



Waitangi Soda Springs Mire¹

Site Number: SNA145
Ecological District: Rotorua Lakes
Source of Information: Wildland Consultants (2005c) - Geothermal Site No. 33
Digital Scale: 1:2,000
Data Source: RDAM 2006
Regional Council: Bay of Plenty
1998 Site Number: Not identified as a site in Shaw and Beadel (1998)
Current Tenure: Unprotected
Site Area: 6.3 ha
Altitude Range: 320-340 m
Bioclimatic Zone: Lowland
Grid Reference: NZTM E1912048, N5783825

VEGETATION		LANDFORM	EXTENT
CODE	TYPE		
1	Grey willow/ <i>Schoenoplectus tabernaemontani</i> -swamp kiokio-raupo forest Grey willow to a height of c.8 m occurs over <i>Schoenoplectus tabernaemontani</i> , swamp kiokio and raupo. Other common species include swamp coprosma, <i>Coprosma robusta</i> × <i>Coprosma propinqua</i> , wheki, <i>Hypolepis ambigua</i> , <i>Carex secta</i> , and <i>Carex virgata</i> . Most of this vegetation type was viewed from an adjacent hillslope.	Wetland	0.6 ha
2	Manuka shrubland↔Raupo- <i>Carex secta</i> - <i>Cyperus ustulatus</i> reedland A mosaic of manuka shrubland (understorey of swamp kiokio, <i>Schoenoplectus tabernaemontani</i> , raupo, <i>Carex secta</i>) and a mixed reedland with abundant raupo, <i>Carex secta</i> and <i>Cyperus ustulatus</i> .	Wetland	0.2 ha
3	<i>Baumea rubiginosa</i> sedgeland A small area in the south-eastern portion of the wetland with a thick cover of <i>Baumea rubiginosa</i> .	Wetland	<0.1 ha
4	Grey willow/ <i>Carex secta</i> - <i>Carex virgata</i> -raupo- <i>Schoenoplectus tabernaemontani</i> sedgeland Scattered grey willow occurs over a mixed sedgeland and reedland with <i>Carex secta</i> , <i>Carex virgata</i> , raupo and <i>Schoenoplectus tabernaemontani</i> dominating in places. Manuka occurs over exotic grasses on margins. Other common species include <i>Hypolepis ambigua</i> , swamp kiokio, <i>Baumea rubiginosa</i> , willow weed (<i>Persicaria persicaria</i>), and bracken. Manuka occurs over Yorkshire fog along wetland margins in places. Several hot springs are present in this vegetation type, particularly at the western end of the site.	Wetland	1.8 ha
5	<i>Carex secta</i> -raupo sedgeland <i>Carex secta</i> and raupo are dominant with scattered patches of swamp kiokio and <i>Schoenoplectus tabernaemontani</i> . This vegetation was viewed from an adjacent hillslope.	Wetland	0.3 ha
6	Unidentified wetland and scrub.	Wetland, hillslope	3.4 ha

Indigenous Flora: Two at risk fern species, *Cyclosorus interruptus* and *Thelypteris confluens* (both 'At Risk - Declining' in de Lange *et al.* 2009), have been recorded at

¹ Site information is based on the greater Waitangi Soda Springs Mire site, part of which is now protected by Nga Whenua Rahui, and has not been mapped in this report.

this site in past surveys (Shaw and Beadel 1989a and 1991). Beadel *et al.* (1996b) states that the *Cyclosorus interruptus* population is one of the largest in the Rotorua Lakes ED. The site contains a small population of maire tawake, which is significant because it is now uncommon in the Bay of Plenty due to the destruction of lowland habitats (see Shaw and Beadel 1991).

Fauna:	Common indigenous and exotic species typical of the habitat are present, including mallard, paradise shelduck, fantail, pukeko, grey warbler, and eastern rosella. North Island fernbird ('At Risk - Declining' in Miskelly <i>et al.</i> 2008) is also present.
Notes on Overall Condition:	The vegetation of the mire is mostly intact, but willows are common in the wetland particularly in the northern portion of the site. Stock have access to the margins of the wetland in the southern portion of the site.
Change Relative to Shaw and Beadel (1998):	This site was not mapped in detail in the 1996 survey of geothermal vegetation in the Bay of Plenty Region and therefore it is not possible to assess changes in the extent and composition of geothermal vegetation between 1996 and 2009.
Threats/Modification/Vulnerability:	<p><i>Invasive Exotic Plants:</i> Grey willow forest dominated a large part of the wetland (25-50% cover) in 2006; however many of these have been poisoned since this 2006 survey.</p> <p><i>Human Impacts:</i> Unformed vehicle tracks occur alongside the southern margin of the wetland.</p> <p><i>Grazing:</i> Trampling by stock on the southern side of the wetland has damaged the margins of the wetland. This site is within an area managed as dairy farm.</p>
Risk Assessment:	Grazing: Risk to site - high; Timeframe - high. Vehicle access: Risk to site - medium; Timeframe - medium. Willow invasion: Risk to site - high; Timeframe - high.
Significance Level:	National (Appendix 10 - Table 1 - Criteria 1, 2, 4, 5, 8, 11, 12, 13; Table 2 - Factors N11, N12).
Significance Justification:	This site is of national significance as it contains a good quality representative example of a nationally uncommon vegetation type - geothermal vegetation. It also contains moderate-sized populations of two at risk species: <i>Cyclosorus interruptus</i> and <i>Thelypteris confluens</i> (both 'At Risk - Declining'). It also adjoins the regionally significant Waitangi Soda Springs Hot Springs (SNA No. 144).
Fieldwork Required:	No fieldwork is required.
Notes:	The greater part of this site is now protected by Nga Whenua Rahui. This site together with area protected by Nga Whenua Rahui cover an area of over 13 ha.
References:	Beadel (1988b); Beadel <i>et al.</i> (1996b); Shaw and Beadel (1989a & 1991); Wildland Consultants (2005c).