

Waikato



REGIONAL COUNCIL

Te Kaunihera ā Rohe o Waikato

2014 UPDATE

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Healthy environment

Strong economy

Vibrant communities

New eruption crater, Te Maari, Tongariro

Changes

- New council – November 2013
- New CEO – Vaughan Payne - November 2013
- New Chair – Paula Southgate – November 2013



Changes

- Organisational Restructure – now
- Fewer manager, more team leaders
- Your geothermal contacts still doing the same thing
- Geothermal science provision to be reviewed early 2105
- Geothermal science now in Grey St



Policy

- 2G Waikato Regional Policy Statement
 - Waiting to be made operative.
- Waikato Regional Plan Review
 - Project preparation for this continues
 - Formal Review Starting 2017
 - Refresh system boundaries – definition and location
 - Quantify sustainability, controlled depletion, resource assessment
 - Standardise SMP, monitoring, reporting
- International interest in our policy continues
 - Peru Renewable Energy Conference with IRENA, December 2013
 - Mexico International Renewable Energy Conf with MFAT, April 2014
 - PNG Ministerial Delegation, June
 - Chilean government delegation, November 2014
 - Toho University, Japan delegation, December 2014

Monitoring and Research

- Waimangu monitoring - cameras in place arranging internet connection
- Interface between fresh and geothermal groundwater
- Inventory of geothermal vegetation updated
- Terrestrial invertebrates
- Significant Natural Areas
- Priorities for Plant and Animal Pest Management
- GI Student projects: Okauia – Matamata area, Waitoa, Te Aroha, Waipahihi
- Economic value of geothermal resources and their uses: including reserves, energy and features lost, natural capital, direct uses.

Technical Reports published

<http://waikatoregion.govt.nz/Services/Publications/Geothermal/>

- Lake Waikare geothermal system (Geothermal Institute)
- Geothermal features annual monitoring report – Jan 2013

Waikato Regional Council Technical Report 2013/29

Geothermal features annual monitoring report - January 2013

7.3 Longview Road

• Lake

A large part of the lake surface was covered in a foamy substance. Matt Stott from GNS says that their understanding is that it is a eutrophic water body, which has lots of organic matter. The 'scum' on top is most likely a combination of aerobic bugs and plant biomass that is being blown around the lake. The appearance of 'scum' would change depending on the wind velocity and direction.

There was more 'scum' in Jan 2013 than there had been in Apr 2012. The temperature had also increased by 8.5°C.

Table 35: Data from Lake, Longview Road, Reporoa

Date	T(°C)	pH	Flow (l/s)	Water level	Ebullition	Colour
20 Apr 2012	23.2	3	0.8	0.8	Effervescing	Emerald green
23 Jan 2013	31.7	3	0.8	0.8	Effervescing	Green, murky



Figure 73: Lake, Longview Road, Reporoa in Apr 2012 (A&B), Jan 2013 (C&D)

• Mud Pool

There were various mud pools in the area, we chose to sample the large one close to the lake. We could not get an accurate reading of the pH with the pH paper, nothing matched it so we determined that it was <3. We also took photos of the other mud pools beside the large one. The water level in Jan 2013 was lower than it had been in Apr 2012.

Table 36: Data from Lake, Longview Road, Reporoa

Date	T(°C)	pH	Flow (l/s)	Water level	Ebullition	Colour
20 Apr 2012	18.3	<3	0.8	0.3m below rim	Effervescing	Murky, brown with mud base
23 Jan 2013	23.2	<3	0.8	1m below rim	Gas discharge	Murky, brown



Figure 74: Mud pool, Longview Road, Reporoa in Apr 2012 (A&B), Jan 2013 (C&D)

The infrared photo shows that the warmest area of the mud pools is a vent next to the large pool. The mud pool itself seems to be the coolest.

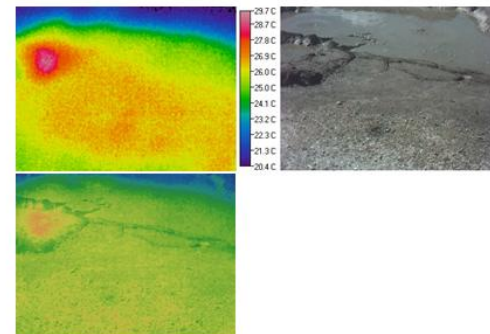


Figure 75: Infrared photo, mud pool, Longview Road, Reporoa in Jan 2013

Technical Reports planned

- Geothermal features annual monitoring report – Jan 2014 (WRC)
- Managing biodiversity in geothermal sites (Ecometrics)
- Further analysis of geyser recordings and controls on periodicity (Massey)
- National standard for classifying geothermal vegetation (Landcare)

Other publications and events coming

- WGC: Waikare, Ohinewai (GI students)
- WGC: macrofauna
- WGC: comparing policy settings worldwide
- WGC: country update co-authored
- WGC: short course on resource allocation co-presented
- Journal paper: Te Aroha (GI student)
- Geothermics paper on sustainability co-authored

Consents

- Consent changes at Rotokawa, Wairakei, Mokai
- Ohaaki Consent Renewal completed
- Nothing major on the horizon

Policy

- Review of RPS implementation – feeds into Long Term Plan and funding implications
- Review of opportunities for co-ordinated management of geothermal across the TVZ completed