



## Ngapouri

<b>Site Number:</b>	SNA572
<b>Ecological District:</b>	Atiamuri
<b>Source of Information:</b>	Wildland Consultants (2014a)
<b>Digital Scale:</b>	1:5,000
<b>Data Source:</b>	Bay of Plenty 0.25m Rural Aerial Photos (2015-17)
<b>Regional Council:</b>	Waikato
<b>1998 Site Number:</b>	Not in Shaw and Beadel (1998). Site No. U16/7 in Wildland Consultants (2004b)
<b>Current Tenure:</b>	Unprotected
<b>Site Area:</b>	6.3 ha
<b>Altitude Range:</b>	360-440 m
<b>Bioclimatic Zone:</b>	Lowland
<b>Grid Reference:</b>	NZTM E1894016, N5751387

VEGETATION		LANDFORM	EXTENT
CODE	TYPE		
1	<p><b>Prostrate kānuka scrub</b></p> <p>Prostrate kānuka scrub with occasional emergent kāmahī or local whekī and occasional mingimingi located in steep-sided gullies surrounded by dense blackberry. Steam was observed rising through the prostrate kānuka but these areas could not be accessed safely. Viewed from a distance.</p> <p>A small area of geothermal water was observed at the base of one of the gullies within this type but could not be accessed safely to inspect further.</p>	Gully	<0.1 ha
2	<p><b>(Whauwhaupaku)/prostrate kānuka-mānuka/ blackberry scrub</b></p> <p>Scattered whauwhaupaku are emergent above a dense canopy dominated by prostrate kānuka and mānuka with locally common mingimingi on the margins of the Waiotapu Stream. Blackberry is common to locally abundant in canopy gaps within this type. Local patches of <i>Hypolepis ambigua</i> are present, and patches of grassland dominated by paspalum and Mercer grass are present around the margins of mud pools within this type. A number of dead emergent kāmahī are scattered throughout.</p>	Riparian margins	c.0.7 ha
3	<p><b>Prostrate kānuka-mingimingi-mānuka scrub</b></p> <p>Prostrate kānuka and mānuka form a canopy up to c.4 m tall with locally common mingimingi over an understorey dominated by blackberry and bracken.</p>	Riparian margins	c.0.2 ha
4	<p><b>Mānuka-prostrate kānuka-mingimingi/water fern-bracken scrub</b></p> <p>Mānuka, prostrate kānuka, and mingimingi form a canopy over water fern and bracken scrub, with tūrutu scattered throughout.</p>	Riparian margin	c.0.1 ha
5	<p><b>Whauwhaupaku-kāmahī-kōhūhū scrub</b></p> <p>Indigenous species dominated scrub located on steep crater sides and riparian margins. The canopy is dominated by either whauwhaupaku or kāmahī, with kōhūhū, prostrate kānuka, and mānuka common, and scattered to locally common whekī, mingimingi, and blackberry. Where this type occurs on the margins of craters, indigenous dominated scrub grades into blackberry and bracken scrub on very steep sides, with <i>Hypolepis ambigua</i> common to locally abundant close to the mud pools that are often present in the crater bases.</p>	Crater and riparian margins	<0.1 ha

VEGETATION		LANDFORM	EXTENT
CODE	TYPE		
6	<b>Prostrate kānuka shrubland</b> Prostrate kānuka up to c.3.5 m height with local mingimingi over bare ground. Local patches of <i>Hypolepis ambigua</i> and water fern are present.	Flat	<0.1 ha
7	<b>Blackberry-bracken shrubland</b> Dense blackberry with bracken and locally common broom and mānuka. Occasional emergent whauwhaupaku, karamū, whekī ( <i>Dicksonia squarrosa</i> ), and kānuka ( <i>Kunzea ericoides</i> ) are present throughout. Local patches of <i>Hypolepis ambigua</i> , and scattered <i>Carex secta</i> and <i>Carex virgata</i> are present where the blackberry is less dense. Where this type occurs near geothermal ponds, <i>Machaerina articulata</i> is common with scattered harakeke. Emergent Tasmanian blackwood are locally common in one part of this type.  This type is highly variable - in places there is often dense blackberry and there are local patches of fernland around small wetlands and geothermal pools.	Riparian margin, flat	c.3.7 ha
8	<b>Blackberry-broom-water fern-bracken shrubland</b> Shrubland dominated by blackberry and broom with locally common water fern and bracken is present on the walls of a steep-sided crater surrounding a mudpool.	Crater margin	c.0.2 ha
9	<b>Kōhūhū-mānuka/bracken fernland</b> Kōhūhū and mānuka are emergent over dense bracken fernland with scattered mingimingi.	Riparian margin	c.0.3 ha
10	<b><i>Hypolepis ambigua</i>-water fern fernland</b> Two areas of this type are present within the site. One is located in the base of a steep-sided gully containing a geothermal spring, which flows into a small stream. Scattered emergent mingimingi are present above fernland dominated by <i>Hypolepis ambigua</i> and water fern.  The other comprises a small area of <i>Hypolepis ambigua</i> and water fern above a steam vent on a steep hillslope and is surrounded by blackberry scrub.	Riparian margin, hillslope	<0.1 ha
11	<b>Nonvegetated raw-soilfield</b> Heated soils and sinter with patches of narrow-leaved carpet grass, paspalum ( <i>Paspalum dilatatum</i> ), and browntop, and occasional <i>Lycopodiella cernua</i> . Steam vents are present (surface temperature up to c.76 °C in 2014). Grassland dominated by narrow-leaved carpet grass is common around areas of this type within the site.	Crater, flat	c.0.1 ha
12	<b>Geothermal water and mudpools</b> Heated pools/ponds. A small lake is present at the base of a steep-sided gully in the north of the site. Fog obscured the view of the lake but it appears to be geothermal in nature. Patches of water fern are present on the margin.	Flat	c.0.8 ha

**Indigenous Flora:** Small areas of geothermal kānuka (At Risk-Naturally Uncommon) are present within the site. A small population of *Lycopodiella cernua*, a characteristic feature of geothermal areas, is also present.

**Fauna:** Common indigenous and introduced bird species typical of the habitat are present including grey warbler, tūī, fantail, welcome swallow, pukeko, spur-winged plover, paradise shelduck, Eurasian blackbird, goldfinch, and Australian magpie.

<b>Notes on Overall Condition:</b>	The vegetation is highly modified. Adventive plants are common and some areas in the northern part of the site are grazed.
<b>Change Relative to Shaw and Beadel (1998):</b>	Probably little change.
<b>Threats/Modification/Vulnerability:</b>	<p><b><i>Invasive Exotic Plants:</i></b> Large parts of this site are dominated by invasive exotic plants. Invasive pest plant species present include: apple (<i>Malus × domestica</i>) (&lt;1% cover), barberry (&lt;1% cover), blackberry (50% cover), broom (1% cover), cotoneaster (&lt;1% cover), crack willow (1% cover), false acacia (&lt;1% cover), flowering cherry (&lt;1% cover), grey willow (&lt;1% cover), ivy (&lt;1% cover), Khasia berry (&lt;1% cover), montbretia (<i>Crocoshia × crocosmiiflora</i>) (&lt;1% cover), pampas (&lt;1% cover), poplar (<i>Populus</i> sp.) (&lt;1% cover), Spanish heath (&lt;1% cover), Tasmanian blackwood (&lt;1% cover), and wilding pines (radiata pine (2% cover) and maritime pine (&lt;1% cover)).</p> <p><b><i>Human Impacts:</i></b> Herbicide drift, and run-off from State Highway 5 and farmland affect this site. Building refuse has been dumped in a fumarole and it appears that some surface water is drawn off for use in the nearby Arataki Honey factory.</p> <p><b><i>Grazing:</i></b> Most of the site is fenced to exclude domestic stock. However small areas in the northernmost part of the site are not fenced and the margins are grazed. Nonvegetated raw-soilfield in these areas is trampled by domestic stock.</p>
<b>Risk Assessment:</b>	Grazing: Risk to site - medium; Timeframe - low. Pest plants: Risk to site - medium; Timeframe - low.
<b>Significance Level:</b>	Local (Appendix 7 - Table 1 - Criterion 5; Table 2 - Factor S).
<b>Significance Justification:</b>	This site is locally significant because it contains small examples of geothermal habitat (some of which are degraded) and which include nationally uncommon habitats (geothermal stream margins, geothermally heated dry ground; Williams <i>et al.</i> 2007; Holdaway <i>et al.</i> 2012). The site also provides habitat for a very small population of an At Risk plant species (geothermal kānuka) but does not represent habitat of considerable importance for the conservation of this species.
<b>Field Work Required:</b>	No field work required.
<b>Notes:</b>	Parts of the geothermal vegetation and habitats are subject to grazing and extensive areas are dominated by pest plant species. Although these areas are degraded, they provide important links between the protected areas of geothermal habitat. Regular management of pest plants, particularly wilding trees should be undertaken. A restoration plan should be prepared and implemented to enhance the ecological values of this site. Formal protection is recommended. Part of this site is adjacent to Ngapouri Conservation Covenant (U16113).
<b>References:</b>	Beadel (1995b); Beadel and Bill (2000); Wildland Consultants (2004b, 2004c, 2009, 2012 & 2014).