



Mamaku Lagoon

Site Number:	SNA654
Ecological District:	Otanewainuku
Source of Information:	Beadel (2006)
Digital Scale:	1:2,000
Data Source:	RDAM 2006
Regional Council	Bay of Plenty
1998 Site Number:	NHS No. 654
Current Tenure:	Unprotected
Site Area:	189.5 ha
Altitude Range:	520-540 m
Bioclimatic Zone:	Lowland
Grid Reference:	NZTM E1874650, N5788568

VEGETATION		LANDFORM	EXTENT
CODE	TYPE		
1	Tawa-kamahi-red beech-hard beech/wheki-wheki ponga-makomako-manuka-mahoe forest and scrub (with tawari, toatoa, and rimu).	Flat and gentle hillslopes	30.1 ha
2	Hard beech-silver beech forest (with pole rimu and toatoa).	Flat and gently hillslopes	70.9 ha
3	Manuka-monoao/ <i>Baumea teretifolia</i> - <i>Gleichenia dicarpa</i> - <i>Sphagnum</i> sedge-shrubland (with local swamp coprosma) ↔ Manuka-monoao/ <i>Gahnia-Astelia grandis</i> - <i>Gleichenia dicarpa</i> / <i>Sphagnum</i> shrubland and scrub.	Wetland	42.6 ha
4	Manuka-swamp coprosma scrub and shrubland and manuka scrub ↔ <i>Baumea teretifolia</i> sedgeland ↔ <i>Myriophyllum pedunculatum</i> subsp. <i>novae-zelandiae</i> herbfield ↔ open water (lake).	Wetland	33.3 ha
5	Manuka-toetoe shrubland (other broadleaved species locally dominant).	Flat	12.9 ha

Indigenous Flora: Several wetland vegetation types virtually surrounded by tall indigenous forest. No threatened or at risk species (as listed in de Lange *et al.* 2009) have been recorded from this site.

Taxa present include *Lilaeopsis novae-zelandiae*, *Carex dipsacea*, and spike sedge. A population of *Gahnia rigida* is present. *G. rigida* reaches its northern limit at these wetlands (Wallace 1986).

Fauna: Australasian bittern ('Threatened - Nationally Endangered' in Miskelly *et al.* 2008), North Island fernbird ('At Risk - Declining' in Miskelly *et al.* 2008), and New Zealand scaup have been recorded (Wallace 1994). The site is also likely to provide habitat to spotless crane ('At Risk - Relict' in Miskelly *et al.* 2008), although this species has not been recorded at this site.

Notes on Overall Condition: Comparatively large, good quality example of an induced wetland that is contiguous with tall forest. This site is of value as a representative example of wetland vegetation in Otanewainuku ED, and as wetland habitat for wildlife. Wetlands similar to induced wetlands such as this were probably present before logging occurred, developing as a result of natural disturbance of the forest. The water table on the Mamaku Plateau is typically very close to the surface, the underlying ignimbrite preventing drainage (Wallace 1994).

Many of the wetlands in this general area have been destroyed or degraded by draining, grazing, and trampling (Wallace 1994).

Change Relative to Shaw and Beadel (1998):

Unknown, probably little change.

Threats/Modification/Vulnerability:

When inspected in 1994 cattle were present in the wetland and there were drains. Grey willow is present on the northwestern side of the larger mire.

This area is within the area managed by the Awahou-Mangorewa Hunting Club for pig hunting.

Risk Assessment:

If cattle are still present: Risk to site - high; Timeframe - high.
Control grey willow: Risk to site - high; Timeframe - medium.

Significance Level:

National (Appendix 4 - Table 1 - Criteria 1, 2, 3, 4, 5, 7, 8, 10, 11, 12, 13; Table 2 - Factors N5, N12).

Significance Justification:

The site is of national significance as it provides good habitat to Australasian bittern ('Threatened - Nationally Endangered'). It is also a good quality wetland habitat, of which <10% of the pre-human cover of this habitat remains.

This site contains a relatively large, good quality wetland. It is important habitat for *Gahnia rigida* near its northern limit.

Apart from value as habitat for *Gahnia rigida* and Australasian bittern, this site is valuable as an example of a relatively old (at least 4,500 years by carbon dating) wetland in the Otanewainuku Ecological District.

Fieldwork Required:

No fieldwork required to assess significance, however biodiversity and management information is dated and fieldwork is required to update this.

Notes:

The site was identified as a Category 1 RAP (RAP No. 62) in the Otanewainuku Protected Natural Area Survey (Beadel 2006) and has been described as "... a key area for elucidation of the post-Pleistocene environmental and biological history of the Rotorua region of current ecological trends." (Nicholls 1982 in Wallace 1994).

Ecological values at the site would improve if stock and grey willow were removed, and drains were filled.

References:

Beadel (2006); Shaw and Beadel (1998); Wallace (1986); Wallace (1994).