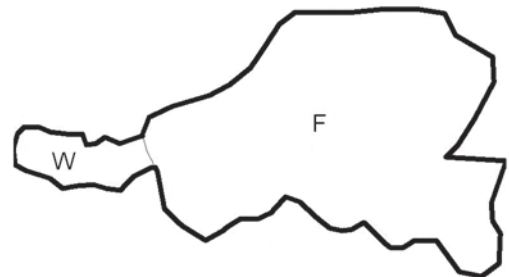


Q08/113 Awakino Creek Forest and Wetland

S = Shrubland
 F = Forest
 W = Wetland
 E = Estuarine

0 250 500 1,000 Metres



FORD ROAD FOREST

| | |
|----------------|-------------------------------------------|
| Survey no. | Q08/114 |
| Survey date | 28 November 2005 |
| Grid reference | Q08 273 609 (3 remnants) |
| Area | 12.5 ha (9.8 ha forest, 2.8 ha shrubland) |
| Altitude | 56–116 m asl |

Ecological units

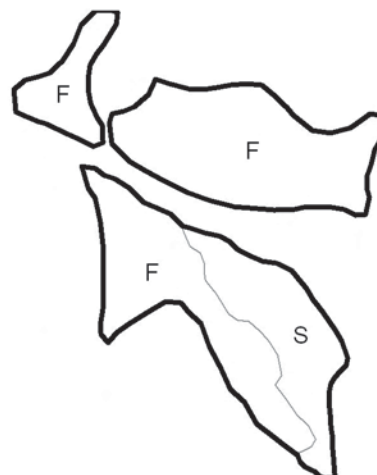
(a) Taraire-puriri forest on moderate to steep hillslope (65%)



Q08/114 Ford Road Forest

S = Shrubland
 F = Forest
 W = Wetland
 E = Estuarine

0 250 500 1,000 Metres



(b) Kanuka treeland on moderate hillslope (10%)

(c) Manuka-kanuka shrubland on moderate to steep hillslope (25%)

Landform/geology

Gullies underlain by Miocene thinly interbedded sandstone and mudstone (Waitemata Group).

Vegetation

This site comprises three indigenous vegetation remnants at the intersection of Ford Road with Whakapirau Road. 75% of the site is either forest or treeland

which is visible from the road, but 25% of the site is not visible from the road (behind a hill and radiata pine plantation). Interpretation of recent aerial photography (flown in 2002) suggests that this is indigenous shrubland.

(a) The biggest forest remnants (northeast and southwest) are very diverse, with a slight majority of taraire and puriri in the canopy, though totara, kanuka, rimu and kahikatea are also frequent. Other species recorded at lower abundances include nikau, tanekaha, rewarewa, pukatea, tarata, pate and mapou. The invasive banana passionfruit vine was observed in the forest at the southern road edge.

(b) The rest of the forest habitat (northwest remnant) is kanuka treeland with frequent karaka, ti kouka, mahoe and totara, and occasional mamaku and harakeke.

(c) The unknown shrubland type is likely to be young manuka-kanuka shrubland.

Fauna

Not surveyed.

Significance

None of the ecological units are representative examples of their type, as they are relatively small and appear to be partially grazed. Taraire-puriri forest on moderate to steep hillslope (a) appears to be relatively protected from grazing by a stock fence, and contains some quite diverse broadleaved forest, which could be important as a feeding site for kukupa (though they were not seen at the time of the survey).

TE OPI ROAD FOREST REMNANTS

| | |
|----------------|------------------------------------------|
| Survey no. | Q08/118 |
| Survey date | 18 November 2005 |
| Grid reference | Q08 236 583 (5 remnants) |
| Area | 14.6 ha (14.1 ha forest, 0.5 ha wetland) |
| Altitude | 0–60 m asl |

Ecological units

- (a) Totara-kahikatea forest on moderate hillslope (45%)
- (b) Kanuka forest on moderate hillslope (20%)
- (c) Totara-puriri-kowhai forest on gentle coastal margin (20%)
- (d) Totara-puriri-kanuka forest on steep coastal margin (11%)
- (e) Open water (constructed freshwater farm pond) (3%)
- (f) Raupo reedland on constructed pond fringe (1%)

Landform/geology

Coastal hillslopes underlain by Cretaceous sandstone and mudstone (Mangakahia Complex).

Vegetation

This site comprises four forest remnants and a small constructed wetland on a sheltered peninsula in the Whakapirau Creek. More than three-quarters of the peninsula has been cleared for pastoral farming, and these are the remnants of a



Q08/118 Te Opi Road Forest Remnants

S = Shrubland
 F = Forest
 W = Wetland
 E = Estuarine

0 250 500 1,000 Metres



once continuous secondary coastal forest tract which developed following logging in the 19th century. The site is contiguous with mangrove forest and shrubland in the estuary, except for at the very tip of the peninsula.

(a) The largest, central forest remnant comprises totara and kahikatea with frequent kanuka and puriri, and occasional nikau, rimu and matai.

(b) Kanuka forest with frequent totara and occasional mahoe, mamangi, ti kouka, puriri and kahikatea occupies the northernmost remnant next to the wetlands.

(c) Two smaller forest remnants on the southwestern coast have an even mixture of totara, puriri and kowhai in the canopy, with frequent taraire and rewarewa.

(d) On the point there is a small patch of totara-dominant forest with abundant kanuka and puriri and frequent karaka.

(e) The northern wetland is a dammed farm pond with open water (and plentiful mallard ducks).

(f) The main vegetation around or in the ponds is raupo, though the introduced water fern *Azolla pinnata* occurs frequently as a floating macrophyte on the upper pond. The southern wetland appears to be a constructed wetland which is entirely vegetated in raupo.

Fauna

Not surveyed.

Significance

Due to the high level of small size none of these ecological units are representative examples of their type. However, they are still important as a protective vegetation buffer to the Kaipara Harbour and as habitat 'stepping stones' for mobile wildlife moving around the various natural areas in the Whakapirau Creek.

HOOK ROAD FOREST REMNANTS

| | |
|----------------|----------------------------------------|
| Survey no. | Q08/123 |
| Survey date | 24 November 2005 |
| Grid reference | Q08 228 664 (2 remnants) |
| Area | 7.4 ha (7.2 ha forest, 0.2 ha wetland) |
| Altitude | 20-50 m asl |

Ecological units

(a) Totara-tree privet forest on moderate hillslope (98%)

(b) Open water (constructed freshwater farm pond) (1.5%)

(c) *Juncus sarophorus* rushland on constructed pond fringe (0.5%)

Landform/geology

Hillslope on Cretaceous sandstone and mudstone (Mangakahia Complex).

Vegetation

This site comprises two forest remnants, one of which is adjacent to a constructed farm pond surrounded by *Juncus sarophorus* rushland. The forest canopy is a mixture of totara (abundant) and tree privet (common) with frequent kanuka, and occasional titoki, mamaku, mahoe, gorse and radiata pine. *Myriophyllum propinquum* (an endemic plant species), was collected in one of the ponds here in 1987 (AK 243 770).

Fauna

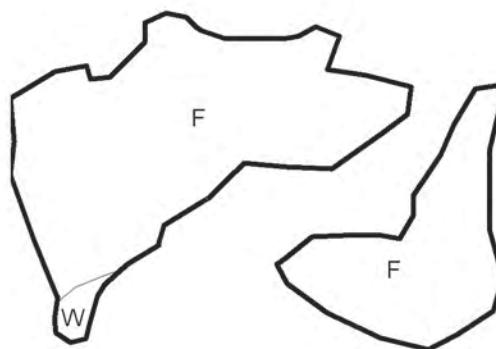
Grey warbler, little shag, shining cuckoo, welcome swallow.



Q08/123 Hook Road Forest Remnants

S = Shrubland
 F = Forest
 W = Wetland
 E = Estuarine

0 250 500 1,000 Metres



Significance

The natural character of the forest is compromised by tree privet achieving greater than 20% canopy cover, although it is mainly concentrated on the northwestern side of the site. However the forest remnants have value as habitat for common forest birds, and the pond is also utilised by birds (e.g. little shag).

HUARAU AIRSTRIP FOREST

Survey no. Q08/125
Survey date 25 November 2005
Grid reference Q08 281 652
Area 7.4 ha
Altitude 40-78 m asl

Ecological unit

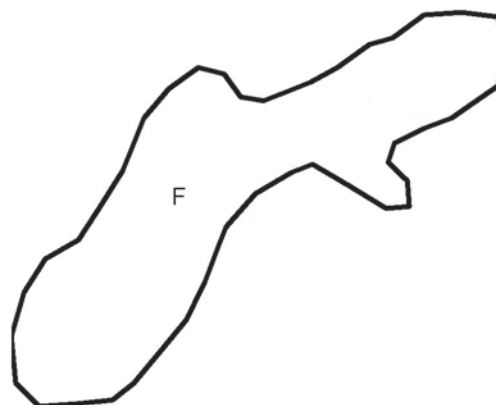
(a) Kanuka-totara forest on moderate to steep hillslope (100%)



Q08/125 Huarau Airstrip Forest

S = Shrubland
F = Forest
W = Wetland
E = Estuarine

0 250 500 1,000 Metres



Landform/geology

Gully underlain by melange (undifferentiated Mangakahia & Motatau Complex lithologies).

Vegetation

This site comprises a single oblong remnant of indigenous forest to the southwest of Huarau Airstrip. The main canopy species is kanuka in association with totara and frequently emergent rimu and kahikatea. Occasional canopy species include taraire, karaka, kauri, nikau and puriri.

Fauna

Paradise shelduck, shining cuckoo.

Significance

The ecological unit in this site is not representative, as it shows severe grazing impacts and is a relatively small remnant. It has value as a habitat 'stepping stone' for fauna using multiple forest patches in a primarily pastoral landscape.

MASSEY ROAD CORNER FOREST

| | |
|----------------|------------------|
| Survey no. | Q08/133 |
| Survey date | 28 November 2005 |
| Grid reference | Q08 263 560 |
| Area | 3.6 ha |
| Altitude | 34-80 m asl |

Ecological unit

(a) Totara forest on moderate to steep hillslope (100%)

Landform/geology

Hillslopes and gullies underlain by Cretaceous sandstone and mudstone (Mangakahia Complex).

Vegetation

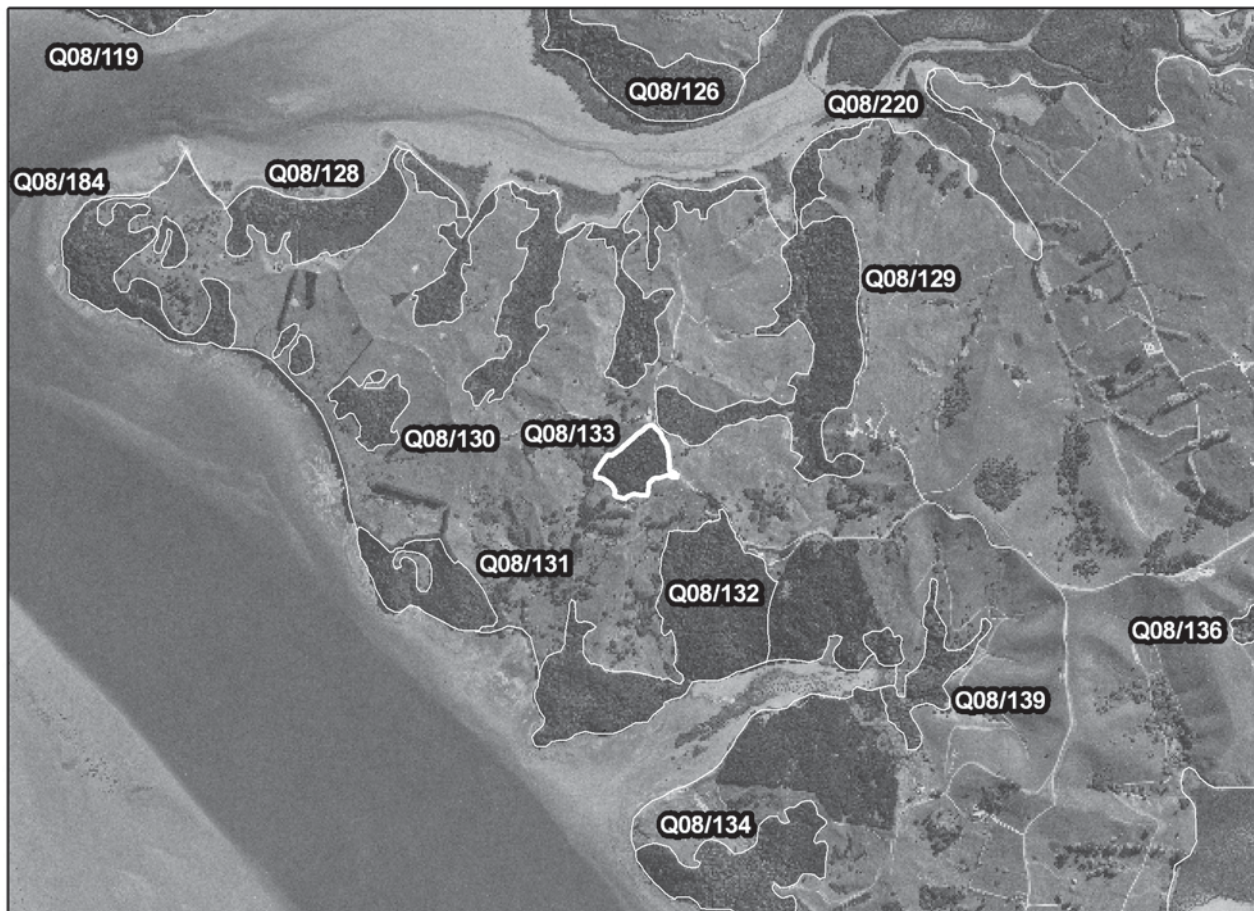
This is a small forest remnant near the crest of the peninsula on the southern side of a corner in Massey Road. The main component of the canopy is totara. The only other species which reaches greater than 5% cover is puriri. Otherwise there are many occasional species including kanuka, kauri, rimu, kahikatea, tanekaha, manuka, putaputaweta, lancewood, brush lawyer and *Coprosma areolata*.

Fauna

Not surveyed.

Significance

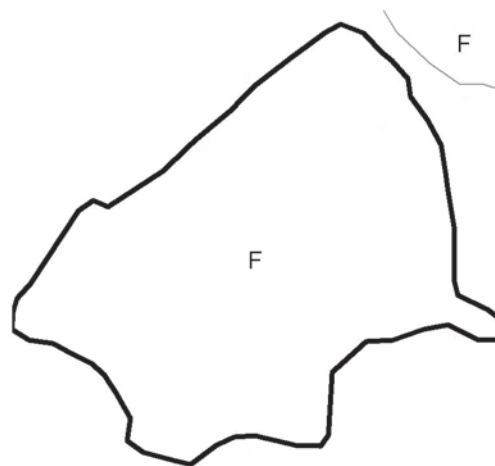
This site provides a link between three other natural areas in the immediate vicinity: Te Kowhai Creek Scenic Reserve and Surrounds (Q08/132), Arapaoa River Scenic Reserve and Surrounds (Q08/131) and Massey Creek Forest (Q08/129). It is not fenced, and shows the effects of prolonged stock grazing and trampling.



Q08/133 Massey Road Corner Forest

S = Shrubland
 F = Forest
 W = Wetland
 E = Estuarine

0 250 500 1,000 Metres



HOKORAKO CREEK FOREST REMNANTS

| | |
|----------------|--------------------------|
| Survey no. | Q08/136 |
| Survey date | 28 November 2005 |
| Grid reference | Q08 287 555 (5 remnants) |
| Area | 18.1 ha |
| Altitude | 0-100 m asl |

Ecological units

(a) Kanuka forest on moderate to steep hillslope (35%)



Q08/136 Hokorako Creek Forest Remnants

S = Shrubland
 F = Forest
 W = Wetland
 E = Estuarine

0 250 500 1,000 Metres



- (b) Totara-puriri forest on gentle coastal margin (35%)
- (c) Taraire-puriri-kanuka forest in gully (20%)
- (d) Puriri-karaka forest on gentle coastal margin (10%)

Landform/geology

Coastal hillslopes and gullies underlain by Cretaceous siliceous mudstone (Whangai Fmn, Mangakahia Complex), Oligocene micritic limestone

(Mahurangi Limestone, Motatau Complex), and melange (undifferentiated Mangakahia & Motatau Complex lithologies).

Vegetation

This site contains the fragmented remains of a once continuous coastal forest on the shores of an upper tidal inlet of the Kaipara Harbour. Five separate remnants are present today, interspersed with pasture. Mudflats and mangrove shrubland lie directly adjacent in the Hokorako Creek, which is part of the Arapaoa River site (Q08/084).

(a) A finger of forest extends up the valley from the edge of the inlet, comprising primarily kanuka with occasional totara, rimu, kowhai and woolly nightshade.

(b) The easternmost remnant supports totara-puriri forest with frequent kanuka and karaka, and occasional kowhai and kahikatea.

(c) Sheltered parts of the valley have taraire-puriri-kanuka forest with frequent nikau and totara, and occasional pukatea and puka (epiphytic).

(d) The series of three small remnants on the western side comprise puriri-karaka forest with frequent kowhai and occasional ti kouka and kanuka.

Fauna

Not surveyed.

Significance

Many of the puriri trees are showing dieback and all of the remnants are grazed by livestock, causing them to lack understorey. The canopy is fairly open in many parts and there is a high ratio of edge to centre in the forest remnants, increasing edge effects. The increased light and disturbance exacerbates weed problems, e.g. woolly nightshade.

TE KOWHAI CREEK FOREST REMNANT

| | |
|----------------|--------------------------|
| Survey no. | Q08/139 |
| Survey date | 28 November 2005 |
| Grid reference | Q08 272 553 (2 remnants) |
| Area | 6.6 ha |
| Altitude | 3–60 m asl |

Ecological unit

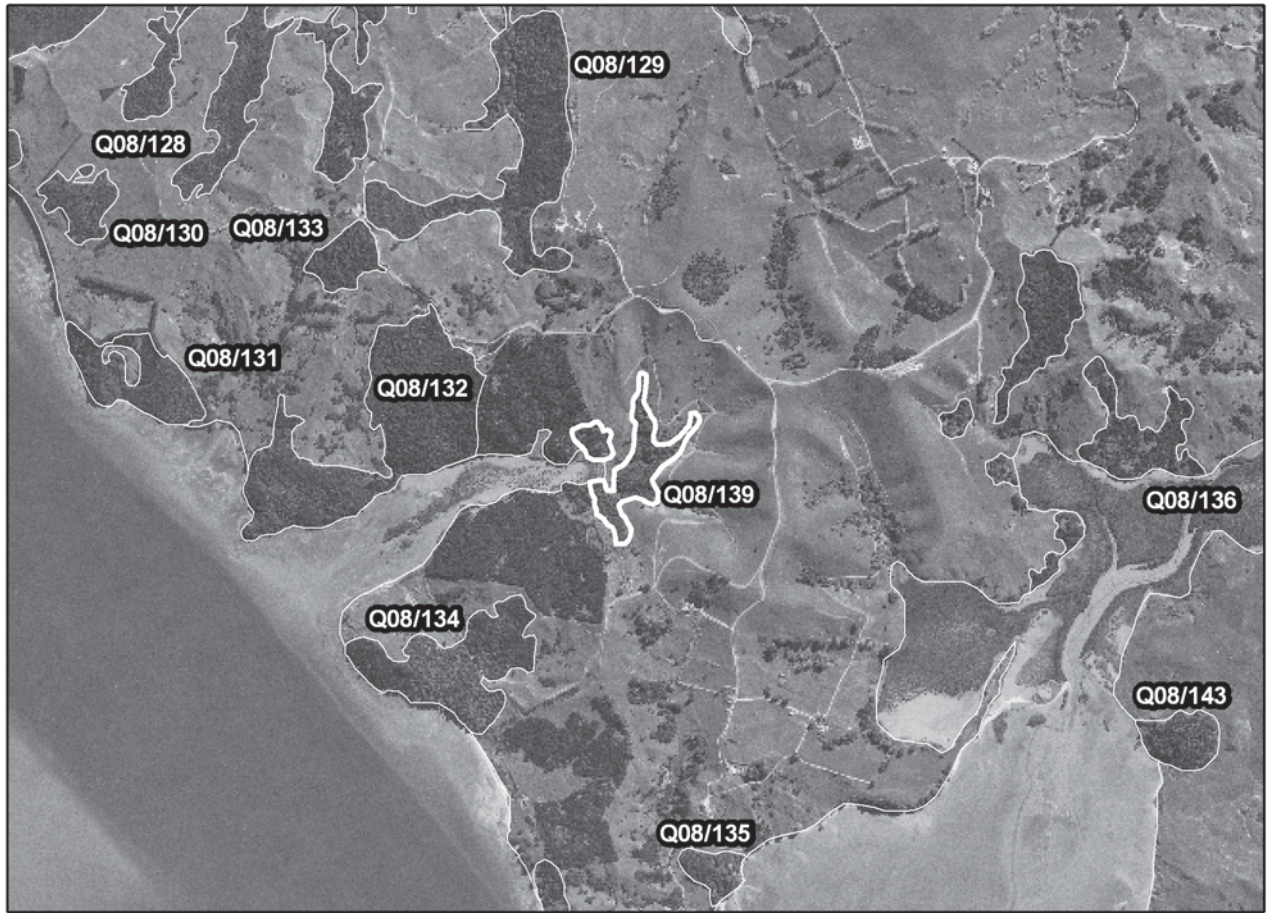
(a) Totara-puriri forest on steep coastal margin (100%)

Landform/geology

Hillslopes and gullies underlain by Oligocene micritic limestone (Mahurangi Limestone, Motatau Complex).

Vegetation

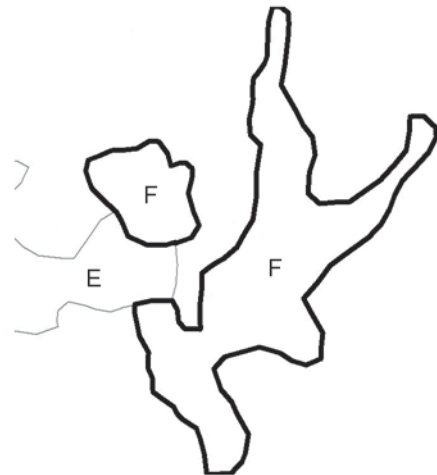
This site comprises two small remnants of indigenous coastal forest on the steep slopes around the narrow head of Te Kowhai Creek. The canopy is dominated by totara with puriri a common associate. Most of the puriri trees are barely alive. Two or three large, spreading pohutukawa are present on a ridge just above salt marsh in the creek head, apparently quite healthy. Frequent kowhai and karaka, and occasional ti kouka are present. There appears to be unrestricted access by stock into the forest and out to the mudflats/saltmarsh.



Q08/139 Te Kowhai Creek Forest Remnant

S = Shrubland
 F = Forest
 W = Wetland
 E = Estuarine

0 250 500 1,000 Metres



Fauna

Not surveyed.

Significance

This is small and extremely fragmented site, which includes large, mature pohutukawa trees (an uncommon feature on the inner harbour coastal fringe) amongst a rather degraded example of totara-puriri forest.