



Arikikapakapa (Golf Course)

Site Number: SNA112
Ecological District: Rotorua Lakes
Source of Information: Wildland Consultants (2005c) - Geothermal Site No. 10
Digital Scale: 1:2,000
Data Source: RDAM 2006
Regional Council: Bay of Plenty
1998 Site Number: NHS No. 112
Current Tenure: Reserve (management of geothermal features and vegetation is not currently a key focus of this reserve)
Site Area: 18.2 ha
Altitude Range: 300-320 m
Bioclimatic Zone: Lowland
Grid Reference: NZTM E1884368, N5771385

VEGETATION		LANDFORM	EXTENT
CODE	TYPE		
1	Silver wattle-dominated treeland Silver wattle is emergent over patches of manuka, kanuka and occasional kamahi. The understorey is comprised of blackberry, matata, bracken mingimingi and broom.	Gently sloping	0.2 ha
2	Prostrate kanuka scrub Prostrate kanuka to a canopy height of c.1 m. Occasional manuka and turutu present.	Gently sloping, flat	<0.1 ha
3	Blackberry scrub Blackberry scrub with occasional bracken and broom.	Gently sloping, flat	<0.1 ha
4	Arrow bamboo scrub Dense arrow bamboo with a canopy height of c.3 m.	Gently sloping	0.1 ha
5	Manuka shrubland Manuka forms an open canopy over bracken, <i>Histiopteris incisa</i> and turutu. Narrow-leaved carpet grass is common on margins.	Gently sloping	0.2 ha
6	Manuka-(kamahi) shrubland	Gently sloping	1.2 ha
7	(Emergent mixed exotic)/manuka-kanuka-mixed exotic shrubland Manuka and kanuka are dominant. Exotic trees are common including silver wattle, Lawsons cypress (<i>Chamaecyparis lawsoniana</i>), Douglas fir, cotoneaster (<i>Cotoneaster glaucophyllus</i>), poplar, elm (<i>Elymus</i> sp.), radiata pine, macrocarpa (<i>Cupressus macrocarpa</i>). Kamahi and kanuka dominates some small areas. Other common species include Japanese honeysuckle, <i>Histiopteris incisa</i> , blackberry, pohue, buddleia (<i>Buddleja davidii</i>), mingimingi, prickly mingimingi, <i>Hypolepis lactea</i> , <i>Hypolepis distans</i> , turutu, kiokio (<i>Blechnum novae-zelandiae</i>), and Mercer grass. <i>Juncus effusus</i> , Mercer grass and <i>Cyperus ustulatus</i> are found on geothermal water margins in places.	Hillslope, lake margin, steep bank.	7.8 ha
8	Bracken fernland Bracken is dominant with occasional blackberry, manuka, pohue, Japanese honeysuckle and Mercer grass.	Gently sloping	<0.1 ha
9	Narrow-leaved carpet grass grassland Mown narrow-leaved carpet grass with patches of heated unvegetated raw-soilfield and mud pools.	Flat	0.3 ha
10	Geothermal water Geothermally influenced open water and mud pools.	Geothermal water	8.0 ha
11	Nonvegetated raw-soilfield Geothermally heated bare ground, mudpools.	Flat, gently sloping	0.2 ha

Indigenous Flora:	A small population of prostrate kanuka ('At Risk - Naturally Uncommon' in de Lange <i>et al.</i> 2009) is present. Prostrate kanuka is endemic to geothermal areas in New Zealand. Other indigenous species typical of the geothermal habitats include mingimingi, manuka, <i>Hypolepis distans</i> , turutu, <i>Histiopteris incisa</i> , kanuka and bracken. <i>Gonocarpus micranthus</i> and <i>Leucopogon fraseri</i> have been recorded from the site in the past (Beadel <i>et al.</i> 1996b).
Fauna:	Indigenous and exotic species typical of the habitat are present, including fantail, grey warbler, red-billed gull ('Threatened - Nationally Vulnerable' in Miskelly <i>et al.</i> 2008), pied stilt ('At Risk - Declining' in Miskelly <i>et al.</i> 2008), spur-winged plover, silvereve, house sparrow and bellbird.
Notes on Overall Condition:	<p><i>Invasive Exotic Plants:</i> Adventive and planted exotic plants are present in most areas of geothermal vegetation. Common invasive plants present include arrow bamboo, silver wattle, silver birch, and several exotic conifer species, broom and blackberry.</p> <p><i>Human Impacts:</i> Areas of geothermal vegetation have been isolated by the clearance of indigenous vegetation. In addition, re-establishment of geothermal vegetation has been prevented by mowing. This ongoing practice is inevitable as part of a golf course. Formed and unformed tracks are present in areas of geothermal vegetation. Litter present. Some dumping of organic gardening and lawn material has occurred in geothermal vegetation.</p>
Change Relative to Shaw and Beadel (1998):	The extent and composition of this site appears to be similar to that recorded in 1996 (Beadel <i>et al.</i> 1996b).
Threats/Modification/Vulnerability:	Small areas of geothermal vegetation occur around margins of geothermal lakes and mud pools. These have been isolated by clearance of the surrounding land. The vegetation is a mosaic of indigenous, adventive, and planted exotic species. Ongoing threats include clearance (including mowing) and establishment of adventive species.
Risk Assessment:	Pest plants: Risk to site - high; Timeframe - high.
Significance Level:	For ranking purposes this site was considered with the Tangatarua site. Regional (Appendix 10 - Table 1 - Criteria 4, 6; Table 2 - Factors R8, R9).
Significance Justification:	The Arikikapakapa and Tangatarua sites are of regional significance because they are good quality examples of indigenous geothermal vegetation that are representative of the ecological character of the region and they contain a population of prostrate kanuka ('At Risk' – Naturally Uncommon').
Fieldwork Required:	No fieldwork is required.
Notes:	This site is within 100 m of two other geothermal sites: Whakarewarewa and Tangatarua (Old Taupo Road Reserve). Restoration of ecological values (e.g. by undertaking weed control) would be of value for educational purposes and conservation of ecological values.

This site was identified as a “Recommended Area for Protection” (RAP No. 112) in the natural area survey of Rotorua Lakes ED (Beadel *et al.* 1998).

References:

Beadel *et al.* (1996b); Smale (1992); Wildland Consultants (2005c); Shaw and Beadel (1998); Beadel *et al.* (1998).