

(a) To the south, the two remnants alongside Okahu Stream are defined by a very open canopy of abundant tī kōuka over approximately 50% of the area, along with frequent kahikatea.

(b) Dominant kahikatea occurs in the remaining area with frequent tī kōuka.

(c) The middle remnant is 100% kānuka/mānuka and emergent kauri. Tōtara is frequent. Occasional species include rewarewa, rimu, kahikatea, tānekaha, kōwhai, and nīkau.

(d) Abundant tōtara occurs in 50% of the remaining southern remnant, along with frequent tītoki. Kauri, rimu, rewarewa, pūriri, kahikatea, kōwhai, and kānuka/mānuka are occasional.

(e) The remaining 50% of this remnant is taraire dominant with frequent pūriri. Tawa, kauri, tānekaha, pukatea, rimu, rewarewa, pukatea and tōtara are occasional.

### **Fauna**

None noted.

### **Significance**

This site includes lowland and alluvial forest types which are under-represented habitat types within the Tokatoka Ecological District and throughout Northland generally. They occur next to the Okahu Stream which is part of the Manganui River Complex. Representative site for type (a) tī kōuka forest; dominant tī kōuka alluvial forest is particularly rare throughout Northland. Approximately 4.5 ha of this site occurs within a 'Chronically Threatened' land environment (A5.2a and G3.1b) and 5.9 ha within a 'Critically Underprotected' land environment (A6.1c) (Walker et al. 2007).

## **OKAHU BUSH**

<b>Survey no.</b>	P08/044
<b>Survey date</b>	25 May 1999
<b>Grid reference</b>	1697142E 6017596N (AY29)
<b>Area</b>	9.8 ha
<b>Altitude</b>	40-100 m a.s.l.

### **Ecological unit**

(a) Taraire forest on moderate hillslope (50%)

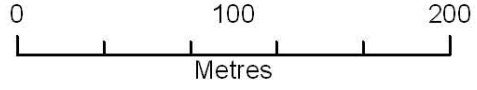
(b) Kahikatea forest on moderate hillslope (50%)

### **Landform/geology**

Hillslopes of Mangakahia Complex sandstone and mudstone.

### **Vegetation**

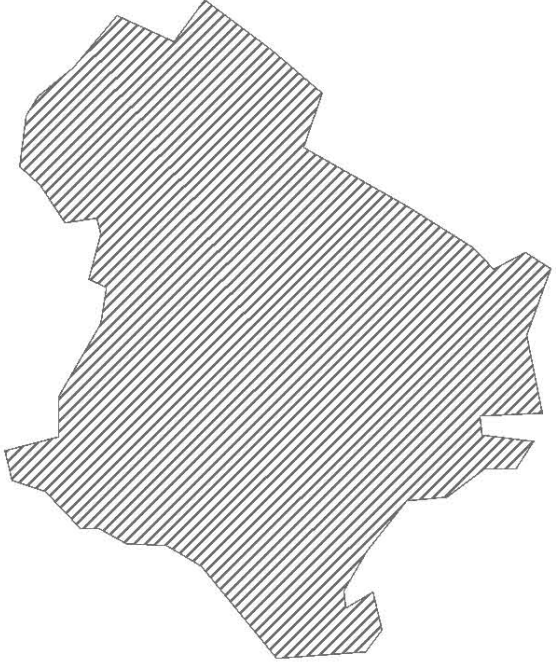
(a) Approximately 50% of the site is forest containing common taraire with frequent kahikatea and pūriri. A range of species are occasional including emergent kauri, rimu, mataī, pukatea, rewarewa, tōwai, tōtara, nīkau and kānuka/mānuka.



### P08/044 Okahu Bush

**Habitat type**

-  Forest
-  Shrubland
-  Wetland



(b) Kahikatea is common in the remaining area. Taraire and tōtara occur frequently. Kauri, rimu, pukatea, pūriri, nīkau and kākūka/mānuka are occasional.

### **Fauna**

**1989 SSBI P08/H004 record:** kūkupa (regionally significant species), grey warbler, silvereye, NI fantail, tūi, NZ kingfisher and Australasian harrier.

### **Significance**

Regenerating forest remnant providing important stepping stone habitat within a very modified Ecological District and an important potential year-round food source for the regionally significant kūkupa (taraire and pūriri). This site is covered by a 'Critically Underprotected' land environment (A6.1c) (Walker et al. 2007).

## H A M L Y N S B U S H S C E N I C R E S E R V E

<b>Survey no.</b>	P08/047
<b>Survey date</b>	6 October 1999
<b>Grid reference</b>	1686112E 6017912N (AY29)
<b>Area</b>	3 ha
<b>Altitude</b>	80-145 m a.s.l.

### **Ecological unit**

(a) Nīkau-pūriri-taraire forest on moderate to steep hillslope

### **Landform/geology**

Hillslope of Motatau Complex muddy limestone.

### **Vegetation**

(a) Hillslope remnant with nīkau, pūriri and taraire as associated species. Tōtara is frequent and karaka, kohekohe, miro, kahikatea, kōwhai, puka and tī kōuka are occasional.

On the toeslopes adjacent to Arapohue Road, harakeke (*Pbormium tenax*) occurs amongst grassland.

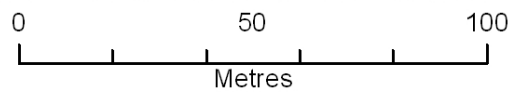
### **Fauna**

None noted.

### **Significance**

A representative site and only example of this forest type within the Tokatoka Ecological District providing important stepping stone habitat and a potential seasonal food source for kūkupa.

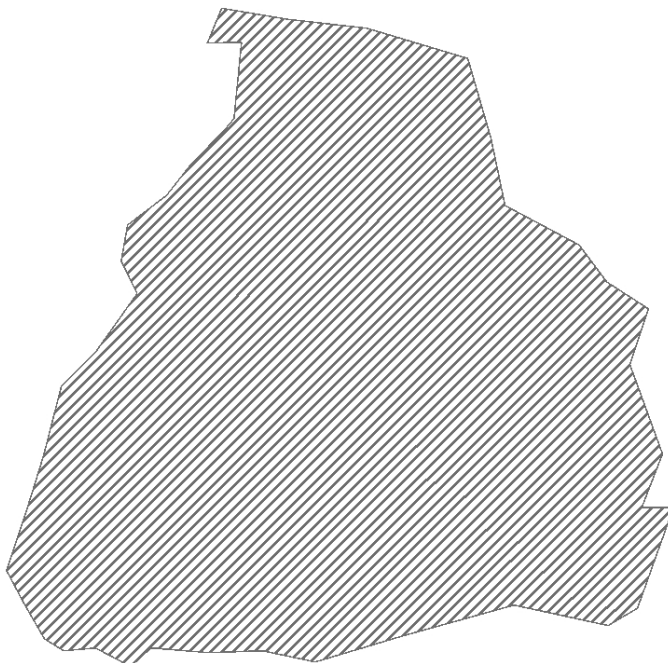
Hamlyns Bush Scenic Reserve is administered by the Kaipara District Council. This site is covered by a 'Critically Underprotected' land environment (A6.1c) (Walker et al. 2007).



### P08/047 Hamlyns Bush Scenic Reserve

#### Habitat type

-  Forest
-  Shrubland
-  Wetland



## WAIOTIRA ROAD BUSH

<b>Survey no.</b>	Q07/086
<b>Survey date</b>	1 April 1998
<b>Grid reference</b>	1709224E 6026240N (AX30)
<b>Area</b>	32.4 ha (29.6 ha forest, 2.7 ha shrubland)
<b>Altitude</b>	60-171 m a.s.l.

### Ecological unit

- (a) Taraire forest on moderate hillslope and gully (70%)
- (b) Māhoe-mamaku forest on hillslope and ridge (5%)
- (c) Tōtara-kahikatea forest on moderate hillslope and ridge (15%)
- (d) Shrubland on moderate hillslope (10%)

### Landform/geology

Motatau Complex calcareous mudstone and sandstone.

### Vegetation

(a) In a gully on the eastern side, taraire is dominant with frequent tōtara and kahikatea. Nīkau, mamaku, pūriri, karaka, emergent rewarewa, tītoki, tī kōuka and pukatea are occasional.

Type (a) taraire forest also occurs along the western end of the remnant, along with occasional karaka.

(b) Māhoe and mamaku occur in an area of on the upper northeast-facing slopes of the remnant. Patē and tī kōuka are occasional.

(c) In the middle of the remnant, abundant tōtara with kahikatea occurs. Pukatea and mamaku are occasional. Type (c) tōtara-kahikatea forest also occurs at the western end of the remnant on the lower slopes.

(d) The shrubland area in the north of the remnant was not described.

### Fauna

Kūkupa (regionally significant species) recorded on day of survey. Kauri snail (Gradual Decline) (F. Brook pers. comm.).

NI brown kiwi (Nationally Vulnerable) reported in 1992/93 DOC Northland kiwi survey (DOC Internal files).

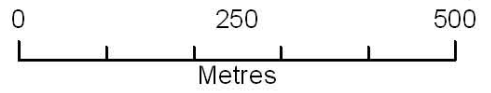
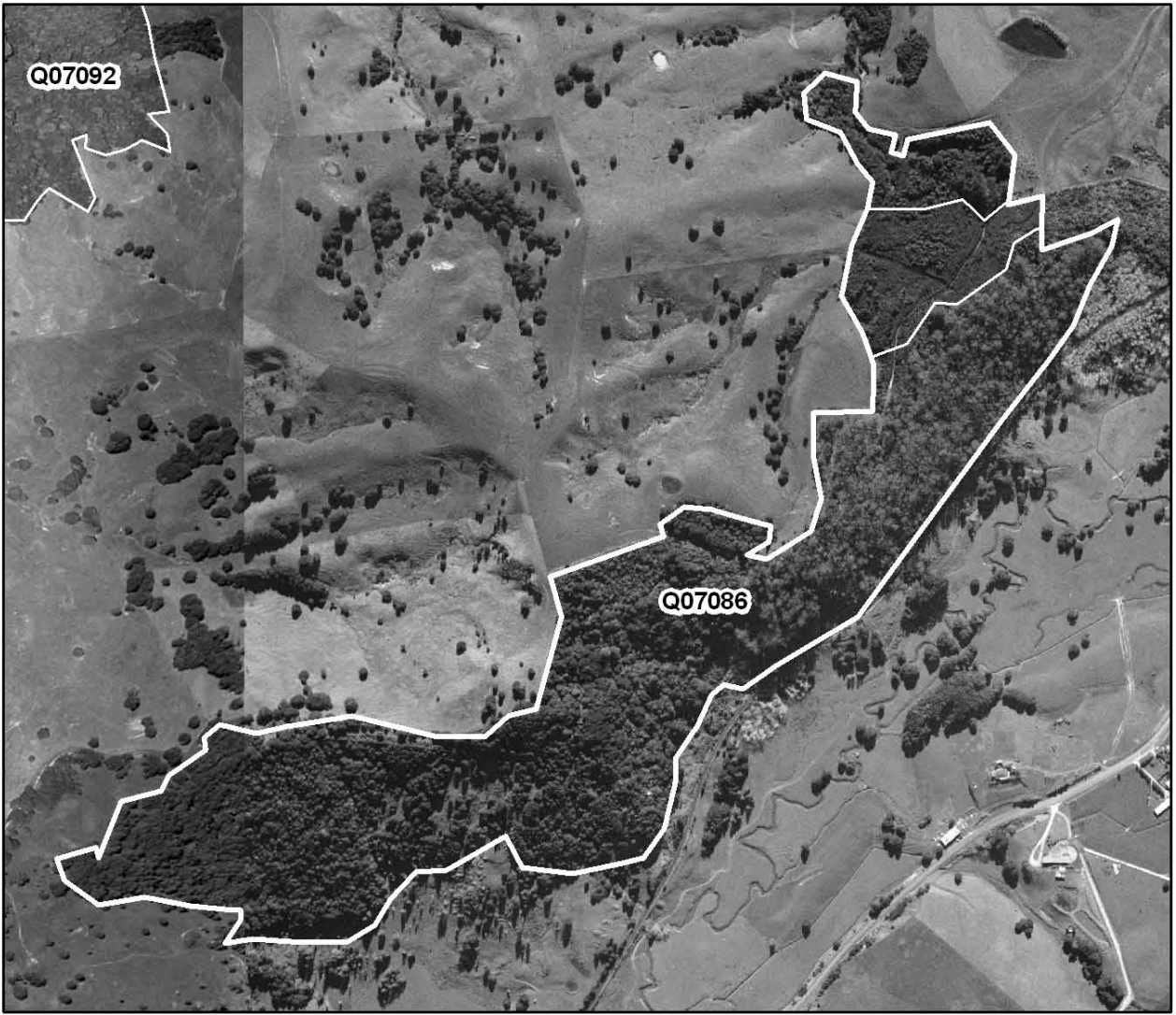
Type locality for the landsnail *Liarea hochstetteri alta*.

### Significance

This site contains a large proportion of taraire-dominant forest which is an important seasonal food source for the regionally significant kūkupa, which have been recorded utilising the site. The Threatened kauri snail is also present

Representative site for type (a) taraire forest.

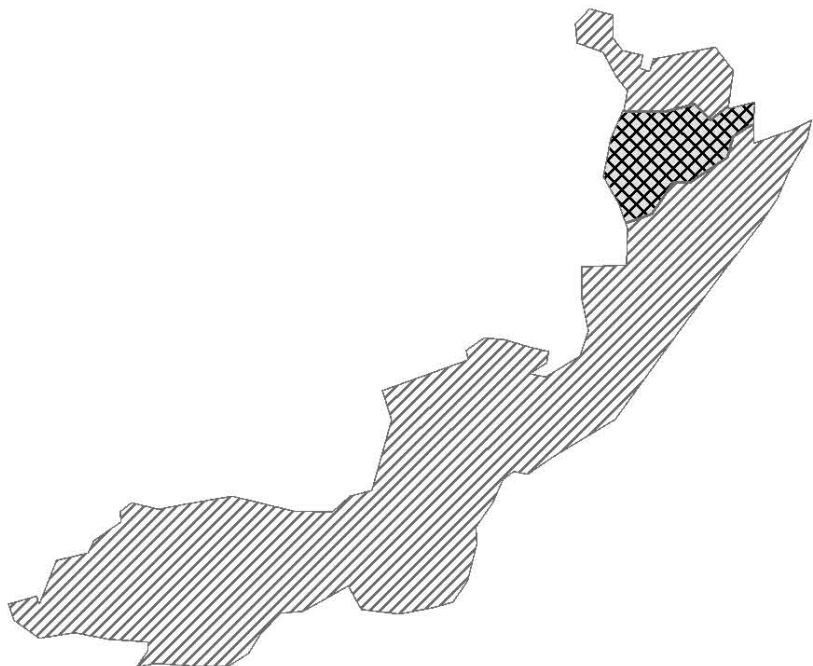
The only occurrence of type (b) māhoe-mamaku forest in the District; however, it is limited to a very small area. Approximately 10.7 ha of this site occurs within an 'At Risk' land environment (A6.1b) and 21.6 ha within a 'Critically Underprotected' land environment (A6.1c) (Walker et al. 2007).



### Q07/086 Waitotira Road Bush

#### Habitat type

-  Forest
-  Shrubland
-  Wetland



## NEWMANS BUSH

**Survey no.** Q07/087  
**Survey date** 1 April 1998  
**Grid reference** 1707741E 6023957N (AX29)  
**Area** 10.8 ha, 2 remnants  
(9.4 ha forest, 1.4 ha constructed wetland)  
**Altitude** 40-100 m a.s.l.

### Ecological unit

- (a) Taraire-tōtara forest on moderate hillslope
- (b) Open water

### Landform/geology

Mangakahia Complex sandstone and mudstone.

### Vegetation

(a) Taraire and tōtara commonly occur in the main forested area. Emergent rewarewa and tōwai frequently occur, with occasional emergent kahikatea.

(b) There is a constructed open water wetland adjacent to the bush area.

The bush areas in the south adjacent to the wetland are included in a Queen Elizabeth II National Trust open space covenant but were not described on the day of survey.

### Significant flora

**1991 records from SSBI Q07/R07/H085:** kaikōmako, round-leaved coprosma, *Coprosma rigida* and kohia (all regionally significant species).

### Fauna

**1991 records from SSBI Q07/R07/H085:** kūkupa (regionally significant species), morepork, grey warbler, NI fantail, silvereve and tūi.

Mallard duck, black swan, pūkeko and welcome swallow recorded on the day of this survey.

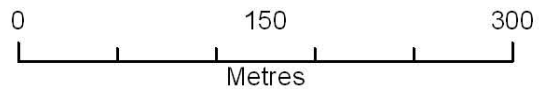
### Significance

Records of several regionally significant species.

The constructed open water wetland provides habitat for waterfowl.

This site is protected by a Queen Elizabeth II National Trust Open Space covenant (10 ha). This site occurs within a 'Critically Underprotected' land environment (A6.1c) (Walker et al. 2007).

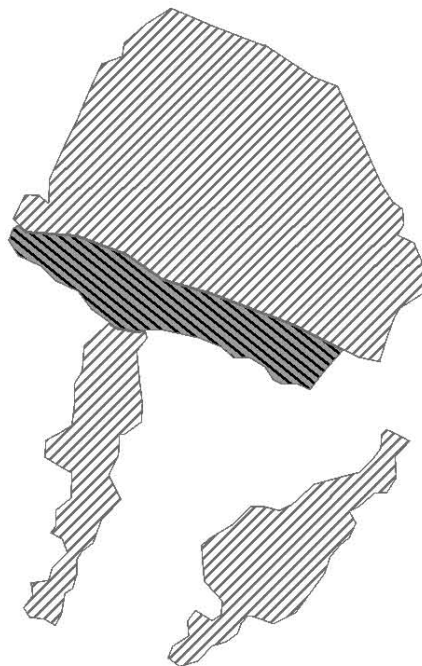




### Q07/087 Newmans Bush

#### Habitat type

-  Forest
-  Shrubland
-  Wetland





## TAIPUHA ROAD BUSH

**Survey no.** Q07/088  
**Survey date** 1 April 1998  
**Grid reference** 1708923E 6022021N (AX30)  
**Area** 7.5 ha, 2 remnants  
**Altitude** 50-100 m a.s.l.

### **Ecological unit**

(a) Rimu-tōtara forest on gentle hillslope and gully

### **Landform/geology**

Mangakahia Complex mudstone/sandstone.

### **Vegetation**

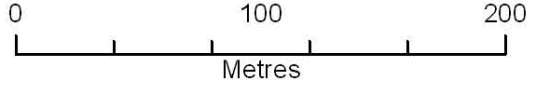
(a) Emergent rimu occurs over a tōtara canopy. Tānekaha, kahikatea, rewarewa and kānuka/mānuka are occasional.

### **Fauna**

None noted.

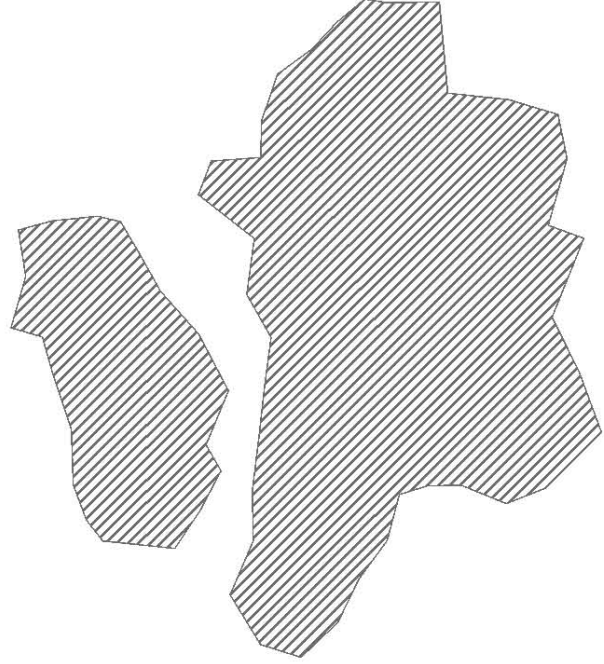
### **Significance**

A representative regenerating lowland podocarp forest remnant providing important stepping stone habitat within a very modified Ecological District. Representative site for rimu-tōtara forest. This site is covered by a 'Critically Underprotected' land environment (A6.1a and A6.1c) (Walker et al. 2007).



**Q07/088 Taipuha Road Bush**

- Habitat type**
-  Forest
  -  Shrubland
  -  Wetland



## HARTNELL ROAD BUSH

<b>Survey no.</b>	Q07/089
<b>Survey date</b>	1 April 1998
<b>Grid reference</b>	1709235E 6020775N (AX30)
<b>Area</b>	79.3 ha, 3 remnants (19.2 ha forest, 60.1 ha shrubland)
<b>Altitude</b>	60-132 m a.s.l.

### Ecological unit

- (a) Tōtara-tōwai forest on ridge
- (b) Tōtara forest on hillslope and ridge
- (c) Kānuka/mānuka shrubland on hillslope (70%)
- (d) Tōtara-kahikatea forest on hillslope
- (e) Taraire forest on hillslope

### Landform/geology

Mangakahia Complex sandstone and mudstone.

### Vegetation

- (a) Along the top ridge of the southwestern remnant, tōtara and tōwai are co-dominant with emergent rewarewa frequently occurring. Pukatea, pūriri, mamaku and kahikatea are occasional.
- (b) Down from this, tōtara is dominant with frequent emergent kahikatea and emergent rewarewa. Pukatea, taraire, nīkau, mamaku and kānuka/mānuka are occasional.
- (c) The small shrubland area is largely kānuka/mānuka dominant.
- (d) Tōtara is abundant with associated kahikatea in a small pocket of forest in the middle remnant. Emergent rewarewa with pukatea, taraire, mamaku, nīkau and pine are also present.

In the 1998 survey, most of the large middle remnant appeared to be type (c) vegetation dominated by kānuka/mānuka with frequent mamaku and pine. Emergent tōtara, tōwai, lancewood and tī kōuka are also present. 2002 aerial photography shows more of a mosaic of areas of forest and shrubland.

- (e) Abundant taraire forest occurs in the remaining remnant in the northeast. Nīkau, kahikatea, tōwai, kohekohe, karaka and tōtara are occasional.

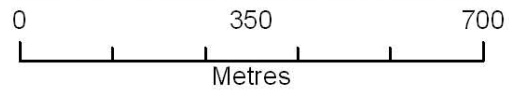
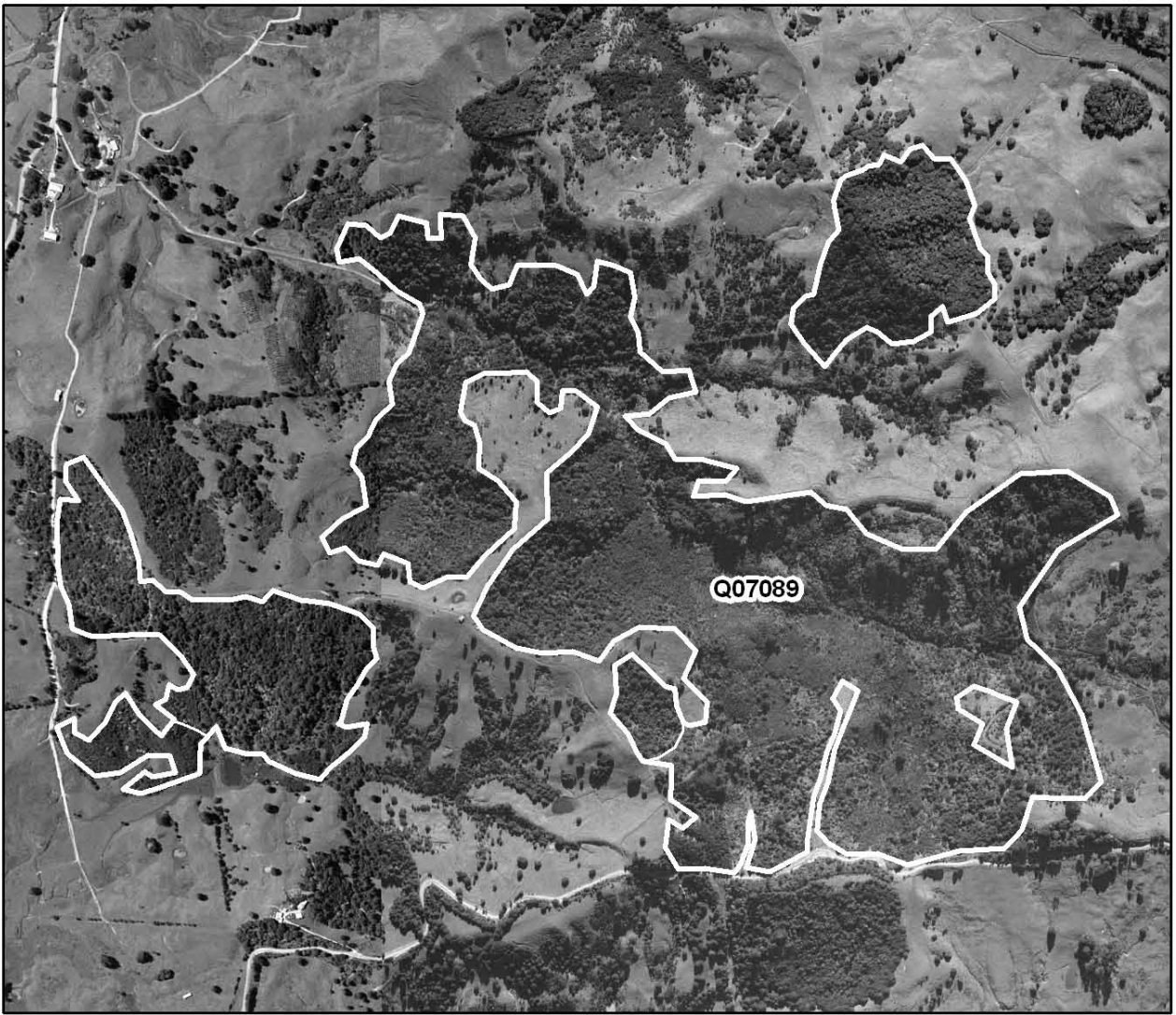
Type (b) tōtara occurs here on the ridge with rimu, taraire, nīkau, kahikatea and kānuka/mānuka (edges) in small amounts.

### Fauna

Kūkupa (regionally significant species) recorded on the day of survey.

### Significance

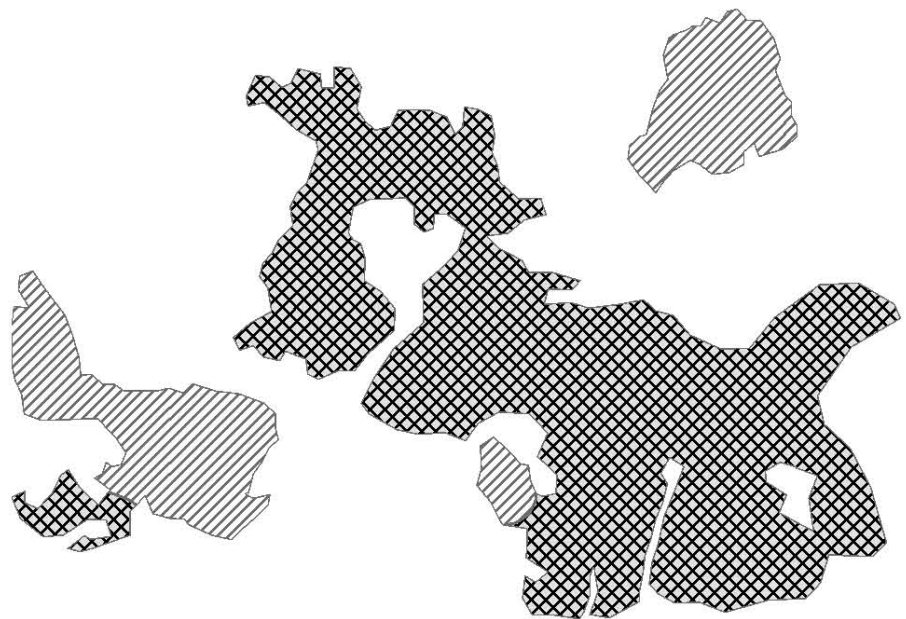
Hartnell Road Bush is a relatively large habitat within this Ecological District, comprising several vegetation types. It also provides important stepping stone habitat for species, including the regionally significant kūkupa. This site is covered by a 'Critically Underprotected' land environment (A6.1a and A6.1c) (Walker et al. 2007).



### Q07/089 Hartnell Road Bush

#### Habitat type

-  Forest
-  Shrubland
-  Wetland



## BARTLETT ROAD BUSH

<b>Survey no.</b>	Q07/091
<b>Survey date</b>	1 April 1998
<b>Grid reference</b>	1710002E 6024607N (AX30)
<b>Area</b>	88.4 ha, 2 remnants
<b>Altitude</b>	40-176 m a.s.l.

### Ecological unit

- (a) Taraire forest on moderate hillslope (20%)
- (b) Tānekaha-tōwai forest on hillslope and ridge (< 1%)
- (c) Tānekaha-tōtara forest on moderate hillslope and ridge (30%)
- (d) Tōtara forest on moderate and steep hillslope (< 1%)
- (e) Kauri-tānekaha forest on hillslope and ridge (1%)
- (f) Kānuka/mānuka-tānekaha forest on gentle hillslope (15%)
- (g) Tītoki-tōtara forest on alluvium (5%)
- (h) Kānuka/mānuka-tōtara forest on alluvium (5%)
- (i) Tōtara forest on alluvium (< 5%)
- (j) Kahikatea-tōtara forest on moderate hillslope (< 1%)

### Landform/geology

Quaternary alluvial deposits (eastern part in valley). Motatau Complex calcareous mudstone and sandstone (western part).

### Vegetation

Type (a) through to (h) describes the large bush remnant on the western side of Bartletts Road and type (i) and (j) describes the forest ribbon remnant associated with the Waiotira Stream.

(a) In the northwest, taraire dominates an area, along with frequent emergent rewarewa. Occasional species include emergent northern rātā, pukatea, nīkau, puka, kānuka/mānuka, pūriri and tī kōuka.

(b) Just south of this, a small area of tānekaha and tōwai is common with occasional mamaku, rewarewa, kānuka/mānuka and tōtara.

(c) Moving south along the western face of the habitat, tānekaha and tōtara are common. Rimu is frequent and mamaku, kauri and taraire are occasional.

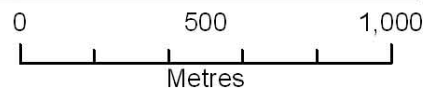
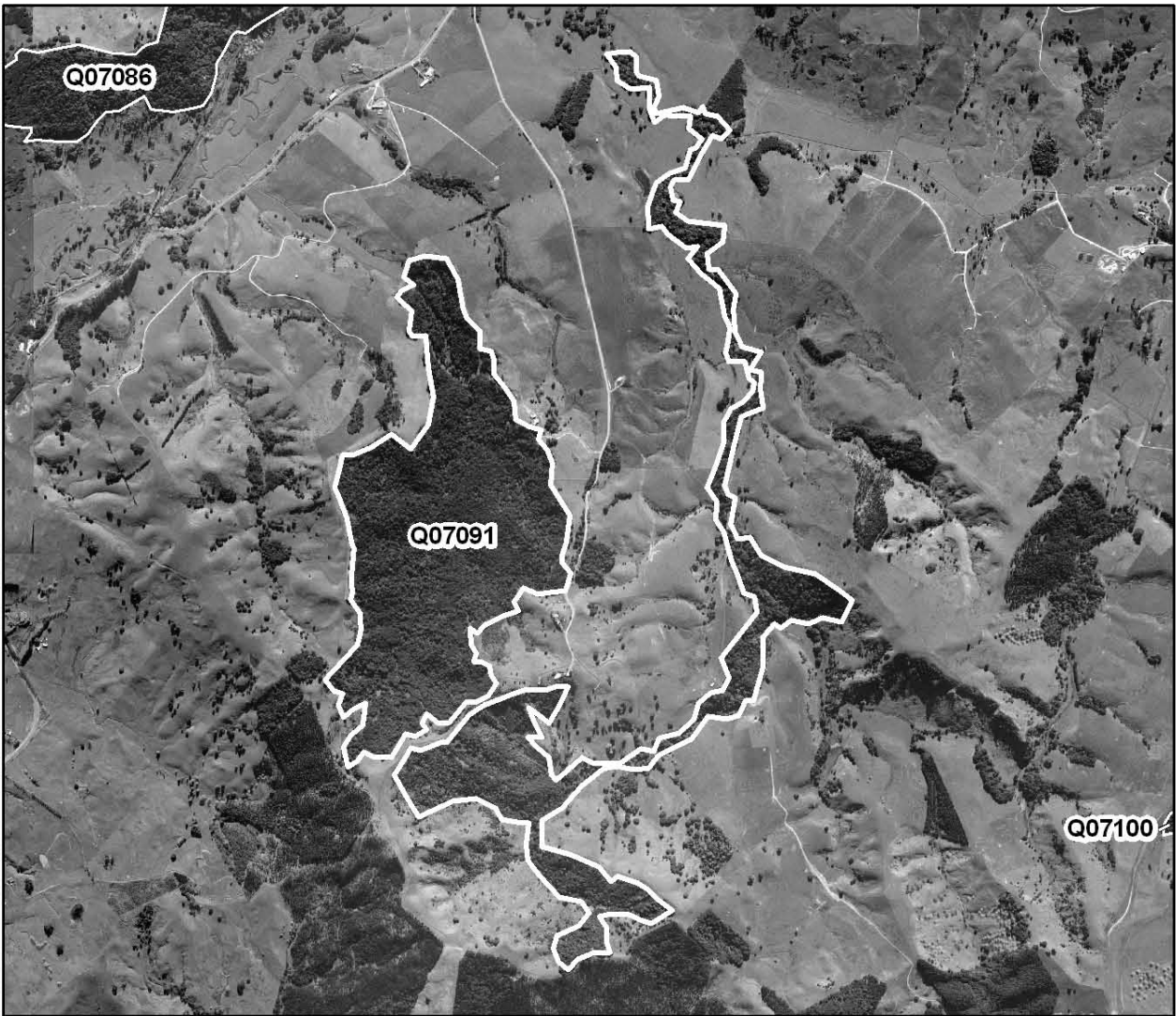
(d) In a very small area, further south along the ridge, tōtara is dominant and mamaku is frequent. Emergent rimu, tī kōuka, tōwai, kōhūhū, pukatea and tānekaha are occasional.

(e) East from type (d), emergent kauri and tānekaha are common. Occasionally occurring species include rimu, rewarewa, tōtara and macrocarpa.

(f) Southeast from this, kānuka/mānuka and tānekaha are common, with kauri and tōtara frequent. Pukatea, mamaku, nīkau and rimu are occasional.

Type (d), tōtara occurs in the forested area south of this with frequent kānuka/mānuka and occasional kahikatea.

(g) Tītoki and tōtara occur adjacent to the bridge on the western side of Waiotira Road. Mataī is frequent within this canopy. Occasional species include kānuka/mānuka, kahikatea, kōwhai, harakeke and bracken. Tradescantia is a dominant ground cover on the stream banks by the bridge.



### Q07/091 Bartlett Road Bush

#### Habitat type

-  Forest
-  Shrubland
-  Wetland



(h) Adjacent to this on the eastern side of the road, kānuka/mānuka and tōtara are common with frequent tītoki. Kōwhai, tī kōuka, kahikatea and hawthorn are occasional.

(i) Tōtara forest then dominates the rest of the riverine ribbon until it adjoins the forested hillslope.

(i) Just before the adjoining tributary, kahikatea, tītoki and kānuka/mānuka frequently occur.

(ii) At the fork of this tributary, on a moderate slope, tōtara forest is interspersed with frequent kahikatea and mamaku. Tī kōuka, kānuka/mānuka, rewarewa and pūriri are occasional.

(iii) Tōtara forest occurs along the tributary with frequent kānuka/mānuka. Karaka, mataī, tītoki, kōwhai, tī kōuka and kahikatea are occasional.

(j) Kahikatea and tōtara forest occurs adjacent to this on a hillslope. Mataī, rimu, kauri and nīkau are occasional.

### ***Significant flora***

Northern rātā (regionally significant species) recorded during this survey.

### **Fauna**

**1992 records from SSBI Q07/R07/H063:** NI brown kiwi (Nationally Vulnerable) were reported in 1992 (on the day of this survey a local farmworker commented that he had not heard kiwi for 6 years or so and in the past he used to hear kiwi a lot). Kūkupa (regionally significant species) were recorded during this survey. 1992 records also of morepork, grey warbler, NI fantail, silvereye and tūī.

### **Significance**

A diverse assemblage of forest types with associated shrubland areas and a riparian ribbon along the Waioitira Stream. This stream connects with the Manganui River Complex. The riparian ribbon provides an important buffer from adjoining landuses. Records of Threatened and Regionally significant species; however, it is unlikely that kiwi are still present in the area; follow-up survey is required.

Presence of two ecological units not recorded elsewhere in the District—types (b) and (e).

Representative site for type (a) taraire forest, type (c) tānekaha-tōtara forest, type (d) tōtara forest and type (f) kānuka/mānuka-tānekaha forest.

A small area of public conservation land, 1.6 ha, is contained within this site and is administered by DOC. Approximately 0.5 ha of this site occurs within an 'acutely Threatened' land environment (A5.1c), 8.7 ha within a 'Chronically Threatened' land environment (G3.1b), 0.5 ha within an 'At Risk' land environment (A6.1b) and 74.8 ha within a 'Critically Underprotected' land environment (A6.1a and A6.1c) (Walker et al. 2007).



## TAURARO A BUSH

<b>Survey no.</b>	Q07/092
<b>Survey date</b>	16 April 1998
<b>Grid reference</b>	1708225E 6026911N (AX30)
<b>Area</b>	32 ha
<b>Altitude</b>	20-100 m a.s.l.

### **Ecological unit**

- (a) Tōtara forest on a gentle hillslope and ridge
- (b) Kauri forest on ridge
- (c) Rimu forest on gentle hillslope and ridge

### **Landform/geology**

Motatau Complex calcareous mudstone and sandstone.

### **Vegetation**

In 1998, this site was recorded as being 38 ha, with the northern part of the remnant extending to Omana Road. 2002 aerial photography shows that this northern extension is no longer present.

A considerable area of this site could not be adequately viewed from the road or vantage points.

(a) On the eastern side of the remnant, tōtara is abundant with frequently occurring kahikatea, tānekaha and kānuka/mānuka.

Type (a), abundant tōtara also occurs in an area on the western edge of the remnant with frequent kahikatea and kānuka/mānuka.

(b) Large emergent kauri trees are dominant along the ridge at the southern end of the remnant. Tānekaha and pine are occasional.

(c) Rimu-dominated forest occurs in the foreground of this. Tānekaha and kauri rickers are frequent and kānuka/mānuka occasional.

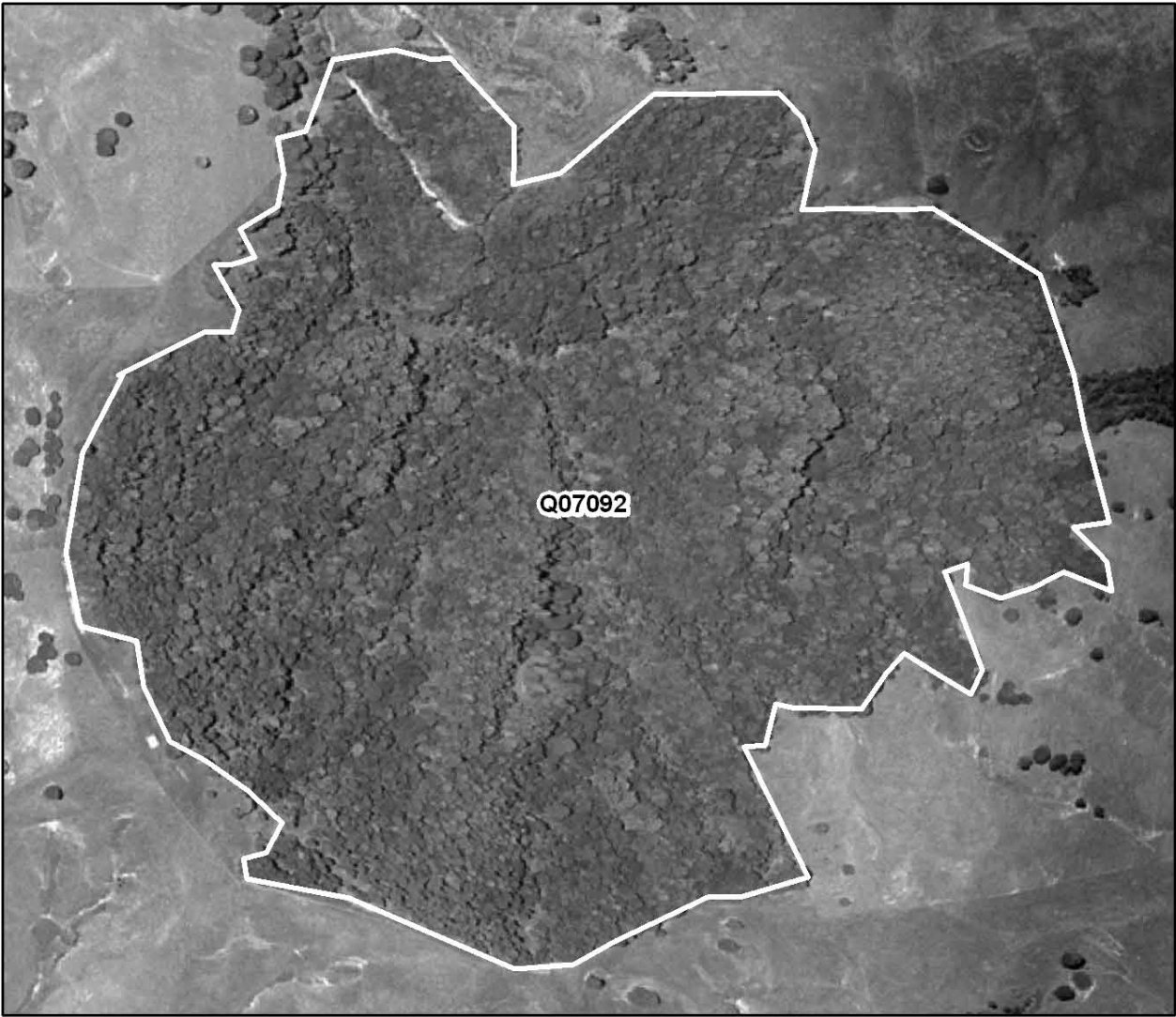
### **Fauna**

**1994 records from SSBI Q07/R07/H062:** NI brown kiwi (Nationally Vulnerable) were reported by the landowner.

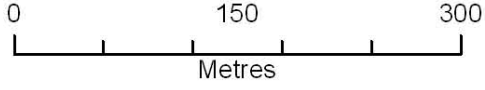
### **Significance**

Presence of large mature kauri trees (which are uncommon in the Tokatoka Ecological District) and past records of the Threatened NI brown kiwi (survey required).



Representative site for type (b) kauri forest and type (c) rimu forest. This site occurs within a 'Critically Underprotected' land environment (A6.1a and A6.1c) (Walker et al. 2007).

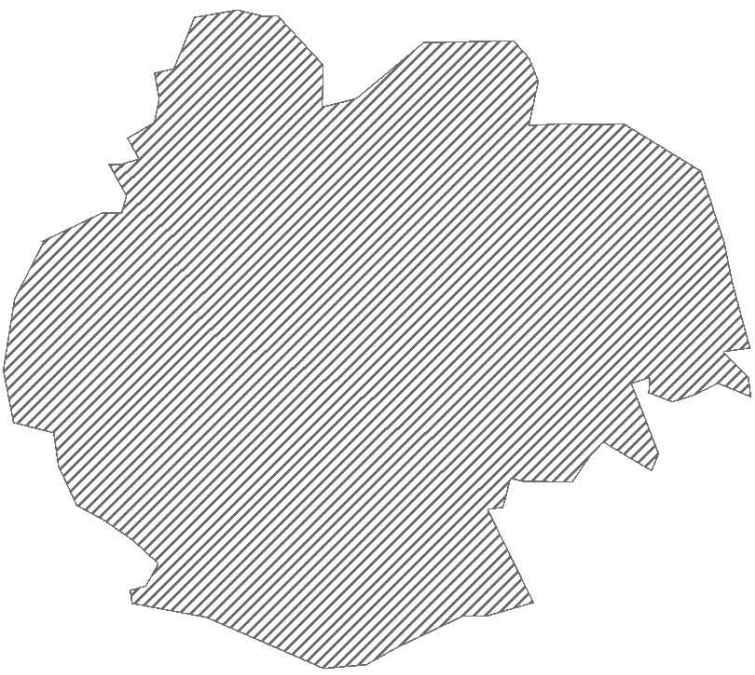


Q07092



**Q07/092 Tauraroa Bush**

- Habitat type**
-  Forest
  -  Shrubland
  -  Wetland



## OMANA ROAD BUSH

**Survey no.** Q07/093  
**Survey date** 16 April 1998  
**Grid reference** 1706507E 6027480N (AX29)  
**Area** 5.8 ha  
**Altitude** 20-110 m a.s.l.

### **Ecological unit**

- (a) Taraire forest on hillslope (70%)
- (b) Kahikatea forest on alluvium (30%)

### **Landform/geology**

Motatau Complex calcareous mudstone and sandstone.

### **Vegetation**

- (a) Taraire dominates this remnant. Tōtara is present especially along the edges. Species that occur occasionally include lancewood, kōwhai, tī kōuka, nīkau, puka, karaka, miro, rewarewa and kauri.
- (b) The remainder of the remnant, associated with the stream, consists of abundant kahikatea with occasional kōwhai, mataī, mānatu, tī kōuka, puka and nīkau. At the time of survey this area was grazed with no understorey.

### ***Significant flora***

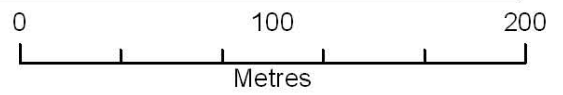
Mānatu (regionally significant species) recorded during this survey.

### **Fauna**

Kūkupa (regionally significant species) where recorded on the day of the survey.

### **Significance**

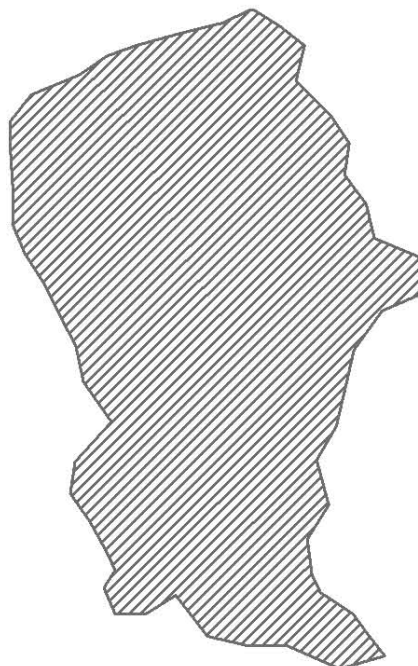
A small but important forest remnant within a very modified Ecological District supporting Regionally significant species including an important food source for kūkupa. Approximately 0.3 ha of this site occurs within an 'acutely Threatened' land environment (G3.1a) and 5.6 ha within a 'Critically Threatened' land environment (A6.1c) (Walker et al. 2007).



### Q07/093 Omana Road Bush

#### Habitat type

-  Forest
-  Shrubland
-  Wetland



## PIKIWAHINE BUSH REMNANTS

<b>Survey no.</b>	Q07/094
<b>Survey date</b>	16 April 1998
<b>Grid reference</b>	1703457E 6024069N (AX29)
<b>Area</b>	11.1 ha, 2 remnants
<b>Altitude</b>	40-100 m a.s.l.

### **Ecological unit**

(a) Taraire forest on moderate hillslope

### **Landform/geology**

Mangakahia Complex sandstone and mudstone.

### **Vegetation**

(a) Taraire forest dominates both remnants.

(i) In the northern remnant, taraire is dominant with frequent large emergent kahikatea and occasional emergent kauri. Other occasional species include rewarewa, rimu, tōwai, pukatea, nīkau, puka, tōtara (edges), kānuka/mānuka and some pines.

(ii) In the southern remnant, dominant taraire occurs with occasional kahikatea, pole rimu, tōwai, emergent rewarewa, tōtara (especially on the edges), pūriri, kohekohe, nīkau, mamaku and kānuka/mānuka.

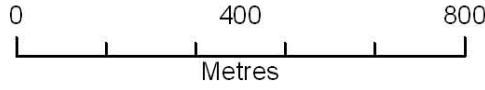
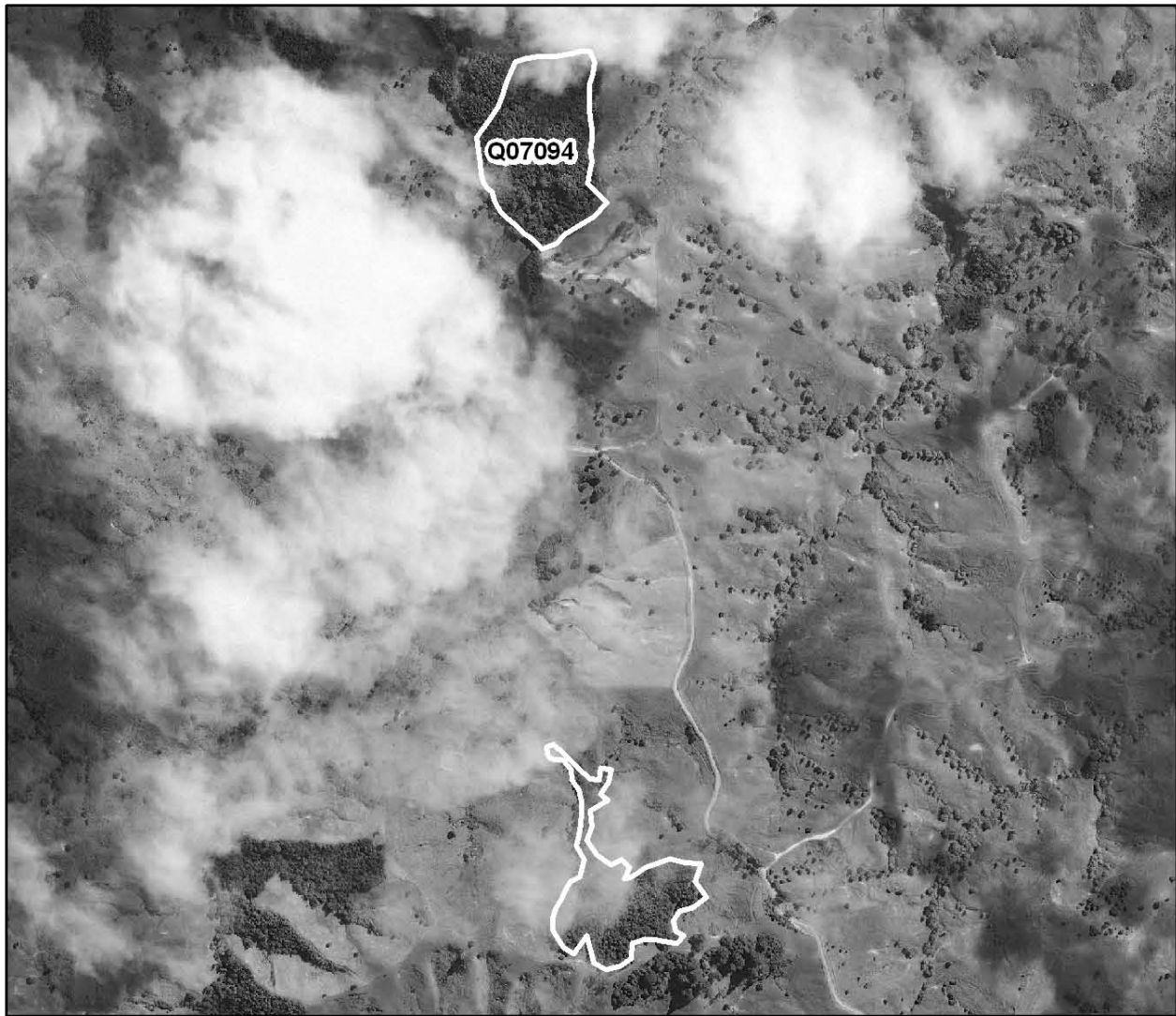
### **Fauna**

Northern remnant: **1990 records from SSBI Q07/R07/H067:** NI brown kiwi (Nationally Vulnerable), kūkupa (regionally significant species) and common forest birds.

Southern remnant: **Historical 1978 records from SSBI Q07/R07/H068:** Kūkupa (regionally significant species) and common forest birds.

### **Significance**

Past records of Threatened and Regionally significant species. The northern remnant contains large old-growth kahikatea and kauri which were also noted in the 1978 NZ Wildlife Service survey (in SSBI Q07/R07/H067): 'a number of large kauris and large kahikatea—one giant kauri' and is a representative site for taraire forest. This site is covered by a 'Critically Threatened' land environment (A6.1c) (Walker et al. 2007).



### Q07/094 Pikiwahine Bush Remnants

#### Habitat type

- Forest
- Shrubland
- Wetland

