



Puarenga Park¹

Site Number:	SNA111
Ecological District:	Rotorua Lakes
Source of Information:	Wildland Consultants (2005c) - Geothermal Site No. 65
Digital Scale:	1:2,000
Data Source:	RDAM 2006
Regional Council:	Bay of Plenty
1998 Site Number:	NHS No. 111
Current Tenure:	Unprotected Council Reserve (geothermal features are not currently a key focus of this reserve).
Site Area:	0.8 ha
Altitude Range:	290 m
Bioclimatic Zone:	Lowland
Grid Reference:	NZTM E1886104, N5772584

VEGETATION		LANDFORM	EXTENT
CODE	TYPE		
1	<ul style="list-style-type: none"> Mingimingi-manuka scrub The canopy is dominated by mingimingi and manuka to c.2 m tall. Small areas of <i>Carex geminata</i> and bracken are present, with occasional turutu, paspalum (<i>Paspalum dilatatum</i>), and Yorkshire fog and local <i>Baumea teretifolia</i>. <i>Carex geminata</i> sedgeland area (too small to map) A 5 × 5 m area of <i>Carex geminata</i> sedgeland with a canopy height of c.0.5 m. 	Flat; geothermal wetland	0.4 ha
2	<p><i>Histiopteris incisa</i>-bracken-mingimingi-Mercer grass-Yorkshire fog fernland A geothermally influenced drain surrounded with <i>Histiopteris incisa</i>, bracken, mingimingi, paspalum, Yorkshire fog, broom, turutu, and blackberry.</p>	Drain	0.2 ha
3	<p>Geothermal water Geothermally influenced water and mudpools.</p>	Flat	<0.1 ha
4	<p>Nonvegetated raw-soilfield Heated bare soils, sinter, mudpools.</p>	Flat	0.1 ha

Indigenous Flora: No threatened or at risk species as listed in de Lange *et al.* (2009) are known from this site. Species typical of geothermal habitats include manuka, turutu, mingimingi, and *Histiopteris incisa*.

Fauna: No threatened or at risk species as listed in Miskelly *et al.* (2008) are known from this site.

Notes on Overall Condition: The best areas of geothermal vegetation are fenced and the abundance of pest plants is low. The site is a remnant of geothermal vegetation which has been isolated by clearance and development of surrounding land.

Change Relative to Shaw and Beadel (1998): The extent and composition of this site appears to be similar to that recorded in 1996 (Beadel *et al.* 1996b).

Threats/Modification/Vulnerability: *Invasive Exotic Plants:* Few pest plants are present within the fenced area of geothermal vegetation. The site is surrounded by mown narrow-leaved

¹ This site was identified as "Soccer Park" in Beadel *et al.* (1998).

carpet grass grassland. Establishment of adventive species could threaten the values of the site in the future.

Human Impacts: The boundary of the geothermal vegetation has been influenced by mowing and vegetation clearance. Litter is present at the site, including fencing material.

- Risk Assessment:** Pest plants: Risk to site - medium; Timeframe - medium.
- Significance Level:** Local (Appendix 10 - Table 1 - Criteria 4, 6; Table 2 - Factor L1).
- Significance Justification:** This site is locally significant as it contains a small area of geothermal vegetation, a nationally uncommon habitat type.
- Fieldwork Required:** No fieldwork is required.
- Notes:** This site is within several hundred metres of three other geothermal sites, Cemetery Reserve, Ngapuna, and Arawa Park (Racecourse).
- This site was referred to as Soccer Park in Beadel *et al.* (1996b).
- This site was identified as a “Recommended Area for Protection” (RAP No. 111) in the natural area survey of Rotorua Lakes ED (Beadel *et al.* 1998).
- References:** Beadel *et al.* (1996b); Wildland Consultants (2005c); Shaw and Beadel (1998).