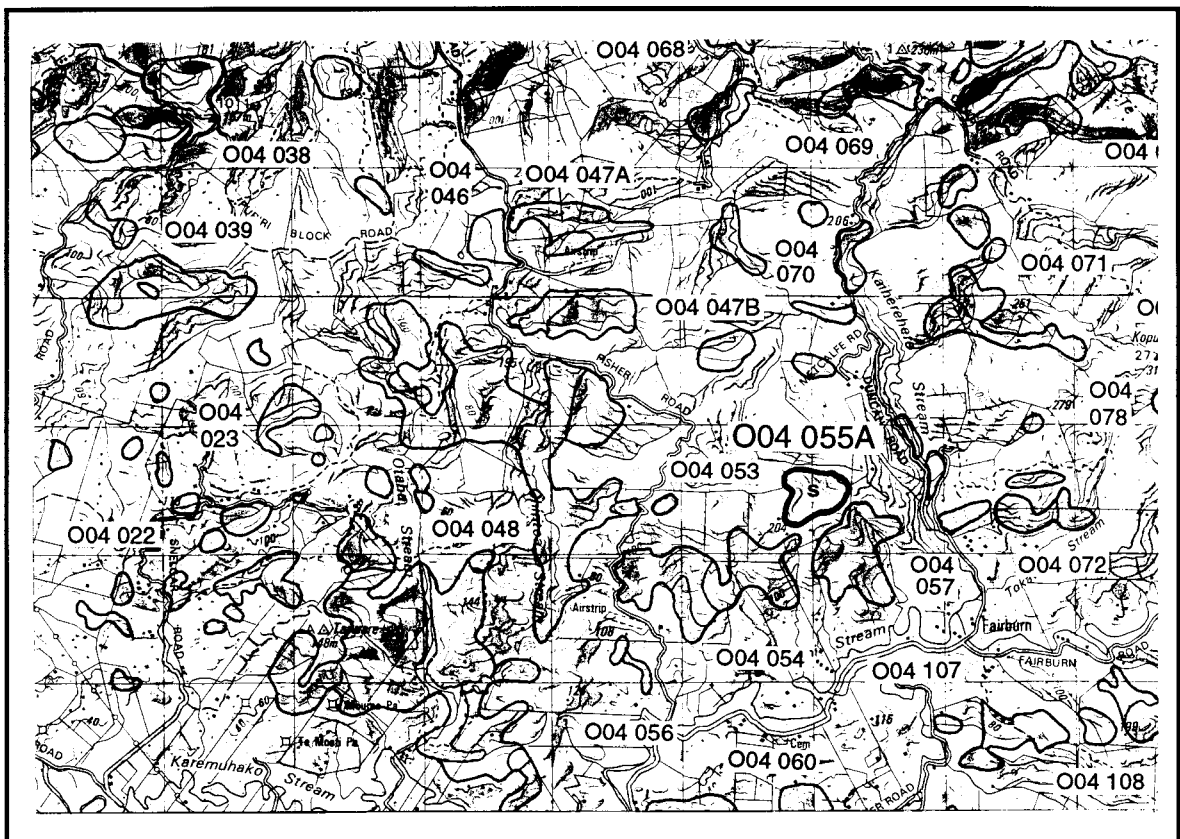


Figure 52. Fairburn 204, O04 055A

Each grid is 1000 m × 1000 m and equals 100 ha. s = shrubland.