



Wairau Bay and Otutarara Springs

Site Number:	124
Ecological District:	Rotorua Lakes
Source of Information:	Field work 2016
Digital Scale:	1:5,000
Data Source:	BOPLASS Ltd 2011
Regional Council:	Bay of Plenty
1998 Site Number:	Not identified as a site in Shaw and Beadel (1998)
Current Tenure:	Unprotected
Site Area:	9.32 ha
Altitude Range:	280-340 m
Bioclimatic Zone:	Lowland
Grid Reference:	NZTM E1893956, N5783291

VEGETATION		LANDFORM	EXTENT
CODE	TYPE		
1	Mānuka-kānuka/<i>Histiopteris incisa</i> shrubland (geothermal) Mānuka and kānuka (to 3 m) dominate the canopy with <i>Histiopteris incisa</i> common in the sometimes open understorey. Other less common species present include <i>Hypolepis ambigua</i> , mingimingi, blackberry, <i>Carex geminata</i> , gorse, <i>Machaerina rubiginosa</i> , bracken, inkweed (<i>Phytolacca octandra</i>) and <i>Cyperus ustulatus</i> . The vegetation surrounds several hot springs and seepages and their warm water outflows.	Wetland	0.3 ha
2	<i>Histiopteris incisa</i> fernland (geothermal) A dense <i>Histiopteris incisa</i> fernland with a canopy height of 2 m. Occasional inkweed and bracken present on drier margins.	Flat, wetland	<0.1 ha
3	<i>Hypolepis ambigua</i>-<i>Histiopteris incisa</i> fernland (geothermal) A mixed fernland of <i>Hypolepis ambigua</i> and <i>Histiopteris incisa</i> . Occasional gorse and blackberry are present.	Flat	<0.1 ha
4	<i>Machaerina rubiginosa</i> sedgeland (geothermal) Dense <i>Machaerina rubiginosa</i> sedgeland with a canopy height of c.1 m.	Wetland	<0.1 ha
5	Mānuka/<i>Gleichenia microphylla</i>-bracken-kiokio-(<i>Machaerina rubiginosa</i>)-(Coprosma tenuicaulis) scrub	Flat, wetland	Not mapped separately
6	(Gorse)/<i>Carex geminata</i>-Yorkshire fog-(<i>Machaerina rubiginosa</i>)-(blackberry) sedgeland	Flat, wetland	Not mapped separately
7	(Gorse)/Yorkshire fog-<i>Carex geminata</i>-soft rush-blackberry grassland	Flat, wetland	Not mapped separately
8	<i>Eleocharis acuta</i>-Yorkshire fog-brown top (<i>Agrostis capillaris</i>) sedgeland	Flat, wetland	Not mapped separately
9	(Alder)/mānuka-wheki shrubland	Flat, wetland	Not mapped separately
10	Blackberry shrubland	Flat, wetland	Not mapped separately

Indigenous Flora: No threatened or at risk species as listed in de Lange *et al.* (2013) were recorded in the 2005 survey. Indigenous species typical of geothermal habitats are present, including mānuka, kānuka, mingimingi, *Histiopteris incisa*, and bracken.

Fauna:	North Island fernbird (At Risk-Declining) was recorded at this site in 2005. New Zealand dabchick (Threatened-Nationally Vulnerable), black shag (Threatened-Nationally Uncommon), and pied stilt (<i>Himantopus himantopus leucocephalus</i> ; At Risk-Declining) were seen on the lake edge and are likely to use the margins of this site for shelter.
Notes on Overall Condition:	The site includes geothermal vegetation and habitats (Types 1-4) and a large wetland on the margins of Lake Rotoiti in a moderate condition. The vegetation of the site appears to have improved significantly since stock were removed from the area. Blackberry vinelands occur on the landward side of this site.
Change Relative to Shaw and Beadel (1998):	The extent of geothermal vegetation and habitat at this site is similar to that recorded by Beadel <i>et al.</i> (1996); however the quality of indigenous vegetation at the site is likely to have improved since stock have been excluded.
Threats/Modification/Vulnerability:	<p><i>Invasive Exotic Plants:</i> Alder occurs on the margins and blackberry and occasional gorse are present.</p> <p><i>Human Impacts:</i> Some slash has been pushed close to the geothermal site.</p> <p><i>Grazing:</i> The site has been farmed in the past, with some fencing still present. A drain has been cut through the centre of this site to the lake.</p>
Risk Assessment:	<p>Management of plantation: Risk to site - low; Timeframe - low.</p> <p>Weeds: Risk to site - low; Timeframe - medium</p> <p>Human impacts: Risk to site - low; Timeframe - low.</p>
Significance Level:	Regional (Appendix 8 - Table 1 - Criteria 3.1, 3.2, 3.6, 3.9, 3.11, 3.12; Table 2 - Factors R8 and R9).
Significance Justification:	This Regionally significant site is one of the largest wetlands in the riparian zone of the Lake Rotoiti, providing riparian buffering from neighbouring land use. It includes a small area of geothermal vegetation and habitat (Otutarara Springs) - which is a nationally uncommon habitat type and a 'Critically Endangered' ecosystem. Although weed species are present the relatively large size of the site and riparian habitats make it a good candidate for wetland restoration.
Field Work Required:	No field work required.
Notes:	<p>The Trust land that this site is on was farmed in the past; the surrounding land now mostly comprises plantation forestry.</p> <p>This site now includes Wairau Bay (Site 173) and Otutarara Springs (SNA 124)</p>
References:	Wildland Consultants (2005b)