



Legend

- Site boundary
- Cadastral boundary

Data Acknowledgement

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Report: 3417
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36
Tikitere Northwest

0 100 200
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Disclaimer: Map only depicts one site, other significant natural areas may be present on this map sheet, but their boundaries and location are not shown on this map.

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Scale: 1:5,000
 Date: 6/06/2014
 Cartographer: FM
 Format: A3R

Tikitere Northwest

Site Number:	SNA36
Ecological District:	Rotorua Lakes
Source of Information:	Shaw and Beadel (1998); Wildland Consultants (2005)
Digital Scale:	1:2,000
Data Source:	BOPLASS 2011
Regional Council:	Bay of Plenty
1998 Site Number:	NHS No. 36
Current Tenure:	Unprotected
Site Area:	5.6 ha
Altitude Range:	330-340 ha
Bioclimatic Zone:	Lowland
Grid Reference:	NZTM E1894480, N5782446

VEGETATION		LANDFORM	EXTENT
CODE	TYPE		
1	Prostrate kānuka scrub Prostrate kānuka forms a scrub cover with a canopy height of c.1 m.	Gently sloping	0.7 ha
2	Prostrate kānuka-mingimingi scrub Most of the canopy is dominated by prostrate kānuka in association with mingimingi and bracken, occasional maritime pine, and one lodgepole pine. Gorse is abundant on cooler soils. Sheep's sorrel and Indian doab are also present.	Gently sloping, hillslope	1.6 ha
3	Prostrate kānuka shrubland Prostrate kānuka form a canopy up to c.1 m high, with occasional gorse, tūrutu, bracken, several patches of Mercer grass, and occasional emergent maritime pine, radiata pine, and mānuka to 2 m.	Moderately sloping	0.2 ha
4	Geothermal water Geothermally influenced water with many hot springs and mudpools. Some pools have been excavated in the past as part of mining operations.	Geothermal wetland	0.7 ha
5	Nonvegetated raw-soilfield Heated bare soil, sinter, mudpools. Fumaroles present. Occasional prostrate kānuka in this vegetation type.	Flat, gently sloping	2.15 ha
6	Nonvegetated raw-soilfield (modified) Heated bare soil and excavations following mining operation. Contains many vehicle tracks.	Flat, gently sloping	0.28 ha

Indigenous Flora: The site contains vegetation dominated by prostrate kānuka ('At Risk-Naturally Uncommon' in de Lange *et al.* 2009), an endemic species restricted to geothermal sites. Other indigenous species typical of geothermal habitats present including mingimingi, mānuka, tūrutu, *Histiopteris incisa*, and bracken.

Fauna: New Zealand pipit ('At Risk-Declining' in Miskelly *et al.* 2008), grey warbler, silvereye, fantail, welcome swallow, and Australasian harrier were recorded at the site in 2006.

Notes on Overall Condition: The eastern portion of the site comprises some good quality geothermal features as well as some good quality, but small, areas of prostrate kānuka scrub and shrubland. Parts the site have been affected by mining operations

for silica and phosphorous. Plantation forest surrounds much of the site, except for the western side which is adjacent to an ‘open cast’ silica mine.

Change Relative to Shaw and Beadel (1998):

The extent of natural geothermal vegetation and habitat has decreased significantly due to consented mining operations.

Threats/Modification/Vulnerability:

Several pine species (radiata pine, maritime pine, and lodgepole pine) are present in the geothermal area. Radiata pine have been planted to within several metres of geothermal activity. A buffer of at least 10 m should be established between forestry operations and geothermal vegetation and activity. Care needs to be taken during future forestry operations to avoid damage to geothermal vegetation and features.

Mining has been undertaken at this site until recently. Vehicle tracks, excavated areas filled with small lakes, and excavated landforms are evident in parts of the site. Gorse and bracken dominate areas that are regenerating following logging (where replanting has not been undertaken). Tikitere Geothermal Field may be linked to the Taheke Field, for which a geothermal power plant is proposed. If there is a link, then geothermal features and vegetation within the Tikitere Geothermal Field could be affected if this proposal is implemented.

Geothermal areas should be fenced if the surrounding land is farmed in the future.

Risk Assessment:

Pest plants: Risk to site - high; Timeframe - high.

Significance Level:

Regional (Appendix 1 - Table 1 - Criteria 1, 2, 3, 4, 11; Table 2 - Factors R4, R8, R9)

Significance Justification:

The site is regionally significant as it contains a population of prostrate kanuka (‘At Risk-Naturally Uncommon’), and it also contains good quality example of a regionally under-represented vegetation type - geothermal vegetation.

Field work Required (to assess significance):

No field work is required.

Notes:

The extent of this site have been reduced significantly to exclude areas that no longer retain any degree of naturalness as a result of mining operations. This site is located in close proximity (*c.*100 m) to Hell’s Gate geothermal area - a site that is of national significance for ecological values.

This area includes about 5.6 ha of vegetation on an ecological unit (flat-undulating in the lowland bioclimatic zone), which is under-represented in the ecological district.

This site was identified as a “Recommended Area for Protection” (RAP No. 36) in the 1998 natural area survey of Rotorua Lakes ED (Shaw and Beadel 1998).

References:

Beadel *et al.* (1996), Clarkson *et al.* (1990); Given (1978); Wildland Consultants (2005); Shaw and Beadel (1998).