

## GEOTHERMAL RESOURCES & TE AO MĀORI

According to Māori mythology, geothermal resources were created by their ancestors, who used their powerful forces to shape the landscape. These captivating tales and beliefs continue to be passed down through generations.

These myths and legends have many different versions, which are unique to each particular iwi (tribe), however, they have a number of common themes as summarised in the Ngātoroirangi narrative below.

## NGĀTOROIRANGI

Most of the traditions, particularly from Bay of Plenty and Central North Island iwi (Mataatua, Te Arawa and Tūwharetoa) ascribe the origin of geothermal activity within Aotearoa's Taupō Volcanic Zone (TVZ) to the exploits of Ngātoroirangi and his sisters Kuiwai and Haungaroa, aided by the atua (spiritual beings) Te Pupu and Te Hoata.

The legend has it that, upon Ngātoroirangi's arrival in Aotearoa, he explored the new land extensively, naming various landmarks and establishing the land for his people. One of the most significant episodes in the myth is Ngātoroirangi's ascent of Mount Tongariro<sup>1</sup>. While climbing the mountain, Ngātoroirangi encountered severe cold and nearly perished. In his moment of desperation, he called upon his sisters Kuiwai and Haungaroa, who were powerful atua located in Hawaiki<sup>2</sup> for help. They sent fire in the form of volcanic activity to warm him, resulting in the geothermal activity seen in the TVZ region today. This divine intervention saved his life.

Within this myth, there is a clear connection made between the volcanic mountains and areas of surface geothermal activity (e.g. hot springs, geysers, mud pools, sinter terraces and steam vents), and as a result of the myth, these resources were believed to be connected by underground passages by which the local taniwha<sup>3</sup> travelled and met together occasionally. These same taniwha were also sometimes associated with earthquakes.

<sup>1</sup> An active volcano in the TVZ.

<sup>2</sup> Māori ancient homeland - the places from which Māori migrated to Aotearoa/New Zealand.

<sup>3</sup> Water spirit, monster, dangerous water creature, powerful creature. *Taniwha* take many forms from logs to reptiles and whales and often live in lakes, rivers or the sea.

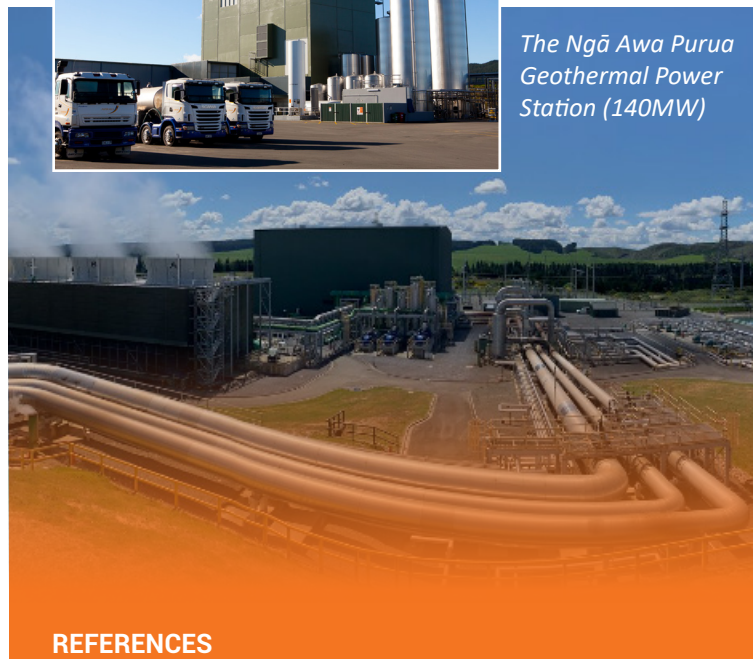
## THE WAIWHATU PROJECT

The Waiwhatu Project is the work of Geothermal: The Next Generation, sourcing appropriate geothermal terms to be used in Te Reo Māori. This project acknowledges the importance of scientific language whilst also incorporating Mātauranga Māori, resulting in a number of Te Reo words that can be implemented by the geothermal community. The term 'waiwhatu' is a combination of 'wai' (liquid / oil) and 'whatu' (stone / core), and can be translated to 'geothermal fluid'. In 2024, the kupu (words) resulting from the Waiwhatu Project were incorporated into the Māori dictionary.



*The Miraka  
Dairy Factory*

*The Ngā Awa Purua  
Geothermal Power  
Station (140MW)*



## REFERENCES

**New Zealand Geothermal Association (NZGA) Website:**

<https://www.nzgeothermal.org.nz/geothermal-in-nz/maori--geothermal/>

**Waiwhatu Project:**

<https://www.geothermalnextgeneration.com/updates/waiwhatu-project-developing-shared-language>

**Waitangi Treaty:**

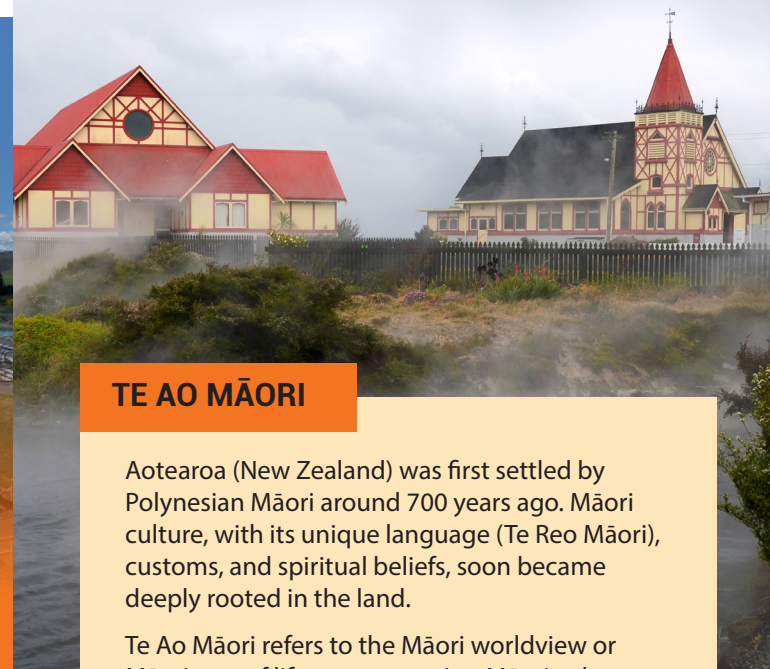
<https://nzhistory.govt.nz/politics/treaty/the-treaty-in-brief>



**[www.nzgeothermal.org.nz](http://www.nzgeothermal.org.nz)**



## MĀORI & GEOTHERMAL



## TE AO MĀORI

Aotearoa (New Zealand) was first settled by Polynesian Māori around 700 years ago. Māori culture, with its unique language (Te Reo Māori), customs, and spiritual beliefs, soon became deeply rooted in the land.

Te Ao Māori refers to the Māori worldview or Māori way of life, encompassing Māori culture, values, customs, and traditions. It is a holistic concept that embodies the Māori perspective on the interconnectedness of all things - people, land, spirituality, and relationships. Central to Māori spiritual beliefs is the world creation narrative which is rich with symbolism and involves a series of events and divine beings.

## EARLY MĀORI USE OF GEOTHERMAL RESOURCES

Geothermal activity has always been regarded as a significant traditional resource among Māori communities that lived near them (mainly in the Bay of Plenty, Rotorua and Taupō districts). The principal settlements of the tribes of Te Arawa, Ngāti Tahu and Ngāti Tūwharetoa had particularly close associations with geothermal areas and their unique resources.

Outside the Taupō Volcanic Zone there are numerous other hot springs which are also highly valued by Māori.

These geothermal resources were used by Māori in various ways. Hot pools (ngāwhā, puia, waiariki) provided hot water for cooking and bathing. Hot ground was used as cooking holes and ovens. Mud from some pools had medicinal properties, especially in the treatment of skin infections.

Many hot pools also had well-known therapeutic qualities in the treatment of muscular disorders, and rheumatic and arthritic ailments, as well as skin conditions. Some had other qualities and were known as wāhi tapu (sacred places), such as a place for ritual cleansing after battle, or having other spiritual qualities linked to medicinal or therapeutic use, and/or incidents of the past. Some hot pools were used as burial places. Today, most hot pools are, for one reason or another, still regarded as wāhi tapu and hold significant cultural value.



An 1884 painting by George French Angus of a Māori bathing pool.

## EUROPEAN COLONISATION

The late 18th century and the early 19th century saw European exploration and colonisation, which in Aotearoa led to the signing of the Treaty of Waitangi and, in turn, the establishment of British governance over New Zealand.

The Treaty of Waitangi exists in both Māori (Te Tiriti o Waitangi) and English versions, and it includes the following key Treaty Principles:

**Partnership:** The Treaty established a partnership between the British Crown and Māori chiefs, recognising the sovereignty of each party within their respective spheres.

**Protection of Rights:** The Treaty guaranteed Māori ongoing possession and protection of their lands, estates, forests, fisheries, and other properties.

**Governance:** The Treaty facilitated the establishment of British governance in New Zealand, with Māori chiefs retaining chieftainship and authority over their own affairs.

The years that followed the signing of the Treaty saw a multitude of injustices and Treaty breaches committed by the ruling British colonial Government.

The New Zealand Native Land Court, a European construct established in 1865, undertook to convert communal Māori land ownership into individual titles as a means to promote European-style land ownership and facilitate land sales to settlers.

Many of these Māori landowners, when facing economic pressures or exploitation by European settlers, sold their land under the court's processes. This resulted in significant Māori land loss, including access to geothermal resources which had been a way of life for Māori for centuries.

## THE CULTURAL LEGACY OF EARLY NZ GEOTHERMAL AND ENERGY PROJECTS

As Aotearoa developed as a nation, and the need for electricity increased, the Government embarked on geothermal electricity generation projects that adversely affected Māori. These developments often proceeded without proper consultation, resulting in the destruction of geothermal features, land subsidence, and loss of cultural heritage. Displacement of Māori communities disrupted traditional lifestyles, causing social upheaval and loss of

livelihood for those relying on geothermal areas. While current geothermal practices are now more sustainable, the impacts of early projects are not forgotten by Māori.

## CONTEMPORARY MĀORI & GEOTHERMAL RESOURCES

Although residual Treaty issues still remain in Aotearoa today, Māori are now more able to actively engage in managing, protecting and even developing geothermal resources – all being tangible ways in which they can exercise their duty as kaitiaki (guardians) over these highly valued taonga (treasures).

Where Māori managed to retain ownership of portions of land overlying geothermal resources and/or received geothermal assets from the Crown as part of Treaty of Waitangi claim settlements, this kaitiaki role has culminated in some Māori entities gaining and exercising direct or partnership control of nationally significant geothermal developments that are providing substantial environmental and economic benefits to New Zealanders as well as cultural and other tangible benefits directly to their own people. Examples include:

- **Tūaropaki Trust** with their Mokai Geothermal Power Station and other direct heat use ventures, including:
  - *Halycon Power* – a hydrogen production pilot plant using geothermal energy;
  - *Miraka* – A dairy processing facility utilising geothermal heat; and
  - *Gourmet Mokai* – A covered crop operation using the Mokai geothermal resource;
- **Tauhara North No.2 Trust** with the Rotokawa, Nga Awa Purua and Ngā Tamariki Geothermal Power Stations; and
- **Ngāti Tuwharetoa Geothermal Assets** - the largest direct heat supplier in the world for geothermal steam, and the only Iwi owned and operated geothermal company in New Zealand.

Despite the strong headwinds Māori have faced in the past, these highly successful Māori-led geothermal developments provide immense inspiration and belief to other New Zealand Māori that control of their own destiny can be regained.