

Vegetation

This site comprises a string of nine forest remnants along the southern coast of Point Curtis, which extends westwards from the foot of Pukeareinga out into the Kaipara Harbour, dividing the Wairau River from the Kaiwaka River. The remnants are narrow (at most 200 m wide) and fragmented, with various secondary forest types of different ages. Many parts appear to be fenced off from adjacent pasture.

(a) The main forest type is dominated by totara in association with kanuka, frequent kahikatea, kauri, rimu, and occasional kowhai, ti kouka, karaka and large radiata pine. This generally occurs on the upper side of the remnants, adjacent to paddocks.

(b) In one main area towards the centre of the site, totara-kahikatea forest with frequent kauri rickers occurs. There is an unusually high density of tall kahikatea spars.

(c) At two points along the coast a forest of abundant totara with common emergent kauri rickers and kahikatea spars. Associated with these are frequent tanekaha and occasional ti kouka and lancewood.

(d) At the western end, a relatively steep coastal ridge has stands of kauri rickers emergent over totara. Further east, similar topography also has a high density of kauri rickers, some of which extend down to the water's edge. Associated with this type are frequent kahikatea and tanekaha, and occasional puriri.

Fauna

Kingfisher.

Significance

This site is representative for (c) totara-kauri-kahikatea forest on gentle coastal margin, which is not recorded elsewhere in the Northland Conservancy part of this ED.

DONALDSON'S FOREST

Survey no.	Q08/157
Survey date	13 January 2006
Grid reference	Q08 380 606
Area	8.1 ha
Altitude	0–20 m asl

Ecological unit

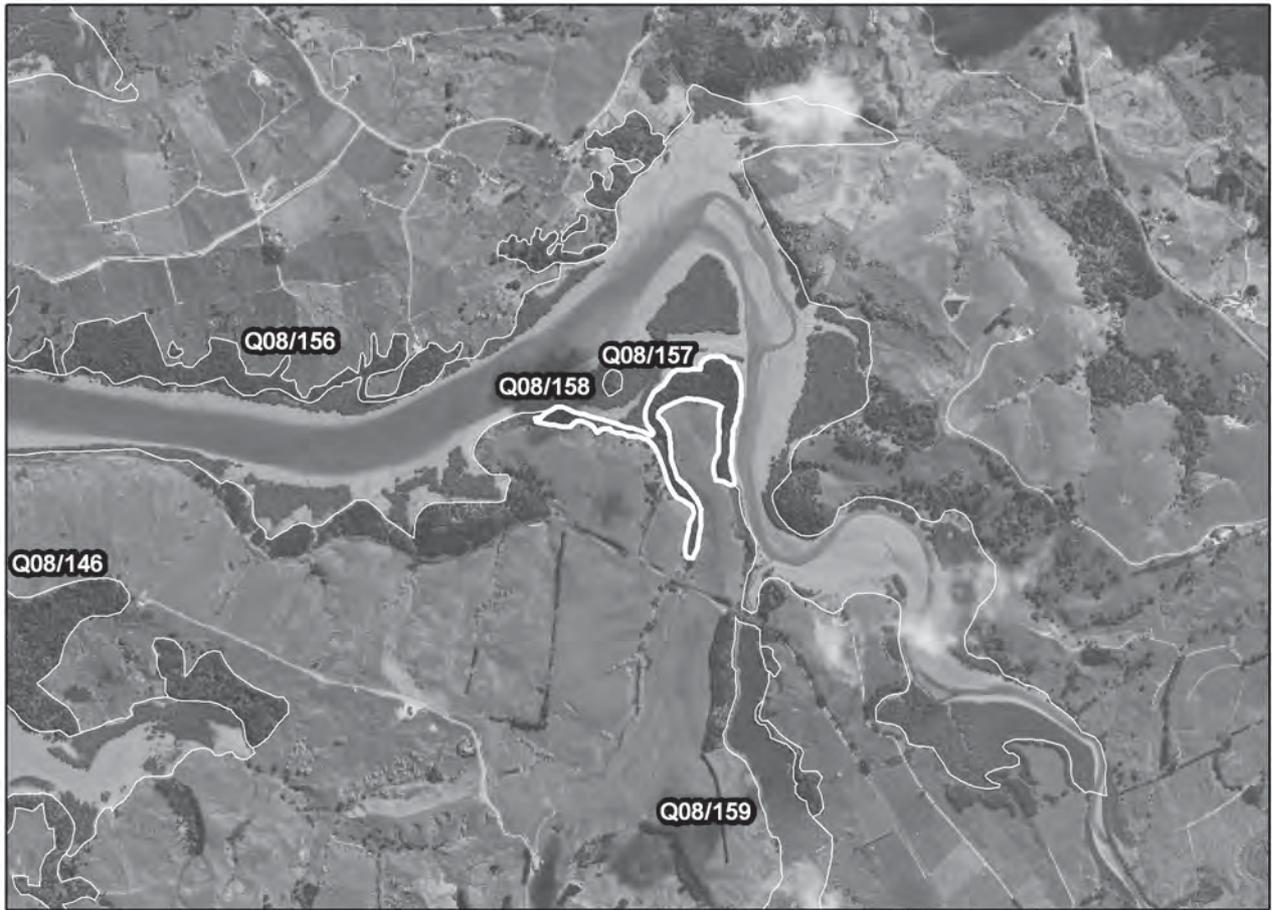
(a) Totara-kanuka-kowhai forest on gentle coastal margin (100%)

Landform/geology

Coastal banks on Pleistocene alluvium.

Vegetation

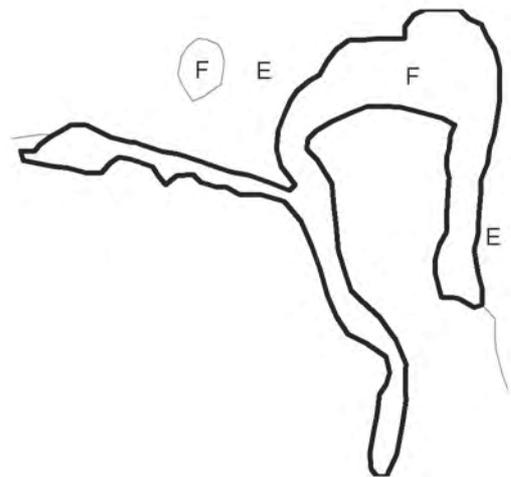
This site comprises a narrow (<150 m) coastal stretch of forest fringing a peninsula in the Kaiwaka River. The forest type appears to be quite consistent throughout: dominant totara with equally common kanuka and kowhai.



Q08/157 Donaldson's Forest

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

0 250 500 1,000 Metres



Occasional species in the canopy include tarata, rimu, matai, ti kouka, mapou, harakeke, *Coprosma macrocarpa*, mahoe, mamaku, kauri, tanekaha, titoki, rewarewa, koromiko and prickly mingimingi (many of these are on the coastal margin). The following weeds were recorded as occasional: woolly nightshade, hawthorn, gorse and wild peach. Manatu, which was reported as 'commonly occurring' in a 2003 survey (SSBI Q08/H074), was not recorded during the present survey.

Fauna

Kingfisher, Australasian harrier. A pied shag (Sparse) colony was noted in a totara on the water's edge.

Significance

This site contains a representative forest type (the best example of totara-kanuka-kowhai forest in Otamatea ED Northland), and supports a threatened bird species (pied shag). Its narrow, convoluted shape makes it subject to the negative effects of wind exposure, weeds and animal pests.

UNNAMED ISLAND IN KAIWAKA RIVER

Survey no.	Q08/158
Survey date	13 January 2006
Grid reference	Q08 377 608
Area	0.4 ha
Altitude	sea level

Ecological unit

(a) Totara-kowhai forest on gentle coastal margin (100%)

Landform/geology

Not surveyed.

Vegetation

This site comprises a tiny terrestrial islet rising above a forest of mangroves in the Kaiwaka River, within the Otamatea River site (Q08/062). The most abundant tree is totara, followed by kowhai. Other species include tarata, tanekaha, lancewood, ti kouka and titoki. In 2000, a field survey team landed on the island and compiled a plant species list comprising 57 indigenous species and 3 exotic species (SSBI Q08/H047). Most species recorded were common, apart from small-leaved milk tree, *Metrosideros diffusa* and kanono. This appears to be the only record for kanono in Otamatea ED Northland. *Hoberia sextylosa* was recorded as present, however this is likely to be the more common northern species *H. populnea* (houhere).

Significant flora

Kanono is not known from any other site in Otamatea ED Northland and is therefore considered to be locally uncommon.

Fauna

Not surveyed.

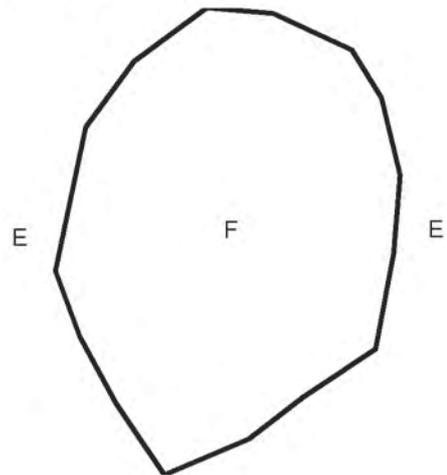
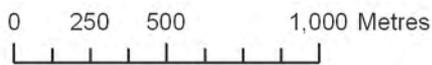
Significance

The forest trees appear to be healthy, perhaps as a result of the site's semi-isolation in a mangrove-filled inlet. It is only 100 m from Donaldson's Forest (Q08/157) on the southern shore. Though this is not a representative example of totara-kowhai forest in Otamatea ED Northland, the site is significant for being the habitat of a locally uncommon plant species (kanono).



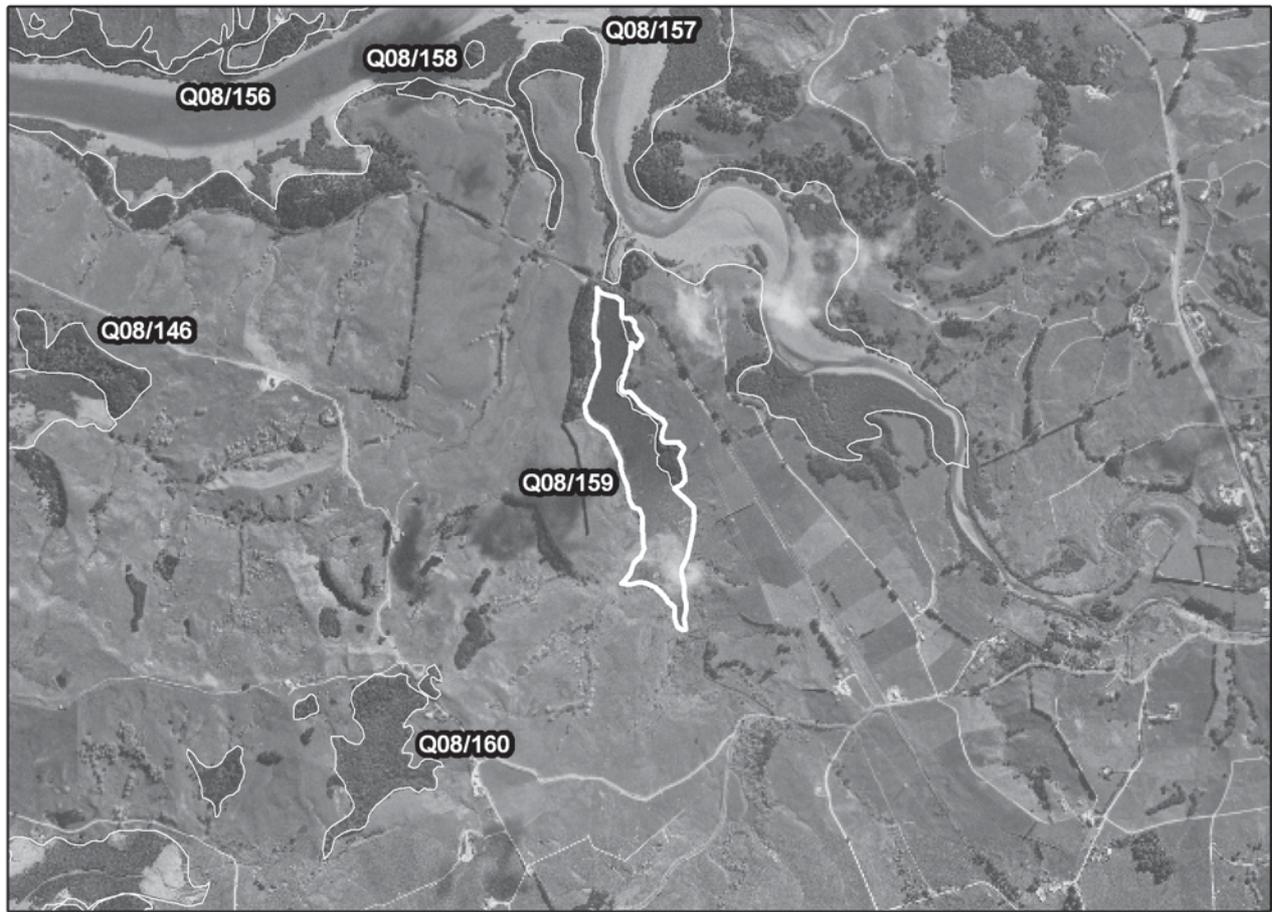
Q08/158 Un-named Island in Kaiwaka River

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



KAITARA CONSTRUCTED LAKE

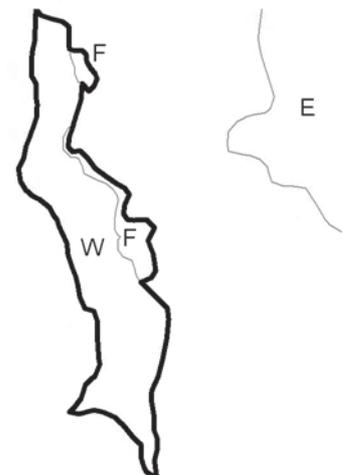
Survey no.	Q08/159
Survey date	13 January 2006
Grid reference	Q08 383 594
Area	15.8 ha (1.9 ha forest, 13.9 ha wetland)
Altitude	11-20 m asl



Q08/159 Kaitara Constructed Lake

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

0 250 500 1,000 Metres



Ecological units

- (a) Open water (constructed lake) (60%)
- (b) Raupo-willow weed reedland on lake margin (23%)
- (c) Totara forest on moderate hillslope (12%)
- (d) *Baumea articulata* reedland on lake margin (5%)

Landform/geology

Man-made pond/lake.

Vegetation

This site comprises the largest constructed lake in Otamatea ED Northland, which is a former tidal inlet/freshwater creek mouth which has been cut off from the harbour by a rail bridge that acts as a dam allowing freshwater to pool at the bottom of Kaitara Creek. The lake is approximately 120 m wide, 1.1 km long and is shallow, especially at its southern margin. The catchment is largely pasture, though along part of its western bank there is a Tasmanian blackwood and radiata pine plantation (excluded from site). A narrow margin of totara forest extends along the northeastern bank with frequent kowhai, which has been included in the site due to its indigenous character. At the south end is the largest raupo-dominant area in the Northland Conservancy part of the ED. The raupo occurs in association with willow weed, however it could not be determined from a distance whether the willow weed was the native species (*Persicaria decipiens*) or one of the exotic willow weeds (*Polygonum* spp.). *Baumea articulata* reedland occurs locally around the margins, and together these areas comprise the largest example of this vegetation type in Otamatea ED Northland.

Fauna

Australasian harrier, paradise shelduck, white-faced heron, pukeko, pied shag (Sparse), black shag (Sparse), grey duck (Serious Decline).

In 1977, this site was identified by the NZ Wildlife Service as one of the most outstanding waterfowl and rail habitats in Northland, with 50+ grey ducks, 20+ paradise shelducks and Australasian shoveler ducks (SSBI Q08/H031). During this survey and the 1977 survey the most common bird species were introduced species: mallard duck (*Anas platyrhynchos*) and black swan (*Cygnus atratus*). The mallards are likely to be hybridising with the grey ducks.

Significance

This is the largest freshwater wetland in Otamatea ED Northland. It is representative for ecological units (b) the raupo-willow weed reedland (which is the most extensive example of its type) and (c) the *Baumea articulata* reedland (the only one of its type). It has the capacity to support good populations of indigenous water birds (e.g. black shag, white-faced heron) and is potentially important as a seasonal site for indigenous migratory birds which use freshwater ponds and lakes to overwinter (e.g. pied stilt).

ROTOKIEKIE CREEK FOREST REMNANTS

Survey no.	Q08/161
Survey date	7 December 2005
Grid reference	Q08 364 560 (4 remnants)
Area	30.8 ha
Altitude	8-100 m asl

Ecological units

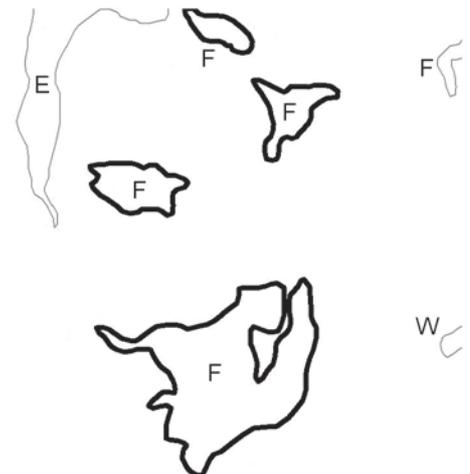
- (a) Totara forest on moderate to steep hillslope (50%)
- (b) Puriri forest in gully (50%)



Q08/161 Rotokiekie Creek Forest Remnants

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

0 250 500 1,000 Metres



Landform/geology

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

Vegetation

This site comprises three small forest remnants along two ephemeral creeks, and a larger forest remnant above them on a hilltop adjacent to Oneriri Road. The remnants are all within the immediate catchment of Rotokiekie Creek, a mangrove-filled inlet on the Otamatea River of the Kaipara Harbour (Q08/062).

The main land use in the surrounding area is pastoral farming. The upper forest remnant appears to be at least partially fenced from livestock, however the lower three are not, and have occasional willows around their edges. The vegetation type of the lower remnants was extrapolated from gully forest in the upper forest remnant, as well as study of a recent aerial photograph (flown in 2002).

(a) The drier parts of the landscape, especially on the hilltop and spurs support a forest dominated by totara almost exclusively. Occasional species include nikau, ti kouka, karaka, rewarewa and taraire.

(b) The wetter areas, including gullies on the hill and in the smaller remnants, support puriri-dominant forest with frequent large matai, nikau and kohekohe, and occasional pukatea, kowhai and small-leaved milk tree. A short walk-through survey was carried out in a south-facing gully of the hill remnant, in which good regeneration of the following species in the understorey was noted: karaka, kohekohe, nikau, taraire and kawakawa. The subcanopy had abundant supplejack and nikau, and frequent mapou and karaka. Gully fern, shaking brake, common maidenhair, and an indigenous grass (*Oplismenus birtellus* subsp. *imbecilis*) were common on the forest floor.

Fauna

Kingfisher, tui, kukupa (Gradual Decline).

Significance

Landowners on Oneriri Road report that they undertake regular control of possums and rats with brodifacoum, and have noticed an increase in kukupa since poisoning began (over the last two years or so). Some of the landowners on Oneriri Road have fences on their properties to keep the indigenous forest separate from lawns and gardens. The presence of a threatened species (kukupa) and the best example of (b) puriri forest in gully affords these remnants Level 1 significance.

TAKAHOA CREEK FOREST

Survey no.	Q08/163
Survey date	13 December 2005
Grid reference	Q08 342 550 (6 remnants)
Area	17.3 ha
Altitude	0–80 m asl

Ecological unit

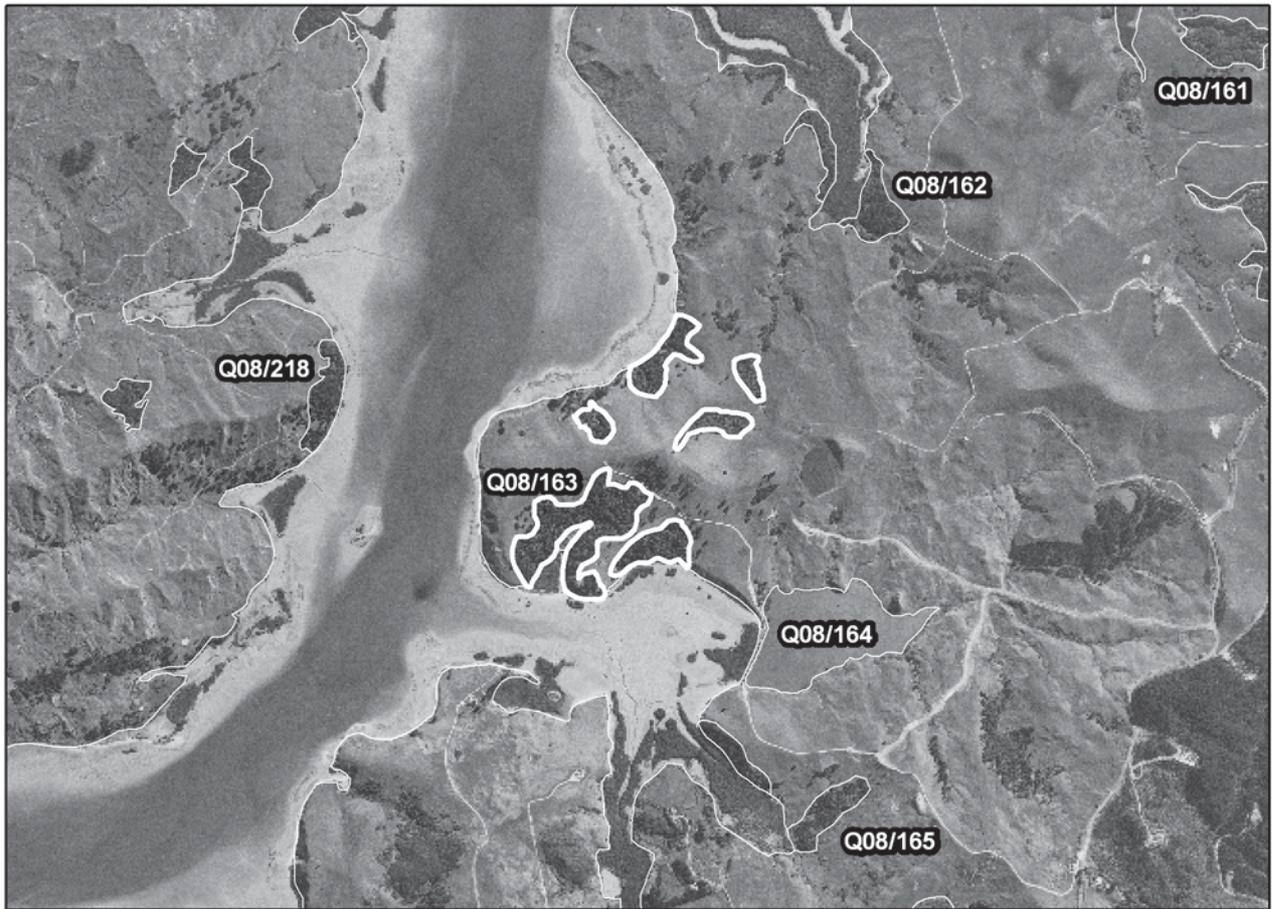
(a) Totara-kowhai-karaka-puriri forest on steep coastal margin (100%)

Landform/geology

Coastal hillslopes underlain by Oligocene micritic limestone (Mahurangi Limestone, Motatau Complex).

Vegetation

This site comprises six closely associated forest remnants on a headland on the northern side of Takahoa Creek. The remnants are set within a landscape of pasture which is rapidly being converted to residential lifestyle blocks. Recently established plantings of mostly non-ecosourced indigenous species are dotted



Q08/163 Takahoa Creek Forest

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

0 250 500 1,000 Metres



around the paddocks between the remnants (including wharariki, toetoe, harakeke, karaka, ngaio, pohutukawa, koromiko, manuka, *Carex testacea* and karo). The Takahoa Government Purpose Wildlife Management Reserve (Q08/164), an important site for resident and migratory waterbirds, lies just to the southeast of the forest remnants. All of the remnants are of the same type: totara is dominant, and kowhai, karaka and puriri are equally common. Kohekohe is frequent, and matai, nikau, ti kouka, *Hebe macrocarpa* and leafless lawyer occur occasionally.

Significant flora

Leafless lawyer (regionally significant) was collected during a 2001 survey of the forest remnants (AK 252397). Mangeao (locally uncommon) was also recorded during that survey (SSBI Q08/H070).

Fauna

Kukupa (Gradual Decline) were observed here in 2001 (SSBI Q08/H070).

Significance

The site is considered representative, as it supports the only example of such a diverse coastal forest type in Otamatea ED Northland. In addition, both regionally significant and locally uncommon plant species are present here (leafless lawyer, mangeao). A threatened bird species is known to use the forest (kukupa). This site is very near to the Takahoa Government Purpose Wildlife Management Reserve (Q08/164) and this site is considered to be an important complementary habitat for the wildlife associated with both itself and the wildlife reserve. The Otamatea Marginal Strip No. 2 (administered by DOC) covers 2 ha of forest on the coastal margin. The presence of non-ecosourced plants in such close proximity to the natural forest is an issue with potential genetic pollution. Another concern would be the future introduction of exotic weeds through residential gardening. Until recently the remnants have been grazed by livestock.

TAKAHOA GOVERNMENT PURPOSE WILDLIFE MANAGEMENT RESERVE

Survey no.	Q08/164
Survey date	13 December 2005
Grid reference	Q08 349 5545
Area	13.0 ha
Altitude	0 m asl

Ecological units

- (a) Open water (constructed lake) (99%)
- (b) Lake clubrush reedland on lake margin (1%)

Landform/geology

Pleistocene alluvial and/or estuarine sediments.

Vegetation

This site comprises a small lake (approximately 600 m in an east-west direction, and 400 m north-south), constructed by damming the inflow of small creek into a tidal inlet (Takahoa Creek on the Otamatea River). The lake is very sparsely vegetated in indigenous species; only a tiny section of the lake fringe has a reedland of lake clubrush. The rest of the vegetation is poplar (*Populus* sp.), willow (*Salix* sp., curly-leaved variety), woolly nightshade, pasture, or recently established conifers (on the northern bank). Dead mangroves in the centre of the lake (killed by changes in the water regimes as a result of the embankment) serve as roosts for waterbirds.

Fauna

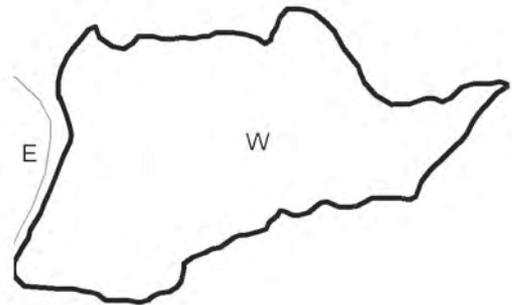
In the present study the following indigenous birds were observed on the lake or directly on the margins: pied shag (Sparse), NZ pipit, grey duck (Serious



Q08/164 Takahoa Government Purpose Wildlife Management Reserve

S = Shrubland
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 E = Estuarine

0 250 500 1,000 Metres



Decline), paradise shelduck, spur-winged plover, royal spoonbill (Coloniser), welcome swallow.

Black shag (Sparse), little shag, kingfisher and Australasian shoveler were also recorded here in 2001 (SSBI Q08/H069).

Significance

This is the second largest freshwater wetland in Otamatea ED Northland, and although it has been constructed by damming a tidal inlet, it has the capacity to support good populations of indigenous waterbirds and is important seasonally for migratory birds. It is a representative site for (b) lake clubbrush reedland,

which is only known from two sites (the other is Ngamotu Farm Pond (Q09/031)). Four threatened bird species are known to use the lake (see above). The lake is a moulting site for paradise shelduck (Peter Anderson, pers. comm.). The most abundant bird species on the wetland at the time of the site visit were, however, black swans (introduced and naturalised), and there were occasional domestic geese, Australian magpies and peafowl. The entire extent of the lake is within the Takahoa Government Purpose Wildlife Management Reserve, which is administered by the Department of Conservation.

RANGIORA ROAD FOREST REMNANTS

Survey no.	Q08/166
Survey date	7 December 2005
Grid reference	Q08 320 531 (3 remnants)
Area	11.7 ha (5.2 ha forest, 6.5 ha shrubland)
Altitude	2–40 m asl

Ecological units

- (a) Manuka-kanuka shrubland on gentle coastal margin (55%)
- (b) Totara-kanuka forest on gentle coastal margin (45%)

Landform/geology

Coastal hillslopes and gullies underlain by Cretaceous–Paleocene thinly bedded calcareous mudstone (Whangai Fm, Mangakahia Complex).

Vegetation

This site comprises three remnants of indigenous shrubland and forest on the southern coastal margin of the lower Otamatea River (Q08/062).

(a). Manuka is currently dominant in the canopy of this manuka-kanuka shrubland but kanuka is likely to become dominant in the short term. Young totara are frequent and occasional examples of mapou, mingimingi, ti kouka, mamangi and pampas are present. The shrubland areas lie adjacent to Rangiora Road next to the largest infestation of dally pine recorded in this survey.

(b) The dominant species in the forest canopy, to the west, are totara and kanuka, accompanied by frequent puriri and kowhai, and occasional pukatea.

Fauna

Not surveyed.

Significance

This site supports quite a large area of regenerating shrubland comparative to other remaining examples in Otamatea ED Northland (13th largest), and it is also considered to be a representative example of manuka-kanuka shrubland. The natural character and function of the remnants is threatened by grazing and weeds, though dally pine is unlikely to be able to establish unless the shrubland cover is disturbed.