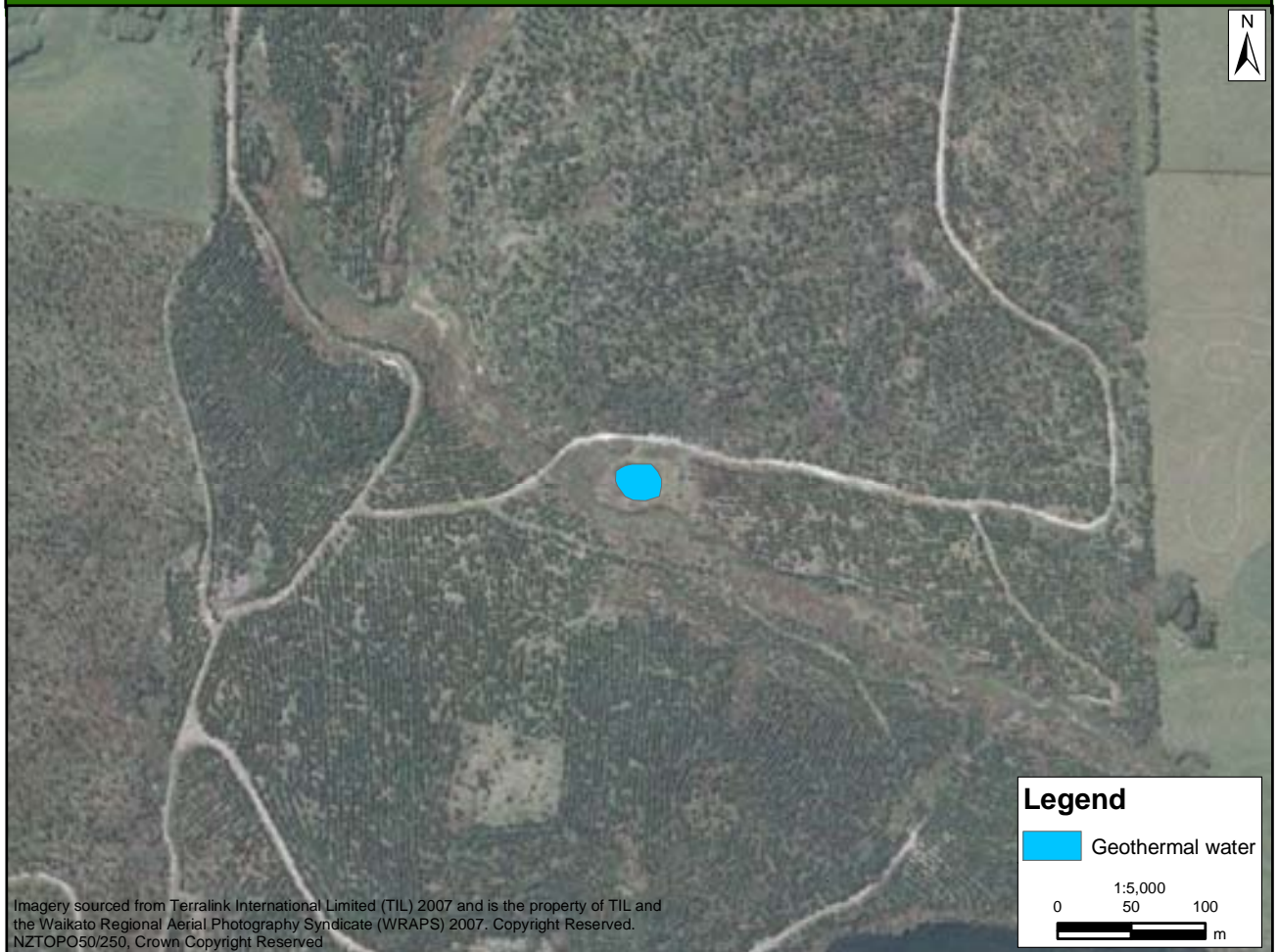
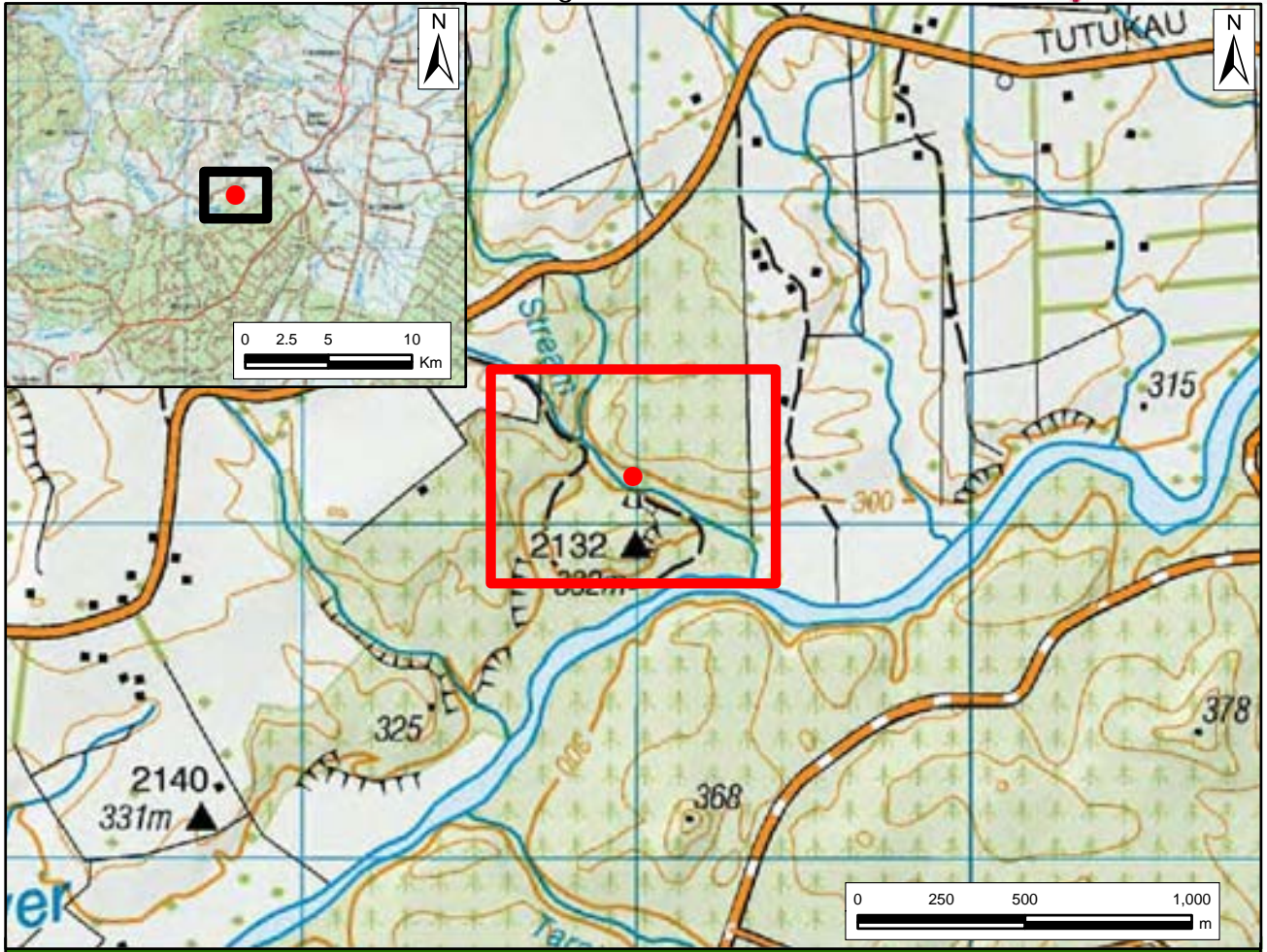


1.9 WHANGAIROROHEA GEOTHERMAL FIELD

List of Geothermal Sites

WGV01	Whangairorohea
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WHANGAIROROHEA

Site Number: WGV01¹
Grid Reference: NZTopo50 BF37 830 331
GPS Reference: NZTM E1882987 N5733149
Local Authority: Rotorua
Ecological District: Atiamuri
Geothermal Field: Whangairorohea
Bioclimatic Zone: Submontane
Tenure: Unprotected private land
Altitude: 310 m
Extent of Geothermal Habitat: c.0.1 ha
Extent of Geothermal Vegetation: c.0 ha
Date of Field Survey: 3 February 2011

Code	Type	Landform	Extent
22.01	Geothermal Water	Steep hillslope	c.0.1 ha
22.01.01	Geothermal Water A pool c.10 × 15 m filled with clear water that was c.36°C at the time of survey. Vegetation on the margins comprises a mosaic of species, which includes <i>Carex secta</i> , raupo, <i>Eleocharis acuta</i> and a band of <i>Schoenoplectus tabernaemontani</i> (c.15 × 1m). Spanish heath (up to c.2.5 m tall), blackberry, koromiko, bracken and rank exotic grasses occur on the drier terrace. Exotic grasses and herb species around the perimeter of the pool include cocksfoot, Yorkshire fog, narrow-leaved plantain, and lotus. One or two plants of poplar and buddleia are also present. <i>Blechnum penna-marina</i> subsp. <i>alpina</i> and <i>Pimelea prostrata</i> subsp. <i>prostrata</i> occur at the northern side of the pool. There was no evidence of heated geothermal soils surrounding the pool.		

Indigenous Flora: *Blechnum penna-marina* subsp. *alpina* and *Pimelea prostrata* subsp. *prostrata* are present amongst the exotic grassland on the northern side of the pool. These species are not common in Atiamuri Ecological District.

Fauna: Magpie and tui were recorded at this site however other birds of plantation forests are likely to also be present.

Current Condition (2011 Assessment): This site comprises a geothermal pool situated within a radiata pine plantation. There is a buffer zone of 20 m around the spring which is not planted in pine. The buffer zone comprises exotic grassland and a small, blackberry-filled gully dissected by access tracks. The pool is used for bathing, with a constructed jetty built towards the centre for easy access.

¹ Previously identified as U17/33 in Wildland Consultants (2004).

**Threats/Modification/
Vulnerability:**

*Invasive pest plants
(2011 Assessment):* Local patches of Spanish heath (1-5% cover), poplar (<1%), and scattered buddleia (<1% cover) and blackberry (1-5% cover) are also present.

*Human impacts
(2011 Assessment):* Impacts of adjacent forestry operations can be excluded from this site because there is a 20 m buffer between the geothermal pool and the plantation forest. There is a permanent wooden structure that provides access into the pool for bathers. Litter was noted within the pool and around its margins.

*Grazing
(2011 Assessment):* Stock do not have access to this site.

*Adjoining land use
(2011 Assessment):* Radiata pine plantation.

Site Change:

Recent change: Wildland Consultants has not assessed this site previously, but, from inspection of aerial photographs, recent change appears unlikely.

Historical: The geothermal lake was located on the 1941 aerial photograph (Historical photo: SN 172 Run 1167 Photo 2, 1941) and appears to be of a similar size to the current survey. In 1941, plantation forestry did not completely surround this site.

Management Requirements: Control of pest plants near spring is recommended.

Significance Level: Local (Table 1 - Criterion 5; Table 2 - Factor 19)

Significance Justification: This site is locally significant because it is a small example of a nationally uncommon habitat type.

Notes: The stream to the south of the site is eroding and undercutting the steep bank to the south of the pool. This could eventually result in the pool disappearing.

A sign identifies this site as „Taahunaa tapu a waiariki o Toa’.

References: Wildland Consultants 2004