





## Waitangi Soda Springs Hot Springs

**Site Number:** SNA144  
**Ecological District:** Rotorua Lakes  
**Source of Information:** Wildland Consultants (2005c) - Geothermal Site No. 34  
**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:** 4.5 ha  
**Altitude Range:** 300-310 m  
**Bioclimatic Zone:** Lowland  
**Grid Reference:** NZTM E1911434, N5783924

VEGETATION		LANDFORM	EXTENT
CODE	TYPE		
1	Grey willow/wheki forest Grey willow dominates over wheki with occasional porokaiwhiri, wild ginger, and woolly mullein ( <i>Verbascum thapsus</i> ) in the understorey. Several warm springs present.	Geothermal wetland	<0.1 ha
1	Japanese honeysuckle- <i>Paesia scaberula</i> vineland Small unit of vegetation surrounding a hot spring. The immediate margins of the hot spring are dominated by <i>Paesia scaberula</i> . Some patches of <i>Lycopodiella cernua</i> are also present on the pool margins. Japanese honeysuckle becomes common on top of the terrace above spring. Other common species present include creeping buttercup, sheep's sorrel and kiokio.	Hot spring margins	
2	Mercer grass- <i>Paesia scaberula</i> grassland Mercer grass and <i>Paesia scaberula</i> are dominant with locally common blackberry and bracken. Other common species include Japanese honeysuckle, Yorkshire fog, creeping buttercup, kiokio, cocksfoot, <i>Cyperus ustulatus</i> and wild ginger. There are several planted trees (e.g. rimu and ti kouka). Yellow flag and canna lily are common near the bathing area.	Flat	<0.1 ha
3	Manuka shrubland Manuka shrubland over an understorey with <i>Schoenoplectus tabernaemontani</i> , <i>Baumea rubiginosa</i> , lotus, blackberry and occasional karamu.	Geothermal wetland	0.2 ha
4	(Grey willow)-raupo- <i>Carex secta</i> - <i>Schoenoplectus tabernaemontani</i> reedland↔raupo-pohuehue ( <i>Muehlenbeckia complexa</i> )- <i>Schoenoplectus tabernaemontani</i> reedland Scattered grey willow and crack willow are emergent over a mixed reedland comprising abundant raupo, <i>Schoenoplectus tabernaemontani</i> and <i>Carex secta</i> . <i>Cyperus ustulatus</i> , manuka, Mercer grass, <i>Paesia scaberula</i> , harakeke, and pohuehue are also common.	Geothermal wetland	0.7 ha
5	(Grey willow)-raupo- <i>Schoenoplectus tabernaemontani</i> - <i>Carex secta</i> reedland Scattered grey willow and crack willow are emergent over a reed-rushland dominated by raupo, <i>Schoenoplectus tabernaemontani</i> and <i>Carex secta</i> . Swamp kiokio is also common. Raupo dominates large parts of this type. Occasional pampas is also common.	Geothermal wetland	1.0 ha
6	Raupo- <i>Schoenoplectus tabernaemontani</i> - <i>Carex secta</i> reedland Occasional grey willow is emergent over a reed-rushland dominated by raupo, <i>Schoenoplectus tabernaemontani</i> and	Geothermal wetland	0.2 ha

VEGETATION		LANDFORM	EXTENT
CODE	TYPE		
	<i>Carex secta</i> . Swamp kiokio is also common. Raupo dominates large parts of this type, particularly towards Lake Rotoehu.		
7	Geothermal water Geothermally influenced open water and hot springs.	Geothermal water	<0.1 ha
8	Unidentified forest and scrub.	Hillslope	2.4 ha

**Indigenous Flora:** No threatened or at risk species as listed in de Lange *et al.* (2009) have been recorded from this site. Species typical of geothermal sites include manuka, *Lycopodiella cernua*, raupo, *Histiopteris incisa* and *Hypolepis ambigua*.

**Fauna:** Common indigenous and exotic species typical of the habitat are present, including pukeko, grey warbler, tui, silvereye, kingfisher, and spur-winged plover. No threatened or at risk species as listed in Miskelly *et al.* (2008) are known from this site.

**Notes on Overall Condition:** The wetland below the bathing area is intact apart from the high cover of grey willow and crack willow. The vegetation cover around the main hot springs has been highly modified and has a high cover of exotic species.

**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:** *Invasive Exotic Plants:* Much of the wetland below the springs has been invaded by grey willow (5-25% cover) and crack willow (5-25% cover). Ginger, canna lily and yellow flag (all <1% cover) are common around the geothermal springs. Some small terrestrial areas are dominated by Japanese honeysuckle and blackberry.

*Human Impacts:* The water course downstream of the hot springs has been dammed to make a large pool to make the site suitable for bathing. Garden plants have been planted in the site. Plantation forest adjoins the western side of the wetland. Part of this site has not been fenced to exclude stock. Some litter is present.

*Grazing:* Stock are shifted across the road above the hot springs and wetland. Part of the site has not been fenced to exclude stock.

**Risk Assessment:** Grazing: Risk to site - high; Timeframe - high.  
Pest plants: Risk to site - high; Timeframe - high.

**Significance Level:** Regional (Appendix 10 - Table 1 - Criteria 1, 4, 7, 11, 12; Table 2 - Factor 9).

**Significance Justification:** This site is of regional significance as it forms part of an ecological sequence that includes a nationally significant site (Waitangi Soda Springs Mire).

**Fieldwork Required:** No fieldwork is required.

**Notes:** None

**References:** Beadel *et al.* (1996b); Wildland Consultants (2005c).