Māori values and uses of low temperature geothermal in Tauranga Moana

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ABSTRACT

The Tauranga Geothermal System is a low temperature geothermal system in the Bay of Plenty Region, with temperatures ranging from 30°C to 77°C. The geothermal heat is used for commercial, domestic and municipal space and water heating, and bathing. With advancements in heat pump technology and a focus on renewable low carbon energy, there is growing interest in the use of low-temperature geothermal resources. As a potential accessible source of geothermal heat, the Tauranga Geothermal System is increasingly seen as a value proposition for social and economic development in the region.

To help manage the system, Bay of Plenty Regional Council (Council) is developing a Tauranga Geothermal System Management Plan, building on previous work to characterise the system, reservoir modelling, iwi and hapū management plans, and an economic assessment of geothermal values in the region. The Council is also working towards greater partnership with Māori in geothermal management, and to ensure that Māori are well positioned to benefit from geothermal development. This paper describes the outcomes of targeted engagement with Māori on the Tauranga Geothermal System, to identify values associated with the geothermal system, and Mātauranga Māori (Māori knowledge) on the health of the resource. Opportunities and strategies to build iwi and hapū capabilities about low temperature geothermal, and its use for social and economic wellbeing, such as Papakāinga housing, are also explored.

1. TANGATA WHENUA PERSPECTIVES

1.1 The Geothermal System

The Tauranga Geothermal System, Ngā Wai Ariki o Tauranga Moana, is situated within a geographically expansive and culturally rich landscape, spanning approximately 875 km² from Waihi Beach to Te Puke-Maketu (See Figure 1).

The system consists of the warm parts of the interconnected groundwater aquifers. In some areas temperatures are over 30°C, therefore meeting the definition of 'geothermal water' under the Resource Management Act 1991 (the RMA), with temperatures as high as 77°C recently recorded.

The Tauranga System is quite different to the Rotorua Geothermal System, which has internationally significant surface features, including geysers. In Tauranga surface expression is rare. Currently, only a few natural geothermal or geothermally influenced springs are known to still exist, ranging from 23°C-50°C. The most well-known of these is near Maketū. Some springs that were once artesian, such as Saphire Springs south-west of Katikati, are now only accessed from groundwater bores (BOPRC, 2023).

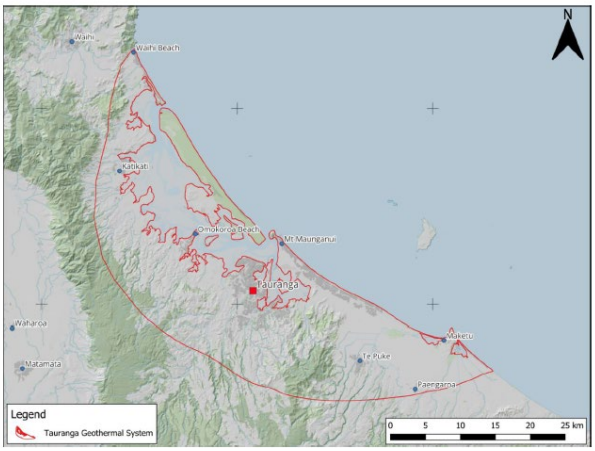

Figure 1: Source: Adapted from Land Information New Zealand (LINZ, 2012) and NZ 8m Digital Elevation Model, as presented in the GeoExchange Report (2024).

1.2 Whakapapa and Connection to the System

Māori do not categorise or delineate the geothermal resource in the same way that the RMA does. The interconnected nature of the groundwater resources in Tauranga, and the wider environment, is front of mind for tangata whenua, and key to management. Any discussion about the geothermal taonga in Tauranga therefore also includes 'geothermally influenced' water of lower temperatures, such as geothermally influenced springs, as well as the groundwater resource generally.

Within the area of the Tauranga Geothermal System lie over 32 marae, 25 hapū, eight iwi, and a substantial number of Māori land blocks, each with their own histories, priorities and aspirations. This complex network of whakapapa connections and whenua-based identities reflects the deep cultural significance of the geothermal system to tangata whenua across Tauranga Moana.

Geothermal is not merely an energy resource, but is *taonga* intrinsically tied to *mauri*, *wairua*, *whakapapa*, and *oranga* (Ngāti Whakaue ki Maketū, 2018; Ngā Pōtiki ā Tamapahore Trust, 2019; Tapuika Iwi Authority, 2014; Tauranga Moana Iwi, 2016). These values frame geothermal features as living entities -woven into healing practices, rituals, and cultural narratives passed through waiata, pātere, and oral histories.

For Ngāti Whakaue, the use of geothermal energy in Maketū is long-standing and carefully protected. Their Iwi Management Plan affirms that these resources were deliberately safeguarded from external use for generations, reflecting their sacred status

and the role of mana whenua as kaitiaki (guardians). Communal geothermal pools, in particular, held deep cultural importance - used for cleansing, relaxation, and rongoā (traditional healing), and valued as spaces that nurtured physical, spiritual, and cultural wellbeing.

Geothermal springs also supported traditional hunting practices, with hunters using the warm waters to recover after retrieving birds from the wetlands (kukuwai) (Potiki, Tapsell, Bennett, & Corbett, 2024). The Wai 2358 Joint Brief of Evidence (2024) documents these customary uses—such as food preparation, bathing, and healing—and highlights the enduring spiritual and practical significance of geothermal waters in sustaining whakapapa and community life.

Similarly, the *Tauranga Moana Iwi Management Plan* recognizes the importance of geothermal features in ritual cleansing, healing, and other cultural practices. Ngāti Ranginui also reinforced this, noting that geothermal pools and hot springs have long been valued for their medicinal and therapeutic properties—reaffirming the enduring spiritual and physical connection tangata whenua have with these taonga (Toi Kai Rawa Trust, 2025a).

2. MANAGEMENT OF THE TAURANGA GEOTHERMAL SYSTEM

2.1 The Draft Tauranga System Management Plan

The Bay of Plenty Regional Council (BOPRC) currently manages the geothermal resource under the RMA. Key planning documents include the Bay of Plenty Regional Policy Statement (RPS), and the Regional Natural Resources Plan (RNRP) which lays out the rules for resource consents (ie. permits).

The Council is currently reviewing the management of the Tauranga Geothermal System through the development of the Tauranga Geothermal System Management Plan (SMP). This operational plan is a whole system management approach that will serve as a guiding framework for the sustainable management of the system. It does not replace the policies and rules in the RNRP, but will be considered in consenting decisions, and in setting organisational priorities (e.g. monitoring). The review aims to improve how the system is managed, including a more inclusive and collaborative approach with tangata whenua, that reflects both scientific understanding, and mātauranga Māori.

The Council has acknowledged the critical role tangata whenua play in environmental kaitiakitanga (stewardship or guardianship) and recognises their long-standing advocacy for integrated management approaches, particularly those that reflect the connections between geothermal and groundwater systems and uphold intergenerational responsibility for the health of the environment. Also, with the growing interest in the use of low temperature geothermal, it is important that Māori are not disadvantaged but are well positioned to benefit from geothermal use for economic and social wellbeing, and energy security.

To develop the SMP, Council carried out some early engagement with tangata whenua in the area. A Draft SMP was then released in October 2024, with a feedback period to January 2025. The Council invited all iwi and hapū in the area to contribute to shaping the review's direction and express their preferences for future involvement. Some targeted hui, and a workshop, were held, with valuable feedback received from several iwi and hapu (some of which are described in this paper). However, the Council has acknowledged significant gaps in feedback. This was not seen as a lack of interest in the kaupapa (topic) but rather reflects limitations in capacity -or in some cases access to the necessary resources or expertise to fully engage.

To support further engagement, the Council partnered with Toi Kai Rawa, a regional Māori economic development agency, to gather further perspectives on values, priorities, knowledge systems, and aspirations. This collaboration aimed to identify a pathway for meaningfully integrating these insights into the evolving management framework for the Tauranga Geothermal System.

With the growing interest in low temperature geothermal to contribute to a low carbon economy, Council also wanted to highlight opportunities for tangata whenua to benefit directly from use of geothermal, particularly on Māori owned land, such as ahu whenua trusts (Māori land trusts and Incorporations).

2.2 Why Tangata Whenua Perspectives Matter

The current development of the SMP presents a critical and time-sensitive opportunity to reshape the management of the geothermal system in Tauranga Moana. It offers space for diverse knowledge systems such as mātauranga Māori to be included into decision-making, enabling the sustainable use of geothermal taonga in ways that enhance community wellbeing and realize economic potential.

Māori have long expressed concern that their priorities and values have been inadequately reflected in regional policymaking. By creating space for tangata whenua to meaningfully engage, this review offers a genuine opportunity to centre tangata whenua leadership, mātauranga Māori, and Te Tiriti o Waitangi within future geothermal planning. Strengthening this alignment offers a powerful opportunity to restore tangata whenua roles as kaitiaki and to safeguard puna and other geothermal taonga for future generations.

2.3 Tangata Whenua Engagement Approach

Toi Kai Rawa's engagement approach began with a desktop review of existing literature to establish a baseline understanding of tangata whenua perspectives on geothermal resources within the Tauranga Moana.

The review incorporated iwi and hapū management plans, findings from relevant Waitangi Tribunal inquiries and technical reports including the Tauranga Geothermal System Science Summary and the Geoheat Potential Report. While the literature review provided important background, it also highlighted the need to capture further insights including contemporary lived experiences of tangata whenua across the region in relation to geothermal resources.

From April to June 2025, kanohi ki te kanohi (face to face) hui were held with hapū, whānau, Māori land trust representatives, marae committees, and a dedicated session with Te Rangapū Mana Whenua o Tauranga Moana Partnership - an independent body representing 17 hapū and iwi within the Tauranga City Council boundary. A considerable amount of groundwork was undertaken prior to gathering formal feedback, not only to

socialize the kaupapa but also to engage with the distinct priorities of whānau, hapū, iwi, and land trusts in their local contexts.

To capture feedback, Toi Kai Rawa designed a survey that invited participants to express their views in their own words - reducing the risk of misinterpretation and enabling authentic responses. The survey included open-ended questions exploring:

- Knowledge and current use of low-temperature geothermal resources
- Cultural values and aspirations related to geothermal use
- Barriers, challenges, and opportunities for future development
- Needs around support, capability-building, and partnership

This combined approach of background research and direct engagement helped ensure tangata whenua perspectives were captured with both depth and integrity.

A total of 32 respondents took part in the survey, collectively representing:

- 13 iwi and hapū entities
- 78 individual land blocks
- 4 whānau (family) trusts
- 5 ahu whenua trusts

Together, these respondents hold tribal land interests spanning an estimated 4,002.17 hectares.

The overlapping roles of the some of the respondents, highlighting the complexity and need for depth in Māori engagement, is captured in Figure 2.

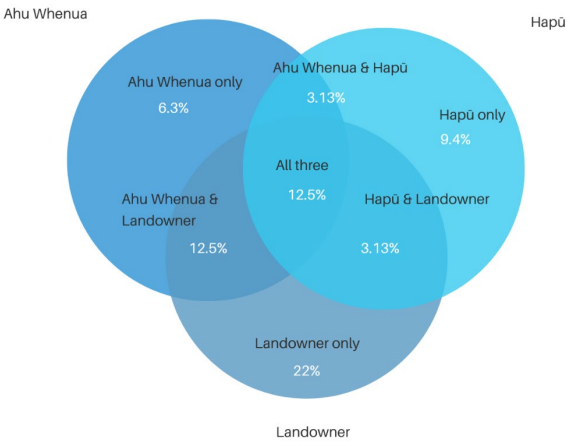

Figure 2 - Overlapping Roles Held by Maori

2.4 Headline Findings

The survey revealed the following insights:

- Geothermal resources are seen as taonga tuku iho, essential to Māori identity and wellbeing. Cultural significance was cited by 100% of respondents; environmental protection and healing/wellbeing by over 80%.
- Tangata whenua feel they are not benefitting from geothermal resources. Only 3% of Māori trusts/businesses responded that they are currently using the resource, with almost half saying no, and over 40% unsure.
- Major concerns include degradation, inequity, and exclusion from decision-making. Over 75% highlighted degradation and lack of Māori participation as key issues; limited access and regulatory barriers were also widely cited.
- Strong support exists for co-governance, protection of wāhi tapu, and mātauranga Māori. 85% want the Council to support Māori-led knowledge systems, provided cultural safeguards and data sovereignty are respected.
- Opportunities for Māori-led development are significant but require removal of barriers. Papakāinga heating, marae/community facilities, wellness ventures, and horticulture were the most cited opportunities, but must be pursued through fair allocation, resourcing, and Treaty-based partnerships.

3. MĀTAURANGA, VALUES AND ASPIRATIONS

3.1 Māori Values Associated with Geothermal

Tangata whenua expressed a wide range of values associated with geothermal resources, with most respondents identifying multiple, overlapping areas of importance. Cultural significance emerged as the most frequently cited, with many referencing taonga tuku iho, wāhi tapu, and other sacred or ancestral dimensions. Environmental protection was also strongly prioritised, often tied to aspirations for sustainable use and the long-term guardianship of geothermal taonga.

Healing and well-being featured prominently, reflecting the role of geothermal resources in supporting holistic health and community restoration. Energy and sustainability (including renewable energy opportunities) alongside economic development, were also viewed as important, though typically framed in ways that uphold cultural and environmental values.

This breadth of responses reinforces the depth of Māori connections to geothermal resources and the need for management approaches that reflect the interwoven nature of cultural, environmental, social, and economic wellbeing.

3.2 Concerns and Priorities

The two most expressed concerns among tangata whenua were the limited involvement of Māori in decision-making and fears about the degradation of geothermal resources - both observed and unknown. Many also spoke of feeling restricted in their

access to geothermal taonga, with regulatory processes often described as overly complex and difficult to engage with.

Participants also raised concerns about declining water quality and a perceived weakening of environmental interconnectedness. The risks of over-extraction and potential impacts on ground stability were highlighted as further areas of unease.

Some respondents felt that Māori values were being sidelined in favour of commercial or non-Māori interests. Others noted that the voices of ahi kā (those who lived continuously in an area) and Māori landowners are often overshadowed by iwi or hapū representatives in resource management discussions.

Additional issues included the increasing commercialisation of geothermal taonga, perceived overreach by government agencies, and a lack of clear leadership and easily accessible information. For some respondents, immediate community challenges - such as wastewater infrastructure and rising rates - were more urgent matters within their rohe.

Together, these concerns reflect a desire for more transparent, inclusive, and culturally grounded approaches to geothermal management that reflect both local realities and intergenerational responsibilities.

3.3 Opportunities and Barriers

Opportunities for wider use of low temperature geothermal by Māori was a key driver for this project. These opportunities were seen to exist - whether through uses such as papakāinga heating, wellness ventures, marae infrastructure, or Māori agribusiness - but only if the current system evolves to center Māori leadership, ensure sustainable management of water resources, protect wāhi tapu, and enable long-term, intergenerational benefit.

Tangata whenua also saw geothermal development as a pathway for reclaiming customary rights and mana, and enhancing community wellbeing and economic outcomes. There was also emphasis on the potential to strengthen governance, build capacity, and secure intergenerational benefits, alongside the creation of new business and innovation opportunities.

However, these aspirations were balanced by notable concerns. The most cited risk was the fear of over-extraction and resource depletion, followed closely by the risk of contamination and pollution (e.g. geothermal discharges to surface water or the Tauranga Harbour). These views emphasize a Te Ao Māori view (Māori world view) of interconnectedness.

4. CHALLENGES AND OPPORTUNITIES IN INTEGRATING MĀORI WORLD VIEWS

4.1 Partnership and Representation

Incorporating tangata whenua views into management and resource allocation decisions is not straightforward, particularly in a resource management system that tends to compartmentalise the way we view the environment (e.g. treating the geothermal and non-geothermal parts of the aquifer as separate resources) and where there may be competing interests. It involves navigating a complex landscape of diverse Māori interests - including iwi, hapū, marae, ahi kā and Māori land trusts - alongside regulatory systems that have overlooked or underrepresented the importance of Māori knowledge, values, and priorities in decision-making.

Yet despite these structural barriers, recent engagement reflects a strong appetite and clear readiness among tangata whenua to design a more collaborative and enduring approach to geothermal governance in Tauranga Moana.

The lack of meaningful participation remains a key concern. Both the degradation of geothermal resources and exclusion from decision-making were cited by 78% of respondents as major issues, with many describing current frameworks as poorly aligned with Māori values and priorities. In response, there is clear support for establishing co-governance arrangements, embedding mātauranga Māori in planning and monitoring tools, and strengthening iwi and hapū roles across the geothermal management lifecycle.

Resourcing remains central to achieving these aspirations. Nearly half (44%) of participants reported having no in-house knowledge of the geothermal system and its management, underscoring the importance of investment in technical support, wānanga, and Māori-led monitoring frameworks.

Some of the respondents have already proposed practical next steps, such as the establishment of a dedicated governance group and shared data platforms that enable real-time access and cultural interpretation.

In summary, while incorporating tangata whenua perspectives into Council instruments may not be straight forward, tangata whenua have outlined a clear desire to move forward with purpose in this space - grounded in mātauranga, tino rangatiratanga, and intergenerational stewardship. With the right structures and support, there is a real opportunity to shift from reactive consultation to enduring partnership in geothermal governance across Tauranga Moana.

4.2 Mātauranga Māori and Data Sovereignty

Many respondents (69%) supported capturing mātauranga Māori about the geothermal system in ways that can meaningfully shape regional policy. However, this was on the basis that cultural safeguards and data sovereignty are upheld.

Mātauranga Māori refers to the collective body of knowledge, wisdom, values, and worldviews developed by Māori over generations through lived experience, observation, and deep relationships with the natural world. It includes spiritual, cultural, environmental, and genealogical knowledge systems, and is expressed through language, practices, narratives, rituals, and protocols. Mātauranga Māori is dynamic and place-based, and it continues to evolve while remaining rooted in whakapapa, tikanga, and the interconnectedness of all living things.

Several respondents emphasised that this knowledge must not be used tokenistically, and that clear, tangata whenua-led processes are needed to guide its appropriate use.

Many were open to sharing knowledge about culturally significant sites to support their restoration and protection - but only if done safely and with strong protections in place. Suggestions included resourcing iwi- or hapū-led wānanga, establishing confidential registers, and embedding culturally respectful protocols that uphold kaitiaki or ahi kā authority.

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At the same time, some respondents remained cautious, emphasising that certain knowledge should remain with hapū or kaitiaki, and must not be used in planning or policy without explicit consent and control.

4.3 Planning Through a Cultural Lens

There is an opportunity for planning for geothermal management in Tauranga Moana to move beyond compliance-based processes to one that reflect a cultural lens grounded in mātauranga Māori, kaitiakitanga, and intergenerational wellbeing. Applying a cultural lens means recognising that Māori environmental planning is not issue-specific, but relational and place-based.

Planning through a cultural lens also means shifting from generic consultation to tikanga-led engagement. This includes respecting ahi kā and hapū authority at place, providing space for cultural health indicators, and acknowledging the nuanced roles that Māori play - as landowners, trustees, kaitiaki, and mana whenua - often simultaneously. It also means designing policies and monitoring tools that reflect concepts like mauri decline, intergenerational risk, and cumulative impacts - terms which do not always map neatly to regulatory frameworks but are critical to tangata whenua assessments of wellbeing and sustainability.

A cultural lens also shifts the purpose of planning - from allocating use to sustaining whakapapa relationships. For example, geothermal planning must consider the revival of puna once used for communal bathing and healing, or the use of geothermal heat to support papakāinga, kaumātua flats, and marae-based infrastructure. In these examples, planning is about restoring balance - not just managing extraction.

Finally, applying a cultural lens includes confronting the risks of cultural dilution. Respondents expressed concern about mātauranga being extracted or misinterpreted within council-led frameworks. Planning through a cultural lens must therefore include tikanga-based protocols, co-designed data systems, and Māori-led governance over how cultural knowledge is gathered, stored, and applied.

5. POSSIBLE PATHWAYS FORWARD

Throughout the process several possible actions have been identified. These ideas have not yet been tested formally with participants, iwi and hapu, or with the Council. However, some broad ideas are explored below.

5.1 Explore partnership approaches

The current resource management system lacks shared authority. Tangata whenua want to be at the decision-making table - helping shape how geothermal resources are managed, not just responding after decisions have already been made.

This issue is not unique to Ngā Wai Ariki o Tauranga Moana. For example, the absence of Te Ao Māori perspectives was also identified in the development of the Rotorua SMP. In response the Council resourced an ahi kā rōpu or group to guide the SMP and committed to establishing joint management group made up of Council and tangata whenua representatives to provide management oversight. While the context is very different in Tauranga Moana, similar options could be explored. The process could begin with a series of hui to agree on shared principles, develop a draft terms of reference, and prioritise immediate steps to support capacity and capability building, such as Māori-led monitoring and data collection on the ground.

5.2 Protect and Restore Wāhi Tapu and Cultural Sites

Tangata whenua have called for urgent action to protect and restore wāhi tapu and other culturally significant sites. Some of this work would need to be operational (e.g. drainage patterns, restoration planting etc.). The SMP also provides an opportunity to embed stronger cultural protections (e.g., the identification of sensitive areas in planning maps, Cultural Impact Assessments (CIAs) for consents in sensitive areas, and regulatory provisions such as allocation limits or well setbacks from sensitive areas).

Additional actions could include:

- Co-designing a restoration framework with tangata whenua to prioritise the recovery of damaged or at-risk sites, drawing on mātauranga Māori, tikanga practices, and dedicated funding.
- Improving mapping and visibility of cultural sites in collaboration with iwi and hapū, ensuring data is protected through tikanga-led protocols and used to prevent harm during planning and development.
- Embedding Māori-led monitoring roles in compliance processes to ensure kaitiaki are involved in site visits, oversight, and reporting.

These steps would ensure wāhi tapu and other cultural sites are not only protected on paper but actively safeguarded in practice.

5.3 Data Sovereignty and Mātauranga Māori

Māori perspectives on the health of the taonga is something that has been given much weight in past decision making. For example, Council monitors the groundwater aquifers with an empirical science focus (e.g. chemistry, temperature and water level). But a Te Ao Māori perspective on the health of these aquifers is more difficult to articulate, especially for a resource that is not highly visible. There is an opportunity through the SMP to build an understanding of this perspective, and to embed it in state of the environment monitoring and reporting. For example, what does sustainability mean through a cultural lens?

Tangata whenua have also signalled the need for culturally appropriate systems to collect, store, and share mātauranga - while ensuring Māori retain control over how that information is accessed and used.

A practical next step could be to work alongside iwi and hapū to co-design a secure mātauranga Māori database or registry, underpinned by clear governance protocols and layered access. The system should reflect tikanga-led principles of protection, purpose, and consent. This could be developed through a series of pilot wānanga to:

- Identify key knowledge holders
- Establish cultural protocols for access and use
- Determine the technical requirements for a Māori-controlled data system

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This approach would help ensure mātauranga Māori is protected, respected, and applied in ways that align with the values and authority of tangata whenua.

5.4 Capacity Building

Building Māori capability in geothermal policy, consenting, science and enterprise was a strong theme throughout the engagement. Many tangata whenua highlighted the need for targeted support to grow local expertise and confidence in this space. A practical next step could be for Council to support capability and capacity-building in partnership with iwi and hapū. For example, wānanga and technical workshops could be held with a focus on:

- The characteristics of the low temperature geothermal system (and other water resources)
- Supporting active, efficient and effective and participation in policy and consent processes (e.g. adequate resourcing of participation)
- Enabling Māori-led enterprise and innovation.

Investing in capability now will ensure tangata whenua are well positioned to lead, influence, and participate fully in the future of geothermal development across Tauranga Moana.

5.5 Targeted Economic Development

There is strong interest among tangata whenua in unlocking geothermal potential to support local, Māori-led development. Seventy-five percent of respondents highlighted opportunities in areas such as papakāinga heating, community infrastructure, horticulture, tourism, and wellness ventures. However, access remains a challenge, particularly where investment, information, and tailored support are lacking.

A practical next step could be to partner with iwi, hapū, ahu whenua trusts, and Māori businesses to share information on low temperature technologies and opportunities, provide 'tailor made' information for ahu whenua trusts (e.g. mapping and resource availability), and building connections between iwi, hapu and Māori land trusts and geothermal innovators and industry players.

For example, system wide work carried out by GeoExchange in 2023 on low temperature opportunities could be expanded on, with a localised spatial mapping project correlating likely geothermal availability, with ahu whenua trust blocks, and land uses that could benefit from geothermal (e.g. covered crops). These insights could then be used to guide a series of targeted hui to:

- Identify existing and future land use aspirations (and energy demand).
- Economic, regulatory and infrastructural barriers to development
- Co-design tailored action plans for each priority zone

This approach would enable place-based, values-aligned development pathways that reflect the aspirations and opportunities specific to each part of Tauranga Moana.

5.6 Policy Integration

There is strong support for embedding mātauranga Māori and cultural health indicators into the Tauranga SMP and related policy and regulatory processes. Sixty-nine percent of respondents endorsed the use of mātauranga Māori, with many emphasising the need for cultural values to be meaningfully and consistently reflected in how geothermal resources are assessed, monitored, and managed.

A practical next step could be to work alongside iwi and hapū experts to co-develop a set of mātauranga Māori-based indicators on the health of the geothermal taonga. These could be integrated into council policy, resource consent processes, and ongoing monitoring frameworks to ensure cultural values are visible, measurable, and actively informing decision-making at every level.

5.7 Consent Processes

There is strong support for iwi and hapū management plans to guide geothermal planning and inform consent processes (as required by the RMA). However, respondents were clear that iwi and hapū documents should not replace site-specific engagement. Some plans may be outdated or incomplete, and relying on them alone risks overlooking current realities, cultural context, and lived knowledge held by local whānau.

Another consideration is that consent processes are often cited as a barrier to use of low temperature geothermal. There are currently no permitted activities for low temperature geothermal in Tauranga, so resource consents are required for even very small takes. In these cases, applicant can find Māori engagement time consuming, costly, and with questionable benefit. Equally, participating in the process can be onerous for tangata whenua and clear outcomes from their input into the consent process, or an improvement in the health of the environment, is not always evident.

As such a careful balance is needed to deliver consent processes that are reasonable for all applicants, and that enable low temperature uses, while still being informed by up-to-date, meaningful engagement with tangata whenua. Options to further consider include tangata whenua forums to provide real-time cultural input on geothermal consent applications, and pre - application hui with tangata whenua (something that the Council already strongly encourages and supports). The Regional Council also provides some funding for the development of iwi and hapū management plans, and this could be built on with additional technical support as needed.

There is also an opportunity to build agreed guiding principles into the SMP or iwi and hapū management plans, ensuring that Māori engagement is focussed and reflects the scale of effects of different uses, priority issues for Māori and the values to be protected.

Resource management reforms will have major implications for consent processes, which is beyond the scope of this paper to explore.

5.8 Monitoring & Adaptive Management

Tangata whenua have consistently raised concerns about the lack of follow-up in geothermal compliance, limited Māori

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involvement in monitoring, and the absence of clear processes to respond to emerging risks. There is strong support for a kaitiaki-led approach to monitoring geothermal allocation, discharges, and both environmental and cultural impacts.

To be effective, monitoring needs to be long term, robust, transparent, locally grounded, and designed to support adaptive decision-making over time. Empowering iwi and hapū to participate in and potentially lead some of this work will ensure that monitoring is culturally relevant, trusted, and responsive.

A practical next step could be to co-design and pilot a geothermal monitoring framework with iwi and hapū that includes:

- Training and resourcing local kaitiaki to carry out site-based monitoring (something the Council is already exploring in the freshwater space)
- Real-time, shared access to monitoring data
- Agreed protocols for rapid response to incidents or emerging risks
- Regular hui to review findings and support continuous improvement
- Te Ao Māori measures of success.

This approach would strengthen accountability, build local capacity, and support a more responsive and culturally aligned geothermal management system.

6. CONCLUSION

To support the development of a SMP for the Tauranga Geothermal System, the Bay of Plenty Regional Council has sought input from tangata whenua on the values and uses of the low temperature system. A key driver for this work was also to explore opportunities for Māori to benefit from low temperature geothermal for social and economic development, and energy security.

This paper has summarised the outcomes of targeted engagement with a number of iwi, hapū and Māori land trusts in Tauranga Moana. It captures insights from tangata whenua - that see geothermal resources not just as energy sources, but as taonga tuku iho, deeply embedded in whakapapa, wairua, and the identity of tangata whenua. Across the rohe, Māori have upheld the cultural, environmental, and healing value of these taonga for generations. Yet despite this enduring connection, there is a sense that most are still not benefiting directly from low temperature geothermal use, and many remain excluded from the decisions that shape its future.

The findings are clear: tangata whenua have a strong appetite for greater partnership, decision making, mātauranga-driven planning and monitoring, capacity and capability building, data sovereignty, and enterprise development grounded in intergenerational outcomes.

While there was limited knowledge about current use of the low temperature system to benefit Māori, opportunities exist. Whether it's direct use for heating for papakāinga or marae, restoring puna, or supporting Māori agribusiness, the potential for geothermal protection and development to uplift whānau is real. The pathways to enable this, all centre on partnership, knowledge, equity, and a shared commitment to the health and wellbeing of both the land and the people.

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