## 4.2 LEVEL TWO SITES

| SURVEY<br>NUMBER | GRID REFERENCE  |
|------------------|---|
| Q05/027          | Q05 314 521, Q05 317 519, Q05 316 516, Q05 312 521,   |
|                  | Q05 311 519, Q05 318 516, Q05 309 521   |
| Q05/032          | Q05 318 450, Q05 314 447  |
| Q06/008          | Q06 194 349, Q06 189 346, Q06 184 348   |
| Q06/034          | Q06 350 301   |
| Q06/035          | Q06 302 359, Q06 309 364  |
| Q06/076          | Q06 349 244   |
| Q06/084          | Q06 424 201   |
| Q06/086          | Q06 417 215   |
| Q06/087          | Q06 436 201   |
| Q06/088          | Q06 334 254, Q06 328 256  |
| Q06/096          | Q06 484 188   |
| Q06/107          | Q06 353 270, Q06 354 273  |
| Q07/017          | Q07 443 071   |
|                  |   |
| Q06/126          | Q06 478 150   |
|                  | NUMBER  Q05/027  Q05/032  Q06/008  Q06/034  Q06/035  Q06/076  Q06/084  Q06/086  Q06/087  Q06/088  Q06/096  Q06/107  Q07/017 |

#### **NGAIOTONGA REMNANTS**

Survey no. Q05/027

Survey date 5 February 1997

Grid reference Q05 314 521, Q05 317 519, Q05 316 516, Q05 312 521,

Q05 311 519, Q05 318 516, Q05 309 521

Area 18 ha

Altitude 15-45 m asl

#### Ecological unit

- (a) Taraire forest on hillslope
- (b) Kanuka/manuka-taraire-totara forest on hillslope
- (c) Kanuka/manuka-totara forest on hillslope

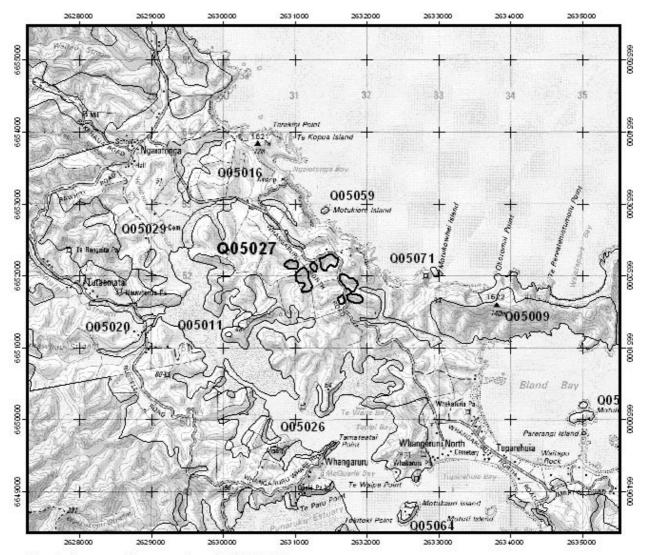
#### Landform/geology

Dissected coastal hillcountry in Waipapa Terrane greywacke.

## Vegetation

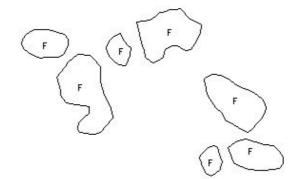
This site is composed of several small forest remnants, surrounded by either pasture or pine forest.

- (a) Taraire is dominant in some instances, with rewarewa, manuka, puriri, and totara also present.
- (b) The remnants in the pine forest are predominantly kanuka/manuka, with totara and taraire common. Kahikatea, rimu, puriri, and rewarewa are frequent, with occasional pohutukawa.
- (c) One of the remnants is dominated by kanuka/manuka and totara, with frequent kahikatea.



## Ngaiotonga Remnants Q05/027

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



#### Fauna

Not surveyed, but likely to provide stepping stones for birds (especially kukupa and tui) moving between Russell Forest and Bland Bay Forest/Whangaruru North Head.

## Significance

Small coastal remnants which potentially provide food for kukupa, but the fragmentation of this site limits its significance.

## **OAKURA REMNANTS**

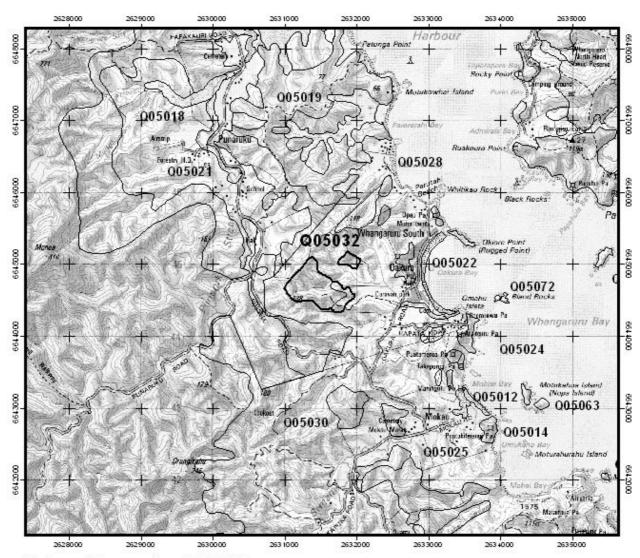
Survey no. Q05/032

Survey date 3 February 1997

Grid reference Q05 318 450, Q05 314 447

Area 42 ha (36 ha forest, 6 ha shrubland)

Altitude 20-138 m asl



## Oakura Remnants Q05/032

Each grid is 1000 m × 1000 m

and = 100 ha

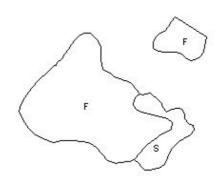
S = shrubland

F = forest

W = wetland

E= estuarine

D = duneland



#### Ecological unit

- (a) Kanuka/manuka forest on hillslope
- (b) Kauri-puriri forest on hillslope
- (c) Kanuka/manuka shrubland on hillslope

## Landform/geology

Dissected hillcountry in Waipapa Terrane greywacke.

#### Vegetation

Two small forest remnants, surrounded in part by pine plantations.

- (a) The area around the high point consists of kanuka/manuka forest, with frequent emergent kauri, puriri, and totara, and occasional nikau.
- (b) South-facing slopes feature kauri-puriri forest, with totara and rimu also present.
- (c) Kanuka/manuka shrubland on the edge of the site has emergent totara and kahikatea.

#### Fauna

Not surveyed.

#### Significance

Possible linkage function, and potential seasonal food source for kukupa.

## TAIPUHI ROAD REMNANTS

Survey no. Q06/008

Survey date 10 August 1994

Grid reference Q06 194 349, Q06 189 346, Q06 184 348

Area 78 ha

Altitude 110-240 m asl

#### Ecological unit

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

#### Landform/geology

Hillcountry of Waipapa Terrane greywacke.

### Vegetation

Three recently fragmented secondary forest and shrubland remnants. Forest types include:

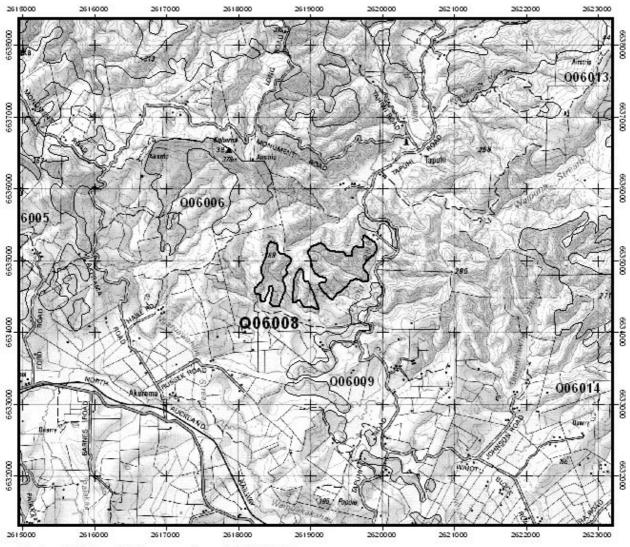
- (a) Kanuka/manuka-taraire-towai forest with frequent totara, rewarewa, kohuhu, and tanekaha, and occasional rimu and emergent northern rata.
- (b) Tanekaha forest with frequent kauri, rewarewa, and totara, and occasional rimu.
- (c) Kanuka/manuka forest with no associated species.

#### Fauna

Not surveyed, but is a potential food source for kukupa.

#### Significance

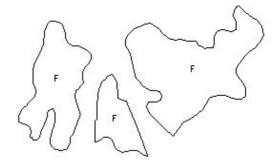
A small outlier of Russell Forest, performing a linkage and upper catchment/riparian protection function.



# Taipuhi Road Remnants Q06/008

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

D = duneland



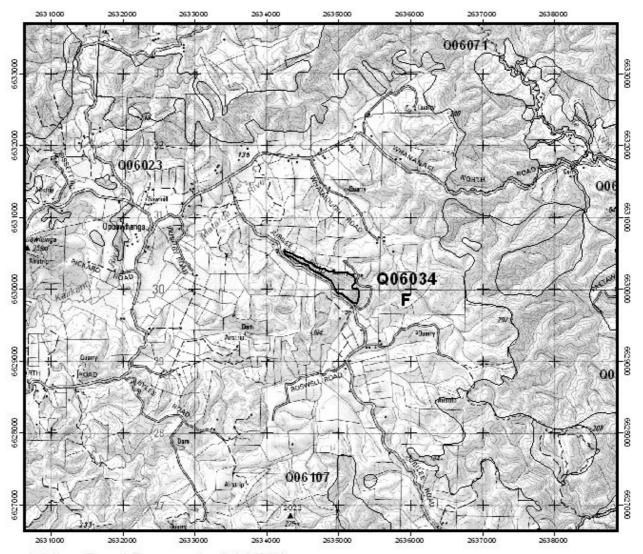
## JUBILEE ROAD REMNANT

Survey no. Q06/034

Survey date 27 February 1997 Grid reference Q06 350 301

Area 15 ha (13 ha forest, 2 ha shrubland)

Altitude 120-200 m asl



## Jubilee Road Remnant Q06/034

Each grid is 1000 m × 1000 m and = 100 ha S = shrubland F = forest W = wetland

E = estuarine D = duneland

#### Ecological unit

- (a) Totara forest on hillslope and river flats
- (b) Mahoe-five-finger shrubland on hillslope

## Landform/geology

Ridge of Waipapa Terrane greywacke and chert.

### Vegetation

- (a) The majority of the site is composed of totara-dominant secondary forest. Kahikatea, rimu and kanuka feature on the river flats, with tanekaha, towai, and mamaku on hillslopes.
- (b) The shrubland area is composed of broadleaved shrubs, with five-finger and mahoe the dominant species. Pate is also present. (This area is not shown on the map).

#### Fauna

Not surveyed.

### Significance

An interesting mix of forest types including a small area of riverine forest, contiguous with totara forest on hillslope and an unusual shrubland dominated by broadleaved shrubs. The shrub species present are possum-preferred species, although little impact seems to have been incurred from possum browse. Although the majority of the site appears to have been fenced from stock, the quality of this site at the time of survey does not warrant Level One status.

#### HAUMAKARIRI STREAM REMNANT

Survey no. Q06/035

Survey date 25 February 1997

Grid reference Q06 302 359, Q06 309 364

Area 43 ha

Altitude 175-220 m asl

## Ecological unit

(a) Rewarewa-totara-towai forest in gully

#### Landform/geology

Deeply incised valley in Waipapa Terrane greywacke with Kerikeri Volcanics basalt flow remnants and boulder colluvium.

#### Vegetation

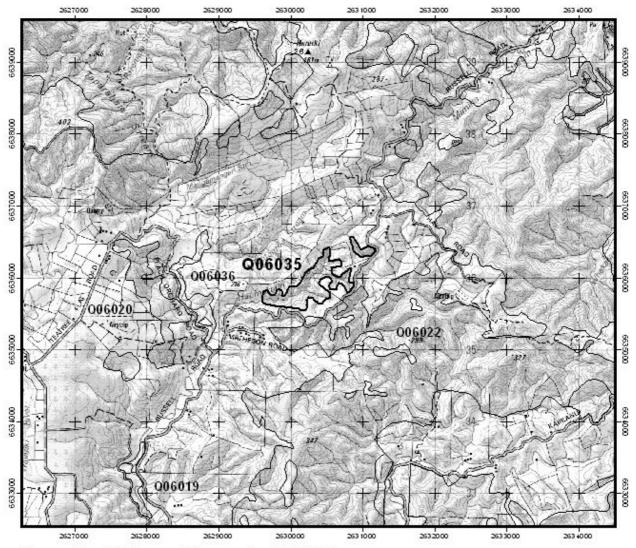
(a) A gully site adjacent to the Russell Road, with totara, towai, and emergent rewarewa common. Mamaku and kanuka/manuka are frequent, with occasional rimu, kahikatea, kauri, and nikau.

#### Fauna

Not surveyed.

#### Significance

Protection of water and soil values.



## Haumakariri Stream Remnant Q06/035

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

D = duneland

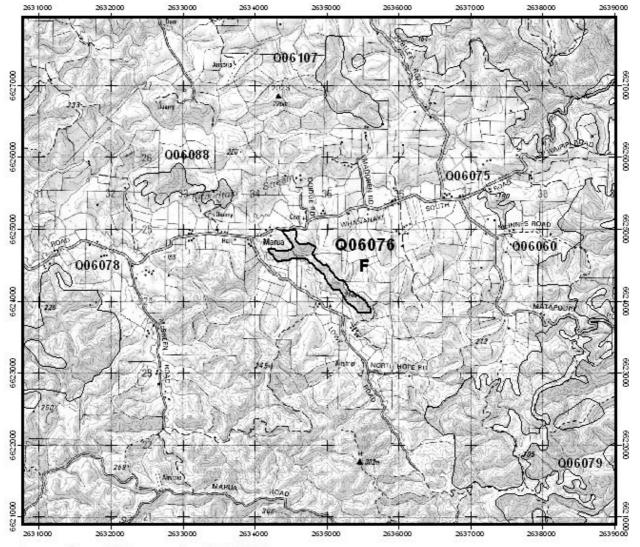


## LOWE ROAD REMNANT

Survey no. Q06/076
Survey date 14 March 1997
Grid reference Q06 349 244

Area 28 ha

Altitude 150-214 m asl



## Lowe Road Remnant Q06/076

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

D = duneland

## Ecological unit

(a) Totara-kauri-tanekaha forest on hillslope

## Landform/geology

Ridge of Waipapa Terrane chert.

## Vegetation

A long, thin piece of bush, running alongside Lowe Road.

(a) Totara is abundant, with kauri and tanekaha common, and concentrated on the ridges. Towai is frequent throughout, with occasional kahikatea, tawa, rimu, puriri, rewarewa, mamaku, and ti kouka.

#### Fauna

Not surveyed.

## Significance

Possible linkage function, and protection of water and soil values.

## KAIATEA REMNANT

Survey no. Q06/084
Survey date 7 March 1997
Grid reference Q06 424 201

Area 14 ha

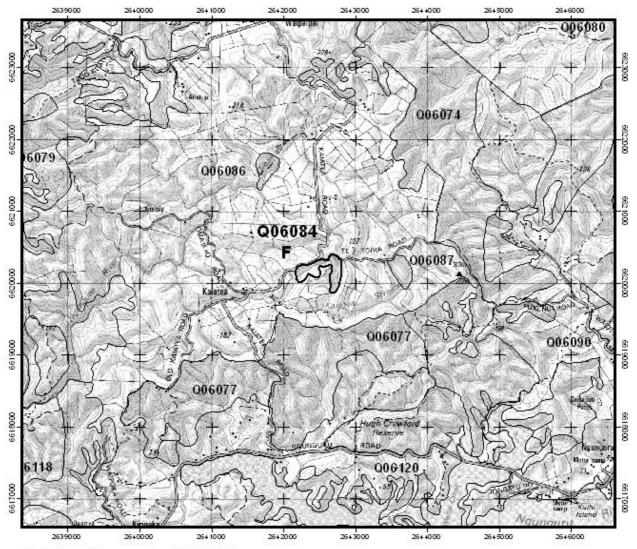
Altitude 160-180 m asl

## Ecological unit

(a) Totara forest in gully

## Landform/geology

Stream valley in Waipapa Terrane greywacke.



## Kaiatea Remnant Q06/084

Each grid is 1000 m × 1000 m

and = 100 ha

S = shrubland

F = forest

W = wetland

E = estuarine

D = duneland

#### Vegetation

A gully adjacent to the junction of Kaiatea and Te Toira Roads.

(a) Totara is common, with frequent taraire, rewarewa, kahikatea, and rimu. Occasionally occurring species include towai, puriri, nikau and ti kouka.

#### Fauna

Australasian harrier, grey warbler, NZ kingfisher, NI fantail.

#### Significance

There is a deer farm adjacent to the site, and deer have access to the bush. Possible linkage function, and protection of water and soil values.

#### **OMAIKAO STREAM REMNANT**

Survey no. Q06/086

Survey date 7 March 1997 Grid reference Q06 417 215

Area 10 ha

Altitude 160-180 m asl

### Ecological unit

(a) Totara forest on hillslope

#### Landform/geology

Stream valley in Waipapa Terrane greywacke.

#### Vegetation

A small forest remnant, which can be seen from Kaiatea Road.

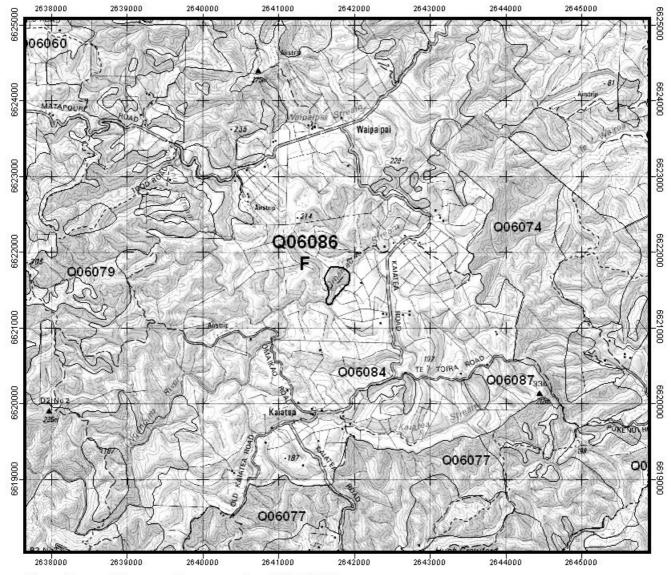
(a) Totara is abundant, with rimu frequent. Occasional species include puriri, kauri, rewarewa, kahikatea, northern rata, nikau, and tree ferns.

#### Fauna

Not surveyed.

#### Significance

Possible linkage function, and protection of water and soil values.



## Omaikao Stream Remnant Q06/086

Each grid is  $1000 \text{m} \times 1000 \text{m}$ 

and = 100 ha

S = shrubland

F = forest

W = wetland

E = estuarine D = duneland

## TE TOIRA ROAD REMNANT

Survey no. Q06/087

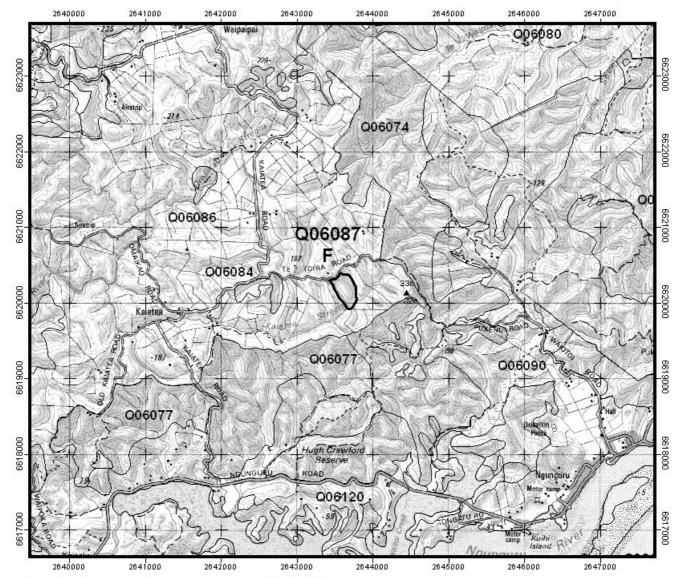
Survey date 7 March 1997 Grid reference Q06 436 201

Area 10 ha

Altitude 170-190 m asl

## Ecological unit

(a) Taraire-totara forest in gully



Te Toira Road Remnant Q06/087

Each grid is 1000m × 1000m

and = 100 ha

S = shrubland

F = forest

W = wetland

E = estuarine

D = duneland

## Landform/geology

Hillcountry in Waipapa Terrane greywacke.

## Vegetation

A gully adjacent to Te Toira Road, dominated by taraire, and with totara common. Kahikatea and rewarewa are frequent, with occasional puriri, rimu, and kauri.

#### Fauna

NZ kingfisher.

### Significance

Possible linkage function, and protection of water and soil values.

## KIRIKIRITOKI REMNANTS

Survey no. Q06/088

Survey date 13 March 1997

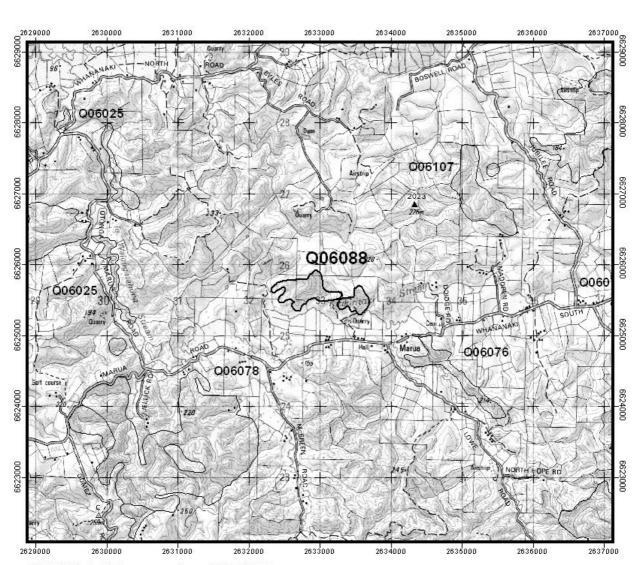
Grid reference Q06 334 254, Q06 328 256

35 ha (25 ha forest, 10 ha shrubland) Area

140-180 m asl Altitude

## Ecological unit

- (a) Totara-towai forest on hillslope
- (b) Kauri forest on ridge
- (c) Totara forest on hillslope
- (d) Kanuka/manuka-totara shrubland on hillslope



#### Kirikiritoki Remnants Q06/088

Each grid is  $1000m \times 1000m$  and = 100 ha

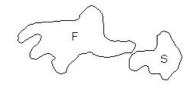
S = shrubland

F = forest

W = wetland

E = estuarine

D = duneland



### Landform/geology

Hillcountry in Waipapa Terrane chert.

#### Vegetation

Site is made up of two remnants.

- (a) The western remnant has a small area of totara-towai secondary forest, with frequent taraire, puriri, rewarewa, and tanekaha. Occasional species are pukatea, northern rata, tawa, nikau, and ti kouka.
- (b) Kauri is the dominant species on the ridge in this area, with frequent rimu and tanekaha.
- (c) Next to these sites is a large area of totara secondary forest, with frequent kanuka/manuka, and a few tanekaha and mamaku.
- (d) The eastern remnant consists of kanuka/manuka shrubland, with totara common throughout. Puriri and *Pinus radiata* occur occasionally.

#### Fauna

Not surveyed.

#### Significance

The eastern area is marginal, and almost divorced from the main forest area. There are enclaves of pasture within the site, and it is obviously browsed. Three goats were observed within one clearing at the time of the survey.

### TUTUKAKA BLOCK SHRUBLAND

Survey no. Q06/096

Survey date 25 March 1997 Grid reference Q06 484 188

Area 49 ha

Altitude 20-100 m asl

#### Ecological unit

- (a) Kanuka/manuka shrubland on hillslope (90%)
- (b) Kanuka/manuka shrubland in gully (10%)

#### Landform/geology

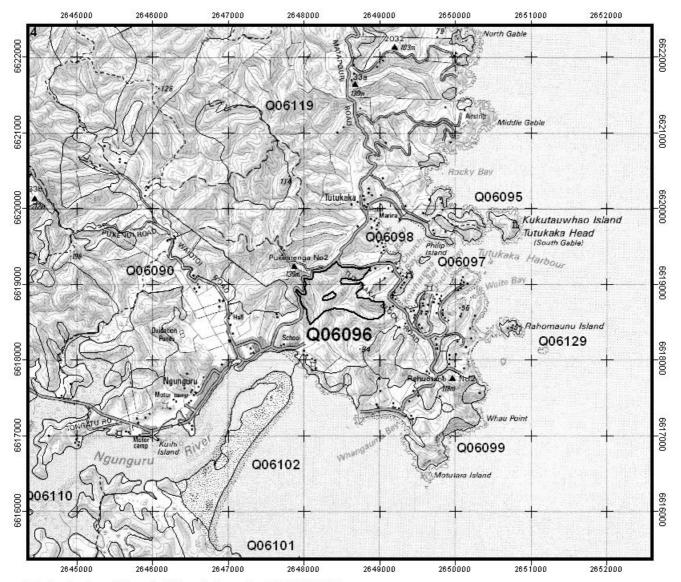
Steeply dissected hillcountry of Waipapa Terrane greywacke.

#### Vegetation

- (a) An area of shrubland adjacent to the Matapouri Road. The majority of the site is composed of kanuka/manuka of up to 4 m tall on the hillslopes. Frequent species are puriri, as well as emergent rimu and tanekaha. Throughout the site is the occasional taraire, nikau, pohutukawa, totara, and emergent rewarewa, kauri, and kawaka.
- (b) Gullies are also dominated by kanuka/manuka, with mamaku, totara, taraire, and puriri frequent. Less common species are mahoe, nikau, ti kouka, tanekaha, and emergent rewarewa. Flame trees and pampas are also present.

#### Fauna

NI brown kiwi (Serious Decline) reported in 1991. Grey warbler, NI fantail.



# Tutukaka Block Shrubland Q06/096

Each grid is 1000m × 1000m

and = 100 ha

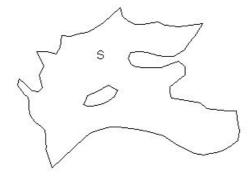
S = shrubland

F = forest

W = wetland

E = estuarine

D = duneland



## Significance

The site contains two small wetland areas which were not sighted, which are a rare habitat type in the District. Survey of current status of NI brown kiwi is recommended.

## MADDREN ROAD BUSH

Q06/107 Survey no.

Survey date 21 April 1997

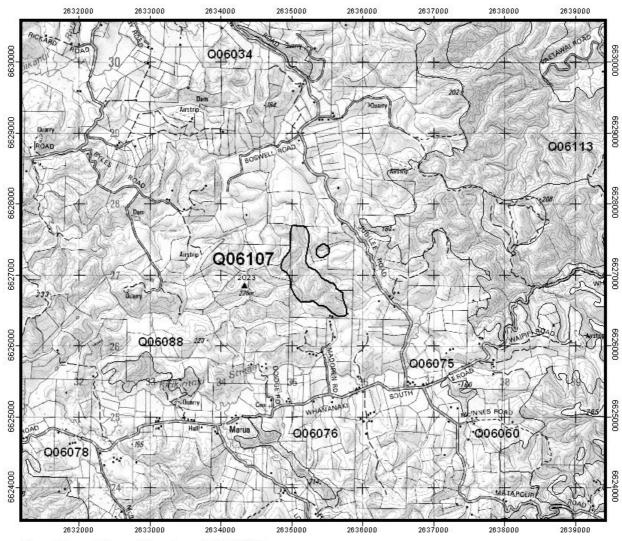
Grid reference Q06 353 270, Q06 354 273

51 ha Area

Altitude 160-220 m asl

## Ecological unit

(a) Rimu-totara-towai forest on hillslope



# Maddren Road Bush Q06/107

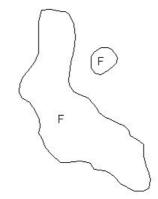
Each grid is  $1000m \times 1000m$ and = 100 haS = shrubland

F = forest

W = wetland

E = estuarine

D = duneland



## Landform/geology

Hillcountry of Waipapa Terrane greywacke.

## Vegetation

This remnant is dominated by totara-towai-rimu forest, with kahikatea, puriri, rewarewa, kauri, and nikau frequent throughout. Tanekaha occurs less frequently.

#### Fauna

Not surveyed.

## Significance

A good example of relatively mature forest.

#### WAIPARERA SHRUBLAND

Survey no. Q07/017 Survey date 29 July 1997 Grid reference Q07 443 071 Area 28 ha

Alea 20 IIa

Altitude 20-80 m asl

#### Ecological unit

(a) Kanuka/manuka shrubland on hillslope

#### Landform/geology

Hillcountry of Waipapa Terrane greywacke.

## Vegetation

Kanuka/manuka shrubland of up to 3 m in height. Totara is a frequent emergent throughout, with puriri and mamaku occasional.

#### Fauna

Not surveyed.

#### Significance

Linkage function, and protection of water and soil values.

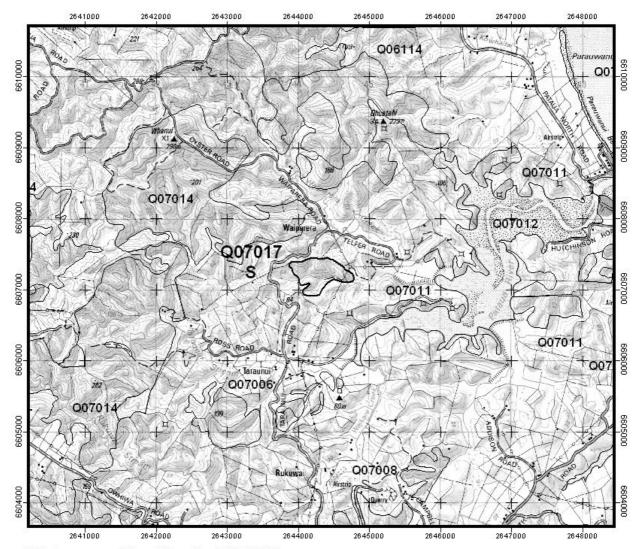
## **GOAT ISLAND**

Survey no. Q06/126

Survey date 12 September 1992

Grid reference Q06 478 150

Area 2.7 ha
Altitude 1-30 m asl



#### Waiparera Shrubland Q07/017

Each grid is  $1000m \times 1000m$  and = 100 ha S = shrubland

F = forest

W = wetland

E = estuarine

D = duneland

## Ecological unit

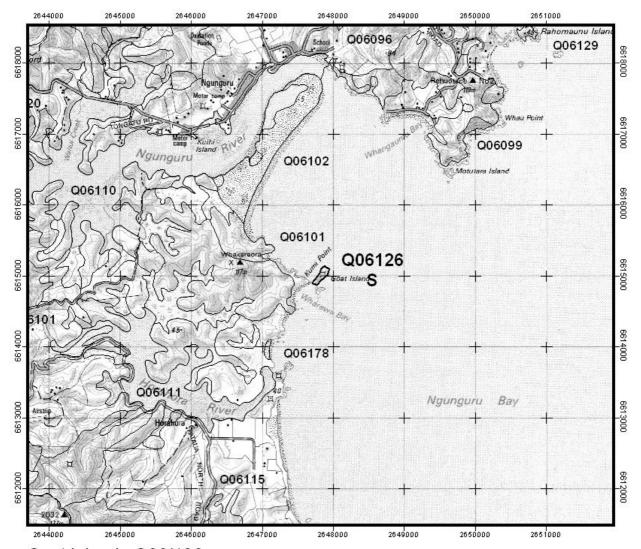
(a) Harakeke coastal flaxland on hillslope

## Landform/geology

Cliffed islets of Waipapa Terrane greywacke, connected to mainland by sandspit at low tide.

#### Vegetation

(a) Harakeke flaxland dominates the island, with some bracken and knobby clubrush throughout. Ti kouka occur occasionally. Introduced grasses occur in some areas.



## Goat Island Q06/126

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

D = duneland

### Fauna

The flax snail *Placostylus hongii* (Range Restricted) formerly present, now presumed extinct.

## Significance

Presence of a rare vegetation type, and the past presence of a threatened species. The site, however, is very modified and is grazed by sheep, so does not warrant Level 1 status.