

Significance

This site is quite heavily degraded (grazing, trampling, clearance), but it provides a partial protective buffer to the estuarine habitats of the Raepare Creek.

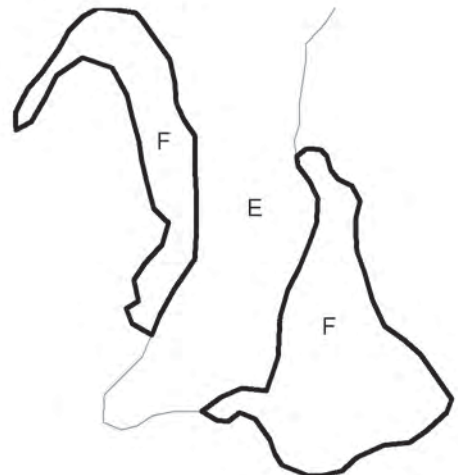
AWAROA CREEK COASTAL FOREST REMNANTS

Survey no.	Q08/162
Survey date	Not surveyed
Grid reference	Q08 350 559 (2 remnants)



Q08/162 Awaroa Creek Coastal Forest Remnants

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



Area 4.5 ha
Altitude 0–30 m asl

Ecological unit

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

Landform/geology

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

Vegetation

This site was not visible from public roads or from a boat on the harbour waters and so the vegetation type was extrapolated through study of a recent aerial photograph (flown in 2002). The texture of the canopy suggests that the forest type is probably mainly totara and kanuka, while the location on a gentle coastal margin next to a mangrove-filled inlet, suggests that kowhai may be common.

Fauna

Not surveyed.

Significance

There is insufficient information about the site to assign a higher significance than Level 2 particularly given its small size. 1.4 ha of forest in this site is within the Otamatea River Marginal Strip No. 2 (administered by DOC).

WAIAROHIA CREEK FOREST AND WETLAND

Survey no. Q08/165
Survey date 7 December 2005
Grid reference Q08 349 537 (4 remnants)
Area 7.2 ha (6.6 ha forest, 0.6 ha wetland)
Altitude 0–50 m asl

Ecological units

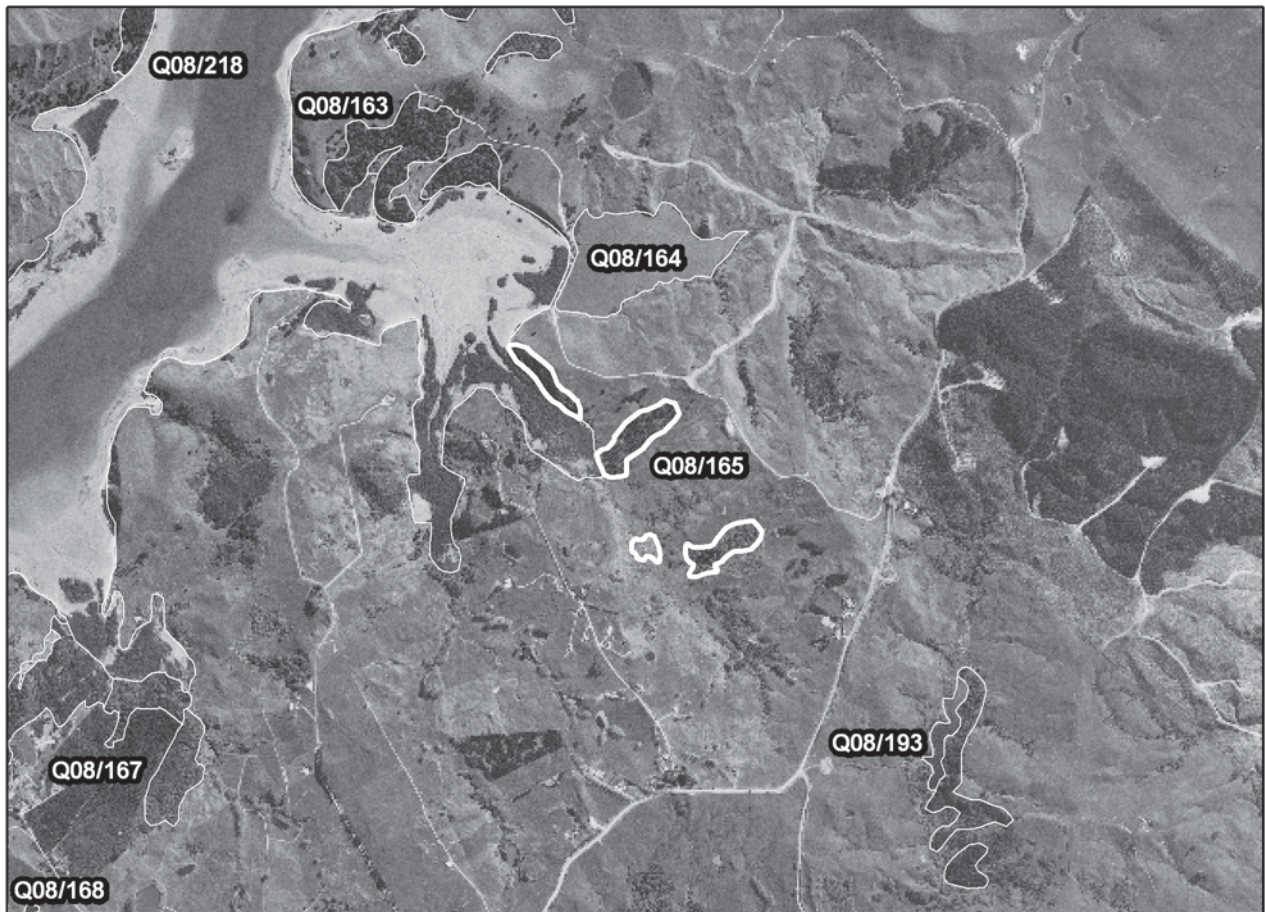
- (a) Kanuka–totara treeland on moderate hillslope (32%)
- (b) Totara–kowhai forest on gentle coastal margin (30%)
- (c) Totara–kahikatea forest on moderate hillslope (30%)
- (d) Raupo reedland in small depression (8%)

Landform/geology

Coastal hillslope underlain by Oligocene micritic limestone (Mahurangi Limestone, Motatau Complex); gullies underlain by melange (undifferentiated Mangakahia & Motatau Complex lithologies); and valley wetland on Holocene alluvium.

Vegetation

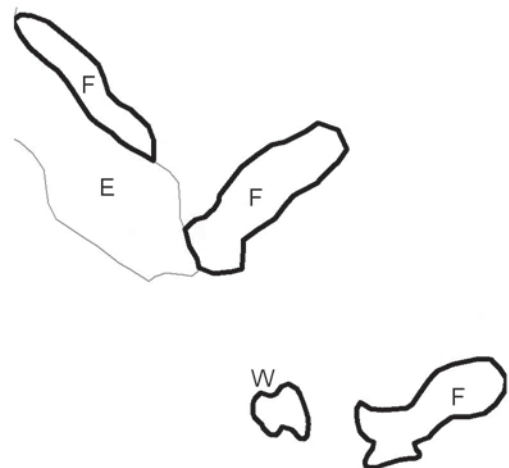
This site comprises two forest remnants, a treeland remnant and a wetland remnant, all within the valley of Waiarohia Creek on the eastern shore of the Otamatea River. The remnants are interspersed with gorse and woolly nightshade, or mixtures of these with occasional regenerating indigenous species including mahoe, manuka, ti kouka, mamaku and totara. Some of these sparse and recent shrublands (mostly dominated by weeds) have been killed in the last year or so (possibly by spraying).



Q08/165 Waiarohia Creek Forest and Wetland

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

0 250 500 1,000 Metres



(a) Kanuka-totara treeland with occasional ti kouka occupies the largest remnant (in the centre), and appears to be heavily grazed and lacking regeneration underneath.

(b) The forest remnant on the coastal margin is a high quality, but small, patch of totara-kowhai forest with frequent karaka. It abuts tall mangroves in the upper tidal inlet.

(c) The southeastern forest remnant was not easily visible from public roads or from a boat on the river, hence its vegetation type has been extrapolated using

recent aerial photography (flown in 2002). The forest canopy appears to be a mixture of totara and kahikatea.

(d) A small area of raupo reedland fills part of the lower freshwater creek. The site would probably support a larger indigenous wetland if not grazed, as surrounding vegetation in the channels appears to be largely grazing-induced exotic rushland.

Fauna

Not surveyed.

Significance

This site contains small, poorly connected remnants and none of the ecological units present are the best examples of their type. The remnants have potential value as habitat for forest birds using a number of forest patches in the landscape, and may contain waterbirds such as the spotless crane, marsh crane or banded rail (due to the wetland's proximity to the coast), however there is currently no information known about the fauna of the site. The Otamatea Marginal Strip No. 2 (administered by DOC) covers 0.6 ha of (b) totara-kowhai forest on gentle coastal margin.

OWHEI CREEK FOREST REMNANTS

Survey no.	Q08/168
Survey date	13 December 2005
Grid reference	Q08 324 522 (7 remnants)
Area	26.1 ha (25.9 ha forest, 0.2 ha wetland)
Altitude	0–100 m asl

Ecological units

- (a) Taraire-puriri-kowhai-kanuka forest on gentle coastal margin (40%)
- (b) Kanuka forest on gentle hillslope (40%)
- (c) Totara-kowhai forest on gentle hillslope (10%)
- (d) Kanuka-totara forest on gentle coastal margin (9%)
- (e) Open water (constructed freshwater farm pond) (1%)

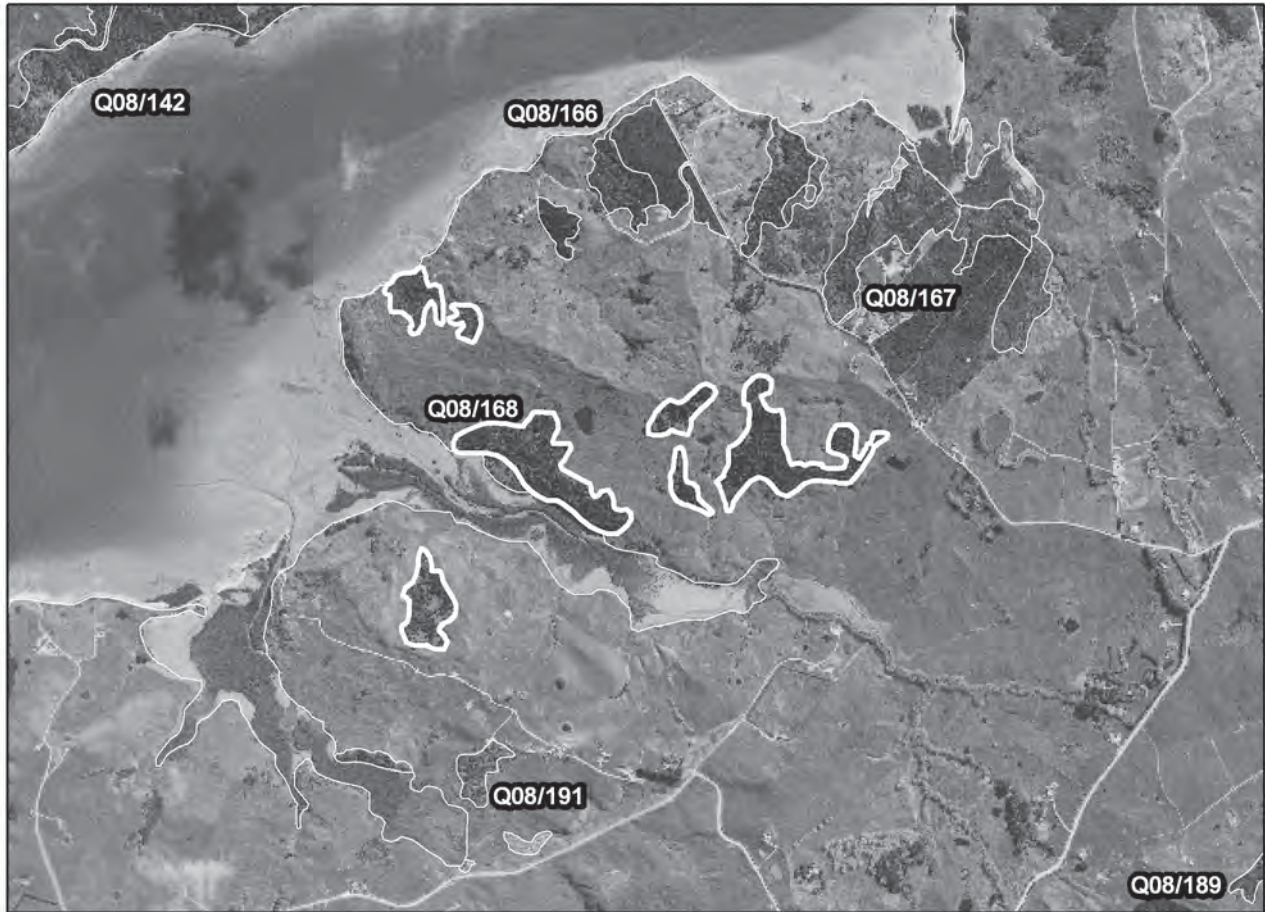
Landform/geology

Coastal hillslopes underlain by Cretaceous–Paleocene thinly bedded calcareous mudstone (Whangai Fmn, Mangakahia Complex), Oligocene micritic limestone (Mahurangi Limestone, Motatau Complex), and melange (undifferentiated Mangakahia & Motatau Complex lithologies).

Vegetation

This site comprises seven indigenous forest remnants in the catchment of Owhei Creek, a small tidal inlet of the Otamatea River (Q08/062). Most of the creek catchment is vegetated in pasture, though frequent infestations of gorse and woolly nightshade are present.

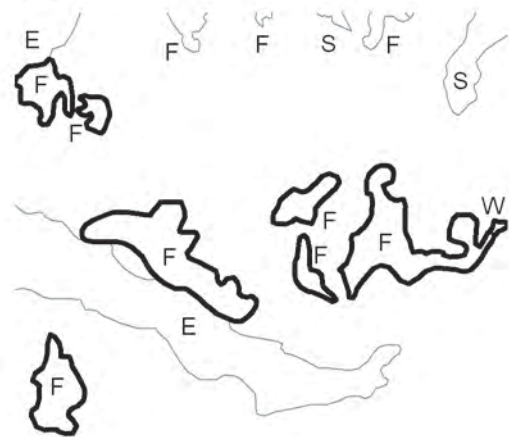
- (a) The largest remnant of forest is directly on the northern coastal margin of Owhei Creek. This has a species rich canopy, dominated by four species (taraire, puriri, kowhai and kanuka) accompanied by frequent kahikatea, ti kouka and karaka. Occasional manuka and matai are also present.



Q08/168 Owhei Creek Forest Remnants

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

0 250 500 1,000 Metres



(b) Remnants in the eastern catchment are dominated by kanuka. Kahikatea, puriri and totara are frequent, and ti kouka is occasional.

(c) On the southern side of the creek, the main forest trees are totara and kowhai in particular. Frequent puriri are also present.

(d) The small remnant on Te Hoanga Point comprises kanuka and totara with occasional ti kouka.

(e) A small farm pond lies adjacent to an area of indigenous forest in the eastern catchment.

Fauna

Not surveyed.

Significance

This site contains no representative ecological units, and is not known to support any threatened or unusual species of any sort. The site is highly fragmented and grazed, which reduces its natural values, and also increases its vulnerability to weed invasion. The northern shore remnant is the highest quality part of the area, and serves as a protective vegetation buffer to the estuarine habitats of the Owhei Creek.

GRIFFIN ROAD FOREST REMNANTS

Survey no.	Q08/172
Survey date	16 December 2005
Grid reference	Q08 299 651 (10 remnants)
Area	31.0 ha
Altitude	40-114 m asl

Ecological units

- (a) Taraire-totara forest on moderate hillslope (40%)
- (b) Totara-kahikatea forest in gully (40%)
- (c) Kanuka-totara forest on moderate hillslope (20%)

Landform/geology

Hillslopes and gullies underlain by Cretaceous sandstone and mudstone (Mangakahia Complex) and melange (undifferentiated Mangakahia & Motatau Complex lithologies).

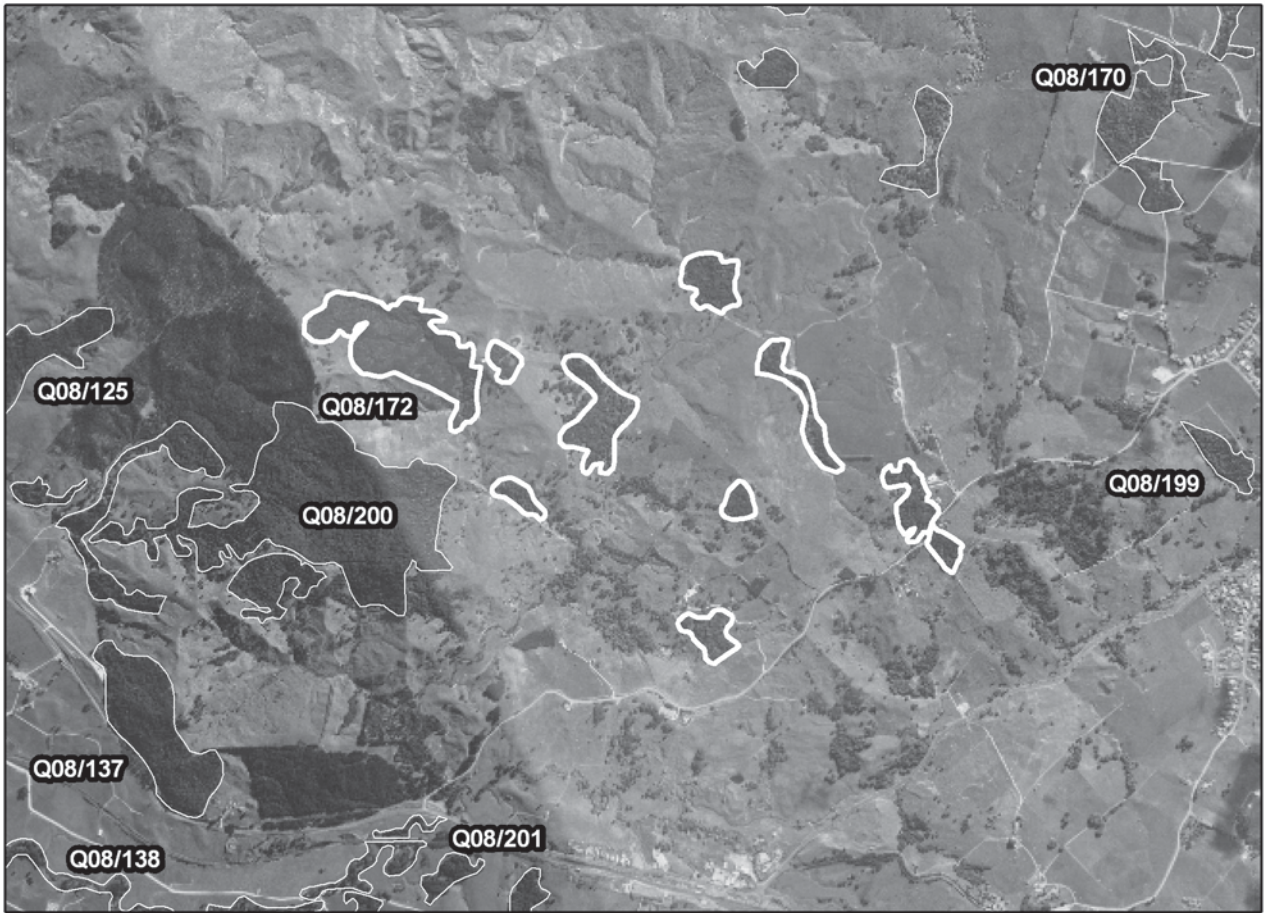
Vegetation

On the northern side of Griffin Road, in part of the headwaters of the Pahi River, there are ten small indigenous forest remnants scattered across pastoral land. Some of these, in particular the largest on the western side, are not visible from Griffin Road, therefore the vegetation description of this site is extrapolated from those parts which are visible combined with study of recent aerial photography (flown in 2002). It was determined that at least three main forest types are present:

- (a) On hillslopes the main forest type is abundant taraire associated with common totara. Rewarewa, nikau and kahikatea are frequent, with occasional pukatea and kohekohe. One particular patch which spans the road and abuts a residential property has several weed infestations, including velvet groundsel, kahili ginger, elaeagnus, agapanthus and busy lizzie.
- (b) In gullies, the main forest type is dominated by totara and kahikatea. Kanuka occurs frequently, with occasional kowhai and nikau.
- (c) The large (obscured) western remnant appears to comprise a substantial amount of even-canopied kanuka-totara forest on the outside of the remnant, with gullies most likely comprising type (b) totara-kahikatea forest.

Fauna

Not surveyed.



Q08/172 Griffin Road Forest Remnants

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

0 250 500 1,000 Metres



Significance

This site does not contain any representative ecological units and there is insufficient information on enough of the remnants to fully assess the significance of the site. The presence of environmentally damaging weed species in one of the remnants along Griffin Road is of concern. In particular velvet groundsel, kahili ginger and elaeagnus threaten to spread and further impair natural character and function in the roadside remnant. Velvet groundsel was not recorded anywhere else in Otamatea ED Northland.

PIROA PEAK FOREST REMNANTS

Survey no. Q08/174
Survey date Not surveyed
Grid reference Q08 362 681 (4 remnants)
Area 9.1 ha
Altitude 74-140 m asl

Ecological unit

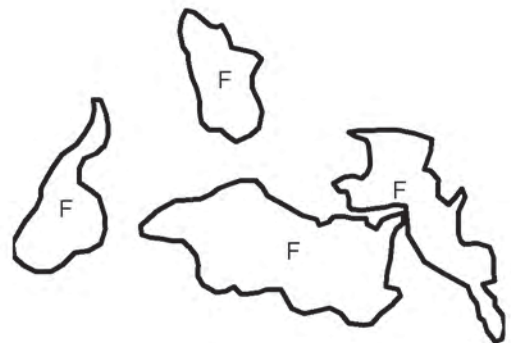
(a) Totara-kahikatea forest on moderate to steep hillslope (100%)



Q08/174 Piroa Peak Forest Remnants

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

0 250 500 1,000 Metres



Landform/geology

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

Vegetation

This site comprises four indigenous forest remnants on a hill top to the east of Piroa Road, southwest of the Piroa Stream valley. The site was not visible from public roads, therefore the forest type was interpreted from recent aerial photography (flown in 2002) by comparing it with a nearby surveyed site showing similar characteristics (Piroa Road Forest Remnants 2, Q08/072).

Fauna

Not surveyed.

Significance

There is insufficient information to assign a higher significance to this site than Level 2.

TITIPU ISLAND

Survey no.	Q08/176
Survey date	12 January 2006
Grid reference	Q08 152 523
Area	1.9 ha (0.7 ha forest, 1.2 ha shrubland)
Altitude	0–20 m asl

Ecological units

- (a) Manuka shrubland on gentle hillslope (63%)
- (b) Pohutukawa-radiata pine treeland on steep coastal margin (37%)

Landform/geology

Steep-sided islet formed of Miocene volcanoclastic gravelly sandstone (Waitakere Group).

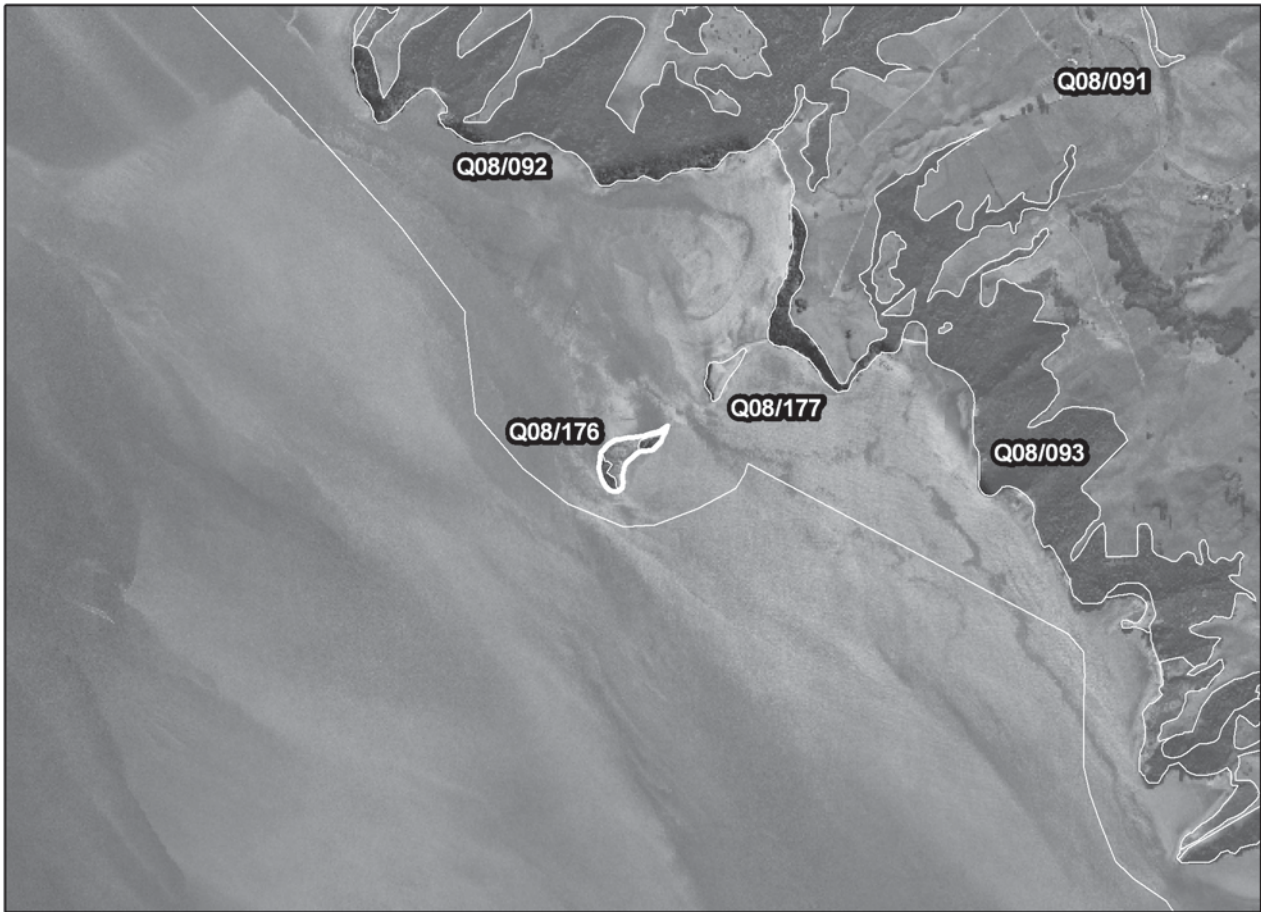
Vegetation

Titipu Island lies in the inner Kaipara Harbour, approximately 160 m southwest of Pupuia Island, and within 450 m of the nearest point on the mainland (Hukatere peninsula). It is separated from Pupuia Island by a relatively deep channel, which cannot be crossed by foot at low tide. The island is steep and is covered by mixed indigenous and exotic vegetation.

(a) The island's highest parts have manuka shrubland with frequent harakeke and ti kouka, and occasional mingimingi, kowharawhara, *Coprosma macrocarpa*, karamu and mapou. The shrubland is divided into patches interspersed with exotic grasses.

(b) On the less steep northeastern end there is a treeland of large pohutukawa and radiata pine with frequent karaka and occasional kowharawhara.

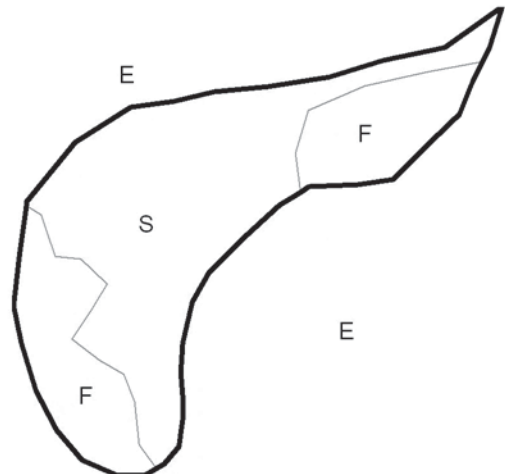
A 1993 plant species list includes some interesting species rarely recorded in Otamatea ED Northland such as *Cheilanthes sieberi*, *Drosera auriculata* and *Pimelea prostrata* (SSBI Q08/H057). These are probably all relatively common in the ED, however.



Q08/176 Titipu Island

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

0 250 500 1,000 Metres



Fauna

For a long time, Titipu Island was a breeding place for reef herons (Nationally Endangered), but none have been recorded there since 1965 (Veitch 1979). Three species of indigenous landsnail were recorded by in 1993: *Delos coresia*, *Phenacobelix giveni* and *Phenacobelix* 'golden' (indeterminate). None of these are threatened species. Several indigenous and exotic wasps and bees were also present (SSBI Q08/H057).

Significance

None of the ecological units present are considered to be particularly good examples of their type, but they are healthier than nearby Pupua Island. Titipu Island is a Recreation Reserve¹⁵ administered by DOC.

PUPUIA ISLAND

Survey no.	Q08/177
Survey date	12 January 2006
Grid reference	Q08 154 526
Area	1.0 ha
Altitude	0–20 m asl

Ecological unit

(a) Exotic grassland with occasional ti kouka and kowharawhara on steep coastal margin (100%)

Landform/geology

Steep-sided islet connected to mainland at low tide; formed of Miocene volcanoclastic gravelly sandstones and basaltic lava flows (Waitakere Group). The island contains part of the Strawberry Bay pillow lava flows (Kenny and Hayward 1996).

Vegetation

Pupua Island lies less than 80 m from the Hukatere peninsula coast, in shallow waters of the Kaipara Harbour (Q08/096). At low tide the island is accessible to terrestrial animals across exposed sandflats. Exotic grasses (mainly kikuyu, buffalo grass and saltwater paspalum) dominate the vegetation on the island (SSBI Q08/H072), with occasional indigenous species dotted around, e.g. ti kouka, harakeke and kowharawhara. Occasional gorse bushes are also present. Dead remains of pohutukawa hint at the previous vegetation cover.

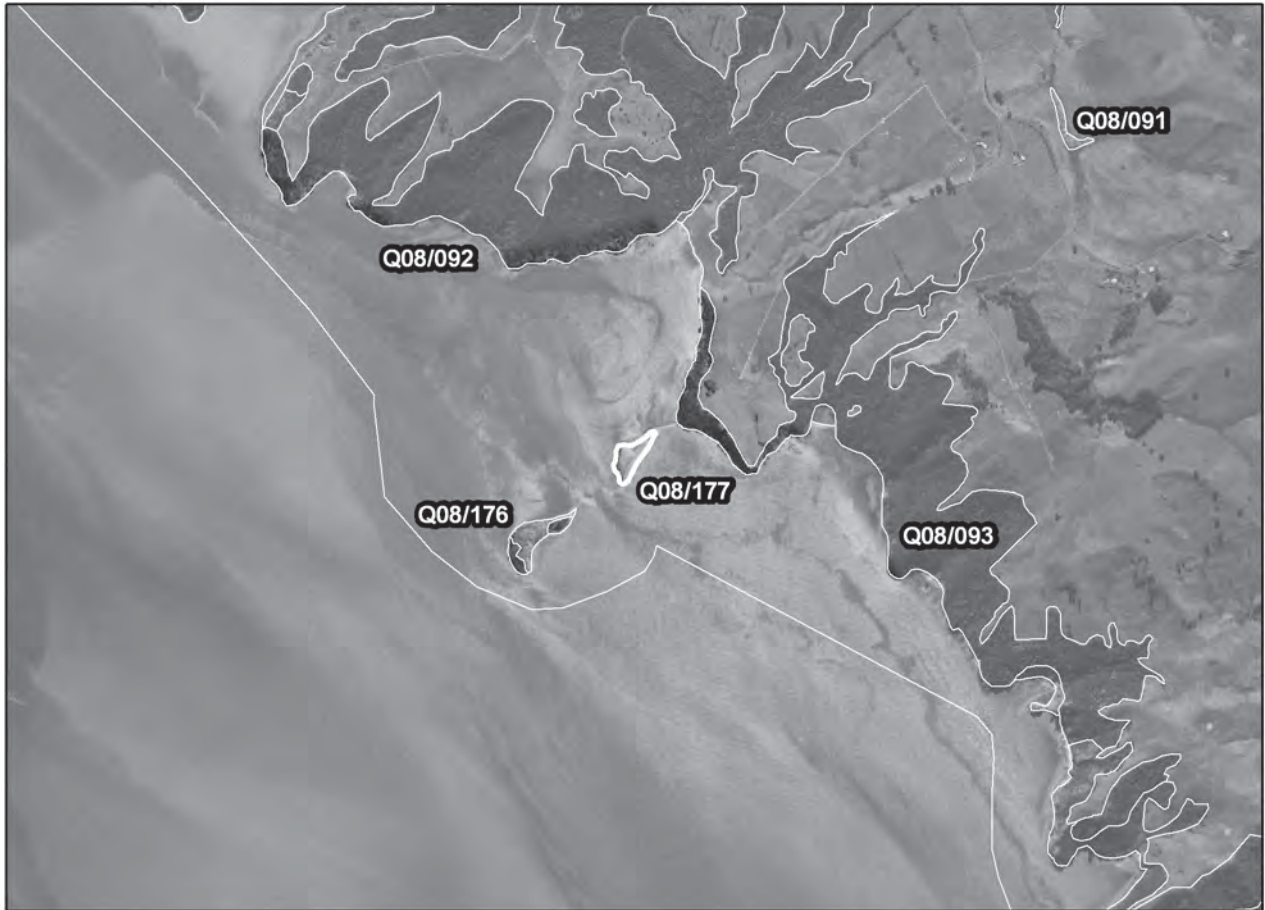
Fauna

The fauna of the island were not surveyed during the present survey. A survey in 1993 recorded no birds, but did note an indigenous shore earwig (SSBI Q08/H072).

Significance

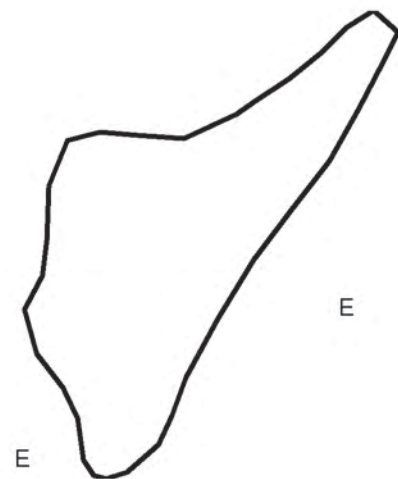
Present knowledge suggests the island is little different from mainland coastal exotic grassland, and is probably still often visited by grazing animals (e.g. sheep) and feral mammals (e.g. possums, rabbits, stoats, cats, rats, etc.). The Strawberry Bay pillow lava is a nationally important geological site (Kenny & Hayward 1996), however its representative value is recognised as part of an ecological unit with indigenous vegetation at neighbouring Te Kiakia Bay Forest Remnants (Q08/093).

¹⁵ Note that the primary purpose of a Recreation Reserve is not biodiversity protection, but recreation, and that, with the exception of animals protected by the Wildlife Act 1953, recreation over-rides biodiversity protection (Reserves Act 1997).



Q08/177 Pupuia Island

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



Significance

This area is very small, but is potential habitat for threatened wetland birds, such as the NI fernbird and spotless crane, though none were detected here at the time of the survey. It is vulnerable to increased exposure following the felling of pines around it. It is also highly weed infested, with Mexican devil in particular affecting its natural character and function.