



Te Kaupapa o Te Whare

House of Tahu Cultural Sustainability Assessment



A report outlining cultural sustainability recommendations for the final design of the House of Tahu

Prepared for Ngāi Tahu Property Limited

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mō tātou, ā, mō kā uri ā muri ake nei

for us and our children after us

This is the vision adopted by the former Ngāi Tahu Māori Trust Board to guide the work of the iwi through the settlement and implementation of its Treaty of Waitangi claim – Wai 27 or Te Kerēme. It also neatly highlights the sustainable development aspirations of Ngāi Tahu and the requirement to ensure all that the tribe does takes account of the needs of this generation, and those to come.

Whakarāpopotonga / Executive Summary

Since 2000, Te Rūnanga o Ngāi Tahu has been developing plans for the House of Tahu as a multi-functional tribal space and an expression of Ngāi Tahu located within the urban environs of Christchurch City. This planning has involved a number of tribal hui and wānanga, the involvement of tribal representatives and the development and approval of initial designs, timelines, costings and resource consents for the former King Edward Barracks site.

In late 2005, an expanded sustainability brief was put before Te Rūnanga which raised the profile of developing the House of Tahu as one of the leading examples of sustainable building in New Zealand, and to match the tribal aspirations for the natural environment as outlined in Ngāi Tahu 2025. The challenge was that while Ngāi Tahu wanted a sustainable development, there were few culturally based methods available for assessing what sustainability meant from a Ngāi Tahu perspective in the context of the House of Tahu.

Cultural Sustainability Assessment Process

A 'Cultural Sustainability Assessment' was therefore developed that aimed at aligning the tribe's significant resource management experience and expertise to ensure that Ngāi Tahu cultural and environmental bottom lines were integrated into the House of Tahu development. The assessment involved a review of relevant tribal policy, planning, design, interview and survey information as well as the facilitation of a cultural design assessment workshop, using a cultural values based decision making framework called the Mauri Model.

The process was commissioned by Ngāi Tahu Property Ltd and overseen by Toitū Te Whenua of Te Rūnanga o Ngāi Tahu. It included advice and facilitation from Mahi Maioro Professionals in the use of the Mauri Model and also involved input from interested Papatipu Rūnanga representatives, Ngāi Tahu staff and House of Tahu project design consultants, architects and engineers.

Results

The review of Ngāi Tahu environmental policy and information uncovered an extensive range of significant and relevant cultural sustainability aspirations and bottomlines for the House of Tahu. In particular, issues seen as critical included policy relating to manawhenua inclusion, water management, waterway, mahinga kai and wāhi tapu protection and enhancement, and the restoration of cultural landscapes. The review also confirmed and reinforced an overwhelming desire by tribal members for Te Rūnanga o Ngāi Tahu to show leadership, set standards and 'walk the talk' in the area of sustainable development.

Tribal policy positions also supported an aspiration for urban developments to decrease the overall impact on existing infrastructure, and to find and implement alternative, low impact and self sufficient solutions for water, waste, energy and biodiversity issues. Solutions specifically mentioned within Ngāi Tahu environmental policy, as well as at the assessment workshop, included the use of composting or waterless toilet/sewage systems, rainwater collection and greywater recycling, land or wetland based stormwater and sewage treatment and disposal systems, solar or wind based energy generation and the protection and enhancement of native flora, fauna and habitats, with a focus on potential mahinga kai and cultural use. The issue of restoring cultural landscapes through native restoration, enhancing views and connections to landscape features, historical interpretation and the use and incorporation of traditional materials, design elements and artwork within developments were also outlined.

From the review the following list of cultural sustainability indicators were drawn up and assessed against the current designs of the House of Tahu within the design assessment workshops.

- **Ngā Wai Tupuna:** Protection of natural waterways and the appropriate use/reuse, treatment & disposal of water (particularly onsite and/or landbased systems for stormwater, greywater and wastewater).
- **Ngā Otaota Māori:** Protection & enhancement of native flora, fauna, habitats and ecosystems, particularly waterways & wetlands).
- **Wāhi Tapu/Taonga:** Acknowledgement, protection, interpretation and enhancement of culturally significant sites.
- **Kaitiakitanga:** Reduction of pollution emissions (air, land, water, coast) and reliance on existing infrastructure (sewage, stormwater, energy)
- **Tikanga:** Sustainable buildings that are energy efficient and have ongoing monitoring and reporting in design, construction and operation.
- **Whakapapa/Matauranga:** Use of native, local, recycled and/or renewable resources that provide a connection to and protect/enhance the local landscape and Ngāi Tahu identity/integrity.
- **Whanaungatanga/Turangawaewae:** Providing a place where Ngāi Tahu are welcome, encouraged and proud to visit.
- **Mana/Mauri/Manaaki:** The ability of the building to manaaki manuhiri and provide a healthy, inspiring work environment for staff.
- **Rangatiratanga:** The expression of te reo, kawa, tikanga, history, identity, cultural symbols and artwork of Ngāi Tahu whānau, hapū and iwi.
- **Tohungatanga:** Cost effective and efficient construction and operation and the ability to provide a return on investment – balancing economic, social, cultural and environmental wellbeing.
- **Manawhenua:** Acknowledgement, recognition and provision for Ngāi Tūāhuriri kawa, tikanga, history and ongoing mana.

The assessment workshops established that the most important aspect of the House of Tahu development for Ngāi Tahu members were those related to cultural, hapū and iwi issues. This was followed closely by environmental and economic issues, while issues related to the wider community were seen as less important.

The workshop also found that the current designs and plans for the House of Tahu have the potential to deliver a culturally sustainable outcome for all performance metrics shown above with the exception of the acknowledgement of the manawhenua, Ngāi Tūāhuriri. Furthermore, kaitiakitanga, water and energy aspects achieved only average ratings and suggest potential for improvement.

Conclusions

The cultural sustainability assessment therefore concluded that the current proposed design for the House of Tahu could be significantly enhanced with particular regard to the following aspects:

- Manawhenua inclusion;
- Reduced environmental impact and reliance on infrastructure;
- Improved waterway connection, protection and onsite water management;
- Improved energy and resource efficiency;
- Enhanced biodiversity, with a focus on mahinga kai species; and
- More materials and design elements that confirm cultural identity and connection.

Specific recommendations and approaches for the above areas are included in Section 8 of this report.

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1 Te Kōrero Whakataki / Introduction

The House of Tahu is set up amongst us to nurture our people, to shelter our people and to serve our people. It is both the symbol of our identity as Ngāi Tahu Whānui and the Whare Whataraki of that which we together own. The poupou of the House of Tahu are the Papatipu Rūnanga of our people, each with their own mana and woven together with the tukutuku of our whakapapa. In them resides the tino rangatiratanga of Ngāi Tahu. Its collective voice is Te Rūnanga o Ngāi Tahu.

Excerpt of the Kaupapa Whakatūwhera and Kaupapa Whakakotahi of
Te Kawenata o Ngāi Tahu / The Charter of Te Rūnanga o Ngāi Tahu
(See Appendix A for a full version of Te Kawenata o Ngāi Tahu).

The House of Tahu project is intended to be an expression of Ngāi Tahu tangata located within the urban environs of Christchurch City. It is proposed by Te Rūnanga o Ngāi Tahu as a multi-functional tribal complex where Ngāi Tahu Whānui, their staff and manuhiri will be welcome, encouraged and proud to visit, gather and conduct their work (Te Rūnanga o Ngāi Tahu/Athfields Architects 2005).

The House of Tahu is located on the site of the former King Edward Barracks, within an entire central city block owned by Te Rūnanga o Ngāi Tahu and situated on the edge of the traditional Puari pā and mahinga kai site, adjacent to Ōtakaro (the Avon River) and surrounded on the remaining three sides by high rise developments. The proposed House of Tahu complex includes a tribal cultural centre, administrative and commercial office space, a 100 space underground carpark and extensive native landscaping.

Te Rūnanga o Ngāi Tahu having aspirations for a successful expression of Ngāi Tahu tangata, instigated a process of cultural review for the proposed development and designs. This process involved a review of tribal resource management policy and other information in relation to urban development and the House of Tahu and an assessment using the Mauri Model, a cultural based decision making framework. The assessment was aimed at aligning the House of Tahu with the policy and perspectives expressed by Ngāi Tahu marae, hapū, rūnanga and the iwi regarding input on other external developments of a similar nature through resource management processes. It was also aimed at identifying the relative importance of cultural aspects of the development with regard to economic, environmental and social considerations. The relative hierarchy established within the Mauri Model assessment was then used to determine the performance of the proposed House of Tahu designs against dimensions identified as cultural performance indicators from the policy review.

The policy review was undertaken by identifying key values, issues and aims from a range of Ngāi Tahu iwi environmental management plan documents, submissions, cultural impact assessments and survey reports and a small number of interviews with key tribal natural resource managers. Design and planning information for the House of Tahu was also reviewed to gain a background to the development and identify gaps in the current designs. The Mauri Model assessment was carried out in a series of workshops held at Te Waipounamu House in Christchurch on 4 and 5 December 2006. Participants in the workshops were identified on the basis of gaining representation from several groups, including design consultants, Ngāi Tahu Whānui, and Ngāi Tahu governance role holders and management staff.

A fuller background to the House of Tahu development and the cultural sustainability assessment, including information on the Mauri Model, is given in the following sections.

2 Tāhuhu Kōrero / Background

Since 2000, Te Rūnanga o Ngāi Tahu has been developing plans for the House of Tahu as a multi-functional tribal space within the heart of Christchurch City.

Importantly, the House of Tahu site is uniquely positioned in an area of high cultural, commercial and historical significance for not only Ngāi Tahu Whānui, but the wider Christchurch community. The development is located on the site of the former King Edward Barracks and situated on the edge of the traditional Puari pā and mahinga kai site, close to Ōtakaro (the Avon River), and nestled between Ihu Tai (Avon-Heathcote Estuary), Te Pātaka o Rakaihautū (Banks Peninsula), Te Waihora (Lake Ellesmere), Kā Pākihi Whakatekateka o Waitaha (The Canterbury Plains) and Kā Tiriti o Te Moana (The Southern Alps).

The King Edward Barracks was formerly owned by the New Zealand Military and along with the nearby Bridge of Remembrance, has a significant association with the World Wars of last century. The site also makes up part of a significant inner city block owned by Te Runanga bounded by Hereford, Cashel and Montreal Streets and Cambridge Terrace and including the site of the central Christchurch Police Station (see Figure 1 below).



Figure 1: Aerial View of the site showing adjacent buildings and Ōtakaro (to the East/left)

This history and connection of the site is important to consider in the context of this report, as the background to the House of Tahu project and the tribal link to the proposed site goes back many generations and can be seen as a natural part of the ongoing development of Ngāi Tahu Whānui.

2.1 Reclaiming a home – a significant tribal development

The Canterbury region is central to the history, culture and identity of Ngāi Tahu Whānui. The vast wetlands and plains of Canterbury, which became known as Kā Pākihi Whakatekateka o Waitaha, link the iwi to the earliest strands of tribal whakapapa, and along with Te Pātaka o Rakaihautū (Banks Peninsula) play a dominant role in the migration and settlement of Ngāi Tahu in Te Waipounamu.

Within the Christchurch area, it was Waitaha that first established the Puari settlement over 700 years ago on a large island like area between the modern day Carlton Mill Corner and the loop in Ōtakaro (the Avon River) near the King

Edward Barracks Site. In the 1500's Kāti Mamoe migrated from Te Ika a Maui (the North Island) and settled within the Canterbury Area, including at Puari, before spreading further south. This was followed by the migration of Ngāi Tahu from the North onto Banks Peninsula, into Canterbury and throughout the South Island during the 1700's. With the establishment of Kaiapoi Pā by Ngāi Tūāhuriri chief Turakautahi, Puari became an important trading post and mahinga kai. Later, Ngāti Huikai chief Tautahi established a kāinga (settlement) and utilised several other mahinga kai within the inner Christchurch city area, leading to his name being given to the contemporary Māori name for Christchurch, Ōtautahi (Te Rūnanga o Ngāi Tahu/Athfield Architects 2004; Tau 2001; Tau et al. 1990).



Figure 2: The settlement of Rakiwhakaputa, near Kaiapoi in 1848, showing the characteristic whata for storing food (Tau 2003 p33)

A network of traditional sites in and around the city remain of significance to the tribe, and in particular, Ngāi Tūāhuriri, despite historical struggles with the ongoing development of Christchurch City. As Tau (2001) states:

since the foundations of the town of Christchurch and their exclusion from its boundaries, Ngāi Tahu had faced the problem of making an urban place for themselves. Both Pākehā attitudes, and after the Second World War, urbanisation and the arrival of North Island Māori in the south made this difficult (p. 236).

In 1868, as the city of Christchurch was becoming established, and following the unsatisfactory allocation of reserves as a result of the Kemps Purchase, Hakopa Te Ata o Tu, Pita te Hori and others of Ngāi Tūāhuriri made unsuccessful claims to the Native Land Court to have a number of significant sites within the inner City, including Puari, put aside as mahinga kai and other reserves. A century later Ngāi Tūāhuriri aspirations for a marae to be built for Ngāi Tahu in Little Hagley Park, another traditional site in the central city, suffered a similar fate (Christchurch City Libraries 2006; Matunga 2000; Tau 2001, Tau et al. 1990).

This history is important to consider in relation to the House of Tahu project, as the development is an opportunity for the current generation to reclaim this urban space and develop a place that adequately balances and expresses the cultural, social, environmental and commercial values of the modern iwi, while recognising the foundations and traditions that have allowed the tribe to flourish, such as the settlement of the Ngāi Tahu claim – Te Kerēme. Such opportunities align closely with the vision of influence and development outlined within Ngāi Tahu 2025, particularly around the revitalisation of cultural landscapes, sustainability and building greater presence within the wider community. This history also outlines a clear need however, to provide for the connection of Ngāi Tūāhuriri to the inner city within the House of Tahu development.

2.2 House of Tahu Development Timeline

It was in 1995 that Ngāi Tahu purchased the King Edward Barracks (KEB) site and in July 2000 that the site was confirmed as the future permanent home of Te Rūnanga o Ngāi Tahu. This decision arose from discussions around the future development and possible sale of both Te Waipounamu House (Hereford St) and the KEB site in late 1999.

Te Waipounamu House was later sold, with a long term lease being taken up by Te Rūnanga while the House of Tahu project was developed. The Barracks which stood on the KEB site were then carefully dismantled and rebuilt in an alternative location, with the empty KEB site being developed into a carparking facility to gain a commercial return in the interim.

In early 2001, the first of a number of wānanga were held by Te Rūnanga to discuss design concepts and the aims for the site. The major issues identified at this initial wānanga included:

- ✕ Providing for whānaungatanga and manaakitanga through ensuring appropriate spaces for mihi, whakatau, and the manaaki of manuhiri as well as carparking and accommodation to enhance use and manaakitanga;
- ✕ Providing for tohungatanga and kaitiakitanga through incorporating the best in sustainable design;
- ✕ Ensuring representation of the 18 Papatipu Rūnanga and the character of the different takiwā and instilling appropriate kawa and tikanga;
- ✕ Considering and balancing costs, commercial returns and resale;
- ✕ The incorporation of native plantings/landscaping, carvings and artwork and the use of local stone (including pounamu) and native timbers; and
- ✕ Having clear separation but interconnectedness between the commercial/corporate office space and cultural space.

During their September 2001 meeting, Te Rūnanga elected six committee members, including a representative from Ngāi Tūāhuriri and Koukourārata, who were tasked to continue the development of the site, including working with Ngāi Tahu Property Ltd to develop the concept and design and incorporate historical elements of the area. After consideration of a historical report provided by Ngāi Tūāhuriri, it was decided that settlement and mahinga kai would be the preliminary themes for the development.

In 2002, the House of Tahu committee met monthly and worked on selecting and appointing the project architect, Ian Athfield. In November 2003, the Committee, in-conjunction with Athfield Architects, presented an overall concept to Te Rūnanga representatives and then to the Hui-ā-Tau at Oraka-Aparima.

The initial concepts identified that:

- ✕ Settlement, occupation and mahinga kai would be the themes of the development;
- ✕ The design would incorporate underground carparking, express a relationship with Ōtakaro / the Avon River as well as the wider city and utilise margins around the building for future commercial and residential properties; and
- ✕ Issues of shadowing, traffic flows and the relationship with the existing police buildings needed further consideration.

The feedback from Hui-ā-Tau was positive and led to the reappointment of the committee, followed by the eventual development of a project design brief in mid-2004. A copy of the design brief is provided in Appendix B. The general requirements of the House of Tahu outlined in the brief included:

- ✕ An obvious, generous and welcoming entry foyer as a space to greet and a space to welcome, with an external space large enough to cover the heads of 120 people and an upper area for visitors to observe from;
- ✕ Internal hui/wānanga area for the assembly of generally up to 100 persons but large enough to accommodate a maximum of 200 persons;

- ✘ A naturally lit boardroom to accommodate Te Rūnanga o Ngāi Tahu meetings;
- ✘ An area for Kaumātua and tribal Whakapapa on the lowest level and shelter and services for elders with wheelchairs;
- ✘ A space to encourage youth, a small relaxing area, and an onsite crèche or day care;
- ✘ A ground level café, tea rooms / dining facility and toilets with parenting space;
- ✘ Staff offices/workspace, meeting rooms and associated staff tea rooms;
- ✘ A storage space for archival documents and tribal whakapapa;
- ✘ Carparking for Ngai Tahu, staff, visitors, the public and commercial users;
- ✘ Extensive landscaping using locally sourced and appropriate native plants, with a mahinga kai theme, pounamu and other local stones, a water feature and sculpture (Te Rūnanga o Ngāi Tahu/Athfields Architects 2004).

Preliminary designs, timelines and costings were then developed from the brief in early 2005 and discussed in detail at two further wānanga held by Te Rūnanga in April and August. Major issues raised at these wānanga included:

- ✘ Costs, opportunity cost, potential returns and future site development;
- ✘ The appropriate involvement of Ngāi Tūāhuriri;
- ✘ Having kitchen facilities and/or café to cater for meetings and staff as well as the public;
- ✘ Appropriate and adequate carparking, access ways, tamariki areas, natural light and shadowing, and the location, type and number of ablutions; and
- ✘ The need to incorporate a KEB foundation stone to commemorate the sites former use.

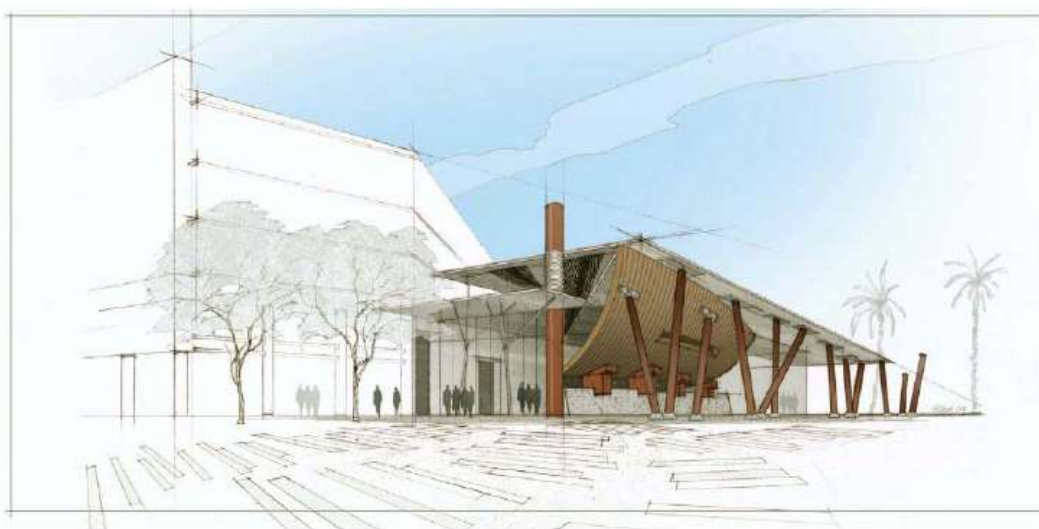


Figure 3: Drawing of the 2-storey tribal cultural centre in House of Tahu Development

The preliminary designs were then worked on further and finally approved in principle by Te Rūnanga at its September 2005 meeting. This allowed for an application for resource consent to be lodged and successfully granted by the Christchurch City Council in late 2005.

In November 2005, Te Rūnanga o Ngāi Tahu then supported the inclusion of developing a sustainable design brief for the House of Tahu that would place a greater emphasis on long term durability, use of materials, energy, water and waste issues, to align the development with tribal aspirations within Ngāi Tahu 2025, particularly around the natural environment. This was also seen as an important way to position Te Rūnanga o Ngāi Tahu as leaders in sustainability as well as making long term economic sense and achieving wider influence objectives (Potiki 2005). A full copy of this brief, entitled 'A Sustainable House of Tahu' is included as Appendix C.

In March 2006, Te Rūnanga approved the investment of capital funds to develop and build the House of Tahu and directed Ngāi Tahu Holdings Corporation to proceed with the development. This directive was given on the basis of a desire to realise a number of cultural and social returns alongside economic returns. The directive also included specific guidance to further incorporate sustainable design features into the development, stating:

The sustainable design principles of the building and landscaping will reflect and promote Ngai Tahu values and heritage. This will position Ngai Tahu as a leader in sustainable property development (Potiki 2006).

A project team involving staff from across the Ngāi Tahu Group was then established to guide the final design and implementation phase of the House of Tahu development. This project team, overseen by Ngāi Tahu Property, identified the need to undertake three further areas of research, including internal fit out design, House of Tahu utilisation and cultural sustainability. A scope for this work was developed by the project team which led to the cultural review process outlined in this report. A copy of this scope is included as Appendix D.

The cultural sustainability assessment was aimed at aligning the tribe's significant resource management experience and expertise to ensure that Ngāi Tahu cultural and environmental bottom lines were integrated into the House of Tahu development. The process was overseen by Toitū Te Whenua o Te Rūnanga o Ngāi Tahu, involved input from interested Papatipu Rūnanga representatives, Ngāi Tahu staff and project design consultants as well as the facilitation of a cultural design assessment workshop by Mahi Maioro Professionals, using a cultural values based decision making framework called the Mauri Model. A background to the Mauri Model is provided in Section 2.3 below. The methods employed in the assessment process are provided in Section 4.

2.3 The Mauri Model

The idea for use of the Mauri model to assess the House of Tahu against cultural sustainability values originated from the lack of clear consensus for what sustainability meant from a Ngāi Tahu perspective in relation to the House of Tahu development proposal. The intention of the cultural sustainability assessment was to provide input on Ngāi Tahu aspirations for the project. The challenge is that while Ngāi Tahu wants a sustainable development, there are no culturally based methods for assessing sustainability. Ngāi Tahu staff therefore initiated this cultural sustainability assessment and identified that the Mauri Model framework seemed well suited.

The potential suitability of the mauri principle as a measure of sustainability is the concept that provides the foundation for this decision making framework. The land, forests, waters, and all the life they support, together with natural phenomena such as mist, wind and rocks, possess mauri (Marsden, 1992). Mauri is the binding force between the physical and the spiritual (Durie, 1998), and is a holistic concept central to Maori thinking due to its representation in the genealogy of creation. Thus mauri is the conceptual basis chosen for the tool, called the Mauri Model.

New Zealand legislation indicates that sustainable development should be holistic and promote social, economic, environmental, and cultural well-being. To assess each of these well-being criteria using mauri as the measure of sustainability, it is necessary to identify physical representations of those dimensions for which the impact upon mauri can be evaluated. These representations have been identified as the mauri of the community (social), whanau (economic), ecosystem (environmental), and hapū (cultural) dimensions (see Figure 4 below).

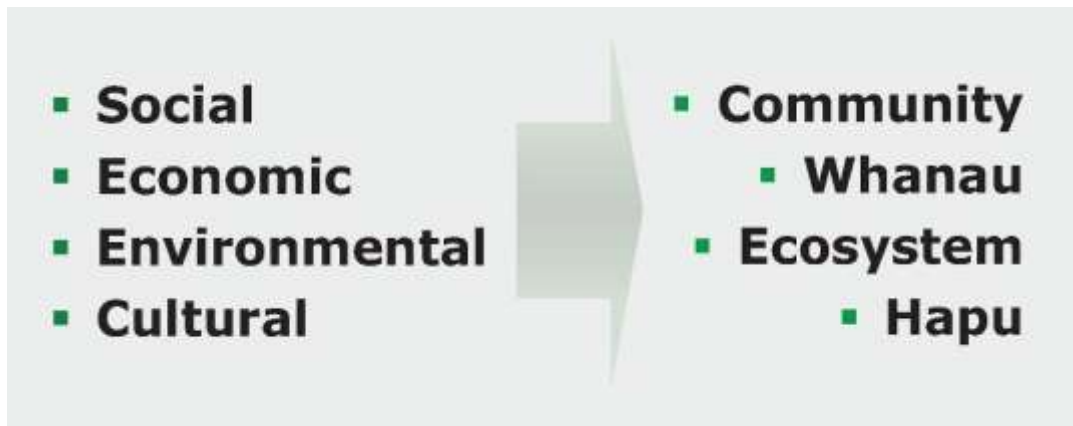


Figure 4: Local Government Act 2002 and Mauri Dimensions

It is also necessary to apply appropriate weightings to each of the four dimensions. Weightings reflect the relative importance given to social, economic, environmental and cultural performance. An equal weighting has little validity as the lack of bias between the dimensions assumes that they have equal importance in the real world. This is not a valid assumption.

Following international best-practice, a non-anthropocentric model hierarchy that reflects strong sustainability would have the economy as a subset of society, and society as a subset of the environment (Bosselmann, 2002). This hierarchy is logical as ultimately the human economy depends on the acceptance of the people and the existence of a physical environment within which to operate. However the hierarchy does not incorporate the cultural dimension identified in New Zealand legislation.

Both social and cultural wellbeing are components of society and in many countries where the dominant culture is also that of the indigenous people there is less potential for conflicting views. This is not the case for the House of Tahu project and the New Zealand context, which requires that the hierarchy of these two dimensions within the model be determined. The order used for this discussion is based on the order consistent with the knowledge base from which the mauri concept is derived.

A potential hierarchy is that all whānau are part of the community, and a community occupy a specific area by virtue of the manakitanga of the hapū who have authority in a particular rohe. The hapū identity is entirely dependent upon their environment of origin. This hierarchy has been examined further using the analytic hierarchy process (AHP) (Saaty, 1980). AHP has been used to determine the actual weightings of dimensions relative to each other in effect determining the hierarchy. To apply AHP it has been necessary to identify the characteristics of the four dimensions, in terms of mauri, in more detail. The metrics chosen as sustainability indicators require further analysis to ensure completeness and appropriateness for the option being assessed or for trend analysis over time.

Mauri is pervasive. Mauri is evident throughout the environment; it is an intrinsic quality of water and people; it is within groups of people like hapū and communities; and it involves the close interaction of individuals and groups with both the inner being and the external world. Mauri is not unlike the idea of a life force. Section 4.3 describes how the Mauri Model has been used in the cultural sustainability assessment workshops for the House of Tahu project.

3 Ngā Take / Objectives

The overall objective of the cultural sustainability assessment was to:

- ✂ Identify and integrate Ngāi Tahu cultural and environmental bottom lines to be incorporated into the design and development of the House of Tahu and to develop Ngāi Tahu's understanding of its standards for sustainable building design and operation.

The specific tasks, outcomes and timeframes for the assessment are outlined in Table 1 below.

Task	Outcome	Timeframe
1. Review existing Ngāi Tahu (Te Rūnanga & ngā rūnanga) policy and planning documents and identify any policies, issues, values that have been developed / identified for similar (urban / building development) issues	Preliminary list of key values collated and referenced providing an important link to 15+ years of resource management related work by the iwi	Mid-Oct 2006
2. Interview key tribal resource management people and selected external experts in relation to the policy review, and identify any further issues, values, design elements, or bottom lines for sustainability	List of key values confirmed and/or extended providing feedback on key bottom lines from key people within and outside of the tribe (a peer review process)	End-Oct 2006
3. Develop draft report of Ngāi Tahu values and cultural design elements for sustainable urban/building development	Key values and design elements for 'sustainable' urban building developments clearly identified	Mid Nov 2006
4. Hold hui with selected experts to discuss report findings, review HoT designs and ESD ratings and those of comparable buildings to identify both bottom line and priority design features of the HoT	Recommendations developed on the bottom lines and priorities for final 'sustainable' design of HoT	Early Dec 2006
5. Develop final report and recommendations for the final design of a culturally sustainable HoT	Final report outlining recommended sustainable design qualities and a Ngāi Tahu urban development policy/standard is submitted.	20 Dec 2006

Table 1: Tasks, Outcomes and Timeframes for the HoT Cultural Sustainability Assessment

4 Te Whakaritenga / Methods

4.1 Tribal Policy Review and Interviews

The first step of the cultural sustainability assessment involved a desktop exercise to identify existing policy, issues or values that have been developed for similar issues through the collective experience of the tribe in resource management related areas. This included a review of Ngāi Tahu natural resource management policy and planning documents as well as a number of tribal surveys, submissions and cultural impact assessments on resource management issues of relevance to the House of Tahu.

Following this, a focus group of Ngāi Tahu representatives with a range of resource management experience and tribal governance and management roles were identified and asked to take part in the assessment process. A copy of the letter of invitation for the assessment process is included as Appendix E. Those involved in resource management were interviewed in relation to the policy review and asked to identify any further issues or values in regards to urban / building developments. A copy of the interview form used in the assessment is included as Appendix F.

This feedback was collated and added to the information collected from the policy review and drafted into a preliminary list of key aims and cultural sustainability performance indicators for urban / building developments.

4.2 Design and Planning Information Review

Next a critical review of the historical, conceptual, design and planning information related to the House of Tahu was undertaken. This included a review of key Te Rūnanga o Ngāi Tahu minutes and decision papers, House of Tahu committee papers and presentations, design brief, resource consent, environmental sustainability design (ESD) and greenstar office design rating documentation and the preliminary design report. This review resulted in the development of the historical background given in Section 2.2, as well as a finalised list of aims and performance indicators that were used in the assessment workshop and included in a presentation outlining these indicators. This list of aims is included in Section 5.4, while the presentation is included as Appendix G.

4.3 Cultural Sustainability Assessment Workshop

The cultural sustainability assessment workshops were conducted over two half days in December 2006. The two day arrangement allowed 'bedding in' of the Mauri Model and the determination of the hierarchy from relevant importance of the dimensions on the first day, with focus group outputs driving the application of the Mauri Model within the decision making framework on day two. A copy of the agenda and a list of background information provided for the hui is included in Appendix H.

Therefore following mihimihi and whakawhanaungatanga, the Mauri Model was introduced via a powerpoint presentation by Mahi Maiora Professionals (see Appendix I for full copy of this presentation). The two focus groups then developed their own understanding of the model dimensions and determined their relative importance using an Analytic Hierarchy Process. This involved each group listing their own aims and definitions for the House of Tahu project under each of the dimensions and carrying out pair-wise comparisons for the Mauri Model dimensions. The comparison was conducted on the basis of mauri

although there was a tendency for some participants to try to make comparisons using the well-being criteria.

Definitions of each dimension were required from the focus group before the ranking process was commenced. The pair-wise ranking was carried out using a scale from -3 to +3 with zero for equal rating. The extent of comparative importance was defined as moderate (1), strong (2), and extreme (3). The scale is shown in Figure 5 below:

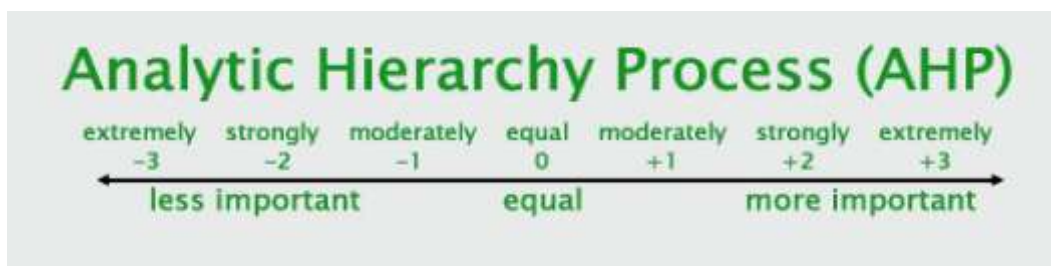


Figure 5: Scale of Relative Importance used in workshops

On day two, each focus group presented back their work from the previous days workshops in a one hour charette. A powerpoint presentation was then given on the set of cultural performance indicators for the House of Tahu project. Smaller focus groups then carried out an assessment of these indicators using the sustainability barometer (shown in Figure 6 below). These assessments allowed identification of areas of the project that required more work or fresh approaches.

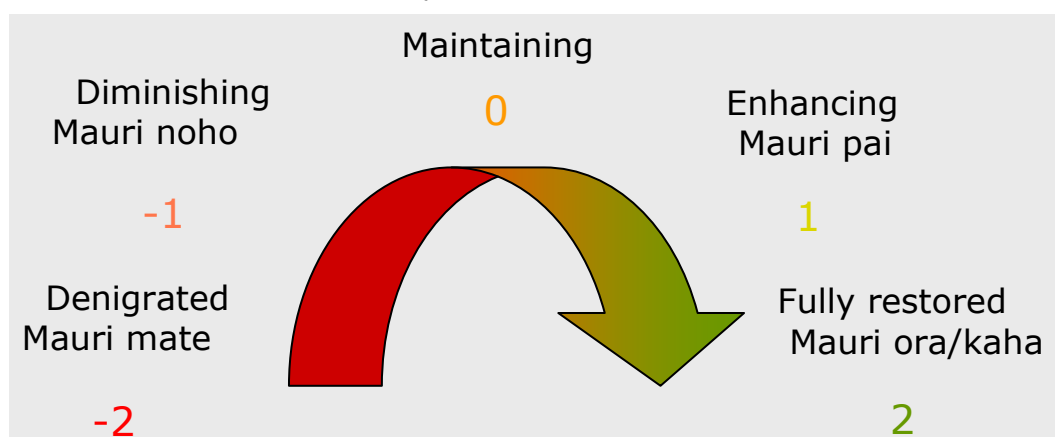


Figure 6: Sustainability Barometer used within the Mauri Model

The second day's workshops ended with discussion of the impact that the process had on participants and an explanation of the how this workstream would further develop going forward. Anecdotal feedback indicated that the participants were positive about the workshop process and that the additional insights it provided into the House of Tahu project identified several issues that required a focused effort to move the project forward.

5 Ngāi Hua / Results

5.1 Tribal Policy Review

Ngāi Tahu is well known for their environmental management work, particularly through their considerable involvement with resource consents and planning under the Resource Management Act 1991 (RMA). Through the collective experiences under this Act, and other key environmental statutes, the tribe has accumulated a wealth of knowledge in relation to major resource management issues affecting the Ngāi Tahu rohe.

In particular, Ngāi Tahu has lead the way in developing iwi management planning documents, the first of which was developed in 1990 prior to the enactment of the RMA. Combined, these documents contain the most comprehensive expression of critical cultural values, issues, bottom lines and aspirations in relation to the natural environment, and of specific relevance to Ngāi Tahu Whānui. They therefore offer an important reference point when dealing with any developments, including the House of Tahu. Cultural impact assessments (CIAs) and submissions on particular resource consent or planning issues and a number of tribal surveys that have focussed on environmental issues provide other sources of information of relevance to the House of Tahu development.

The following policy documents, CIAs, submissions and survey reports have therefore been reviewed to extract key policy positions and bottom lines that have some bearing on the House of Tahu development:

- ✕ Te Whakatau Kaupapa Canterbury 1990
- ✕ Te Whakatau Kaupapa o Murihiku 1997
- ✕ Te Taumutu Rūnanga Natural Resource Management Plan 2003
- ✕ Kāi Tahu Ki Otago 2005
- ✕ Te Poha o Tohu Raumati – Te Rūnanga o Kaikōura Environmental Management Plan 2005
- ✕ Te Rūnanga o Ngāi Tahu Freshwater Policy 2000
- ✕ Ngai Tahu 2025
- ✕ Te Rūnanga o Ngāi Tahu Submissions on the Christchurch City Wastewater Discharge and Ocean Outfall , Meridian Energy's Project Aqua Hydro-electricity Development for the Waitaki River, the Avon River, Christchurch Biodiversity and Urban Development Strategies and the Christchurch City Council Long Term Community Council Plan.
- ✕ Mō Tātou Tribal Needs and Ambitions, Tiaki Para Waste Management, and Christchurch Urban Development Surveys.
- ✕ Te Rūnanga o Kaikōura CIA on the Wairimu Subdivision.

5.1.1 Te Whakatau Kaupapa 1990

Te Whakatau Kaupapa is an important planning document in the context of the House of Tahu project in that it provides policies that specifically relate to both historical and contemporary urban development issues within Christchurch. Critically, this policy document also provides an expression of the key resource management issues for Ngāi Tūāhuriri as manawhenua of the Christchurch area, within which the House of Tahu is located.

Important policies within Te Whakatau Kaupapa of relevance to the House of Tahu project include those relating to marae development, water, mahinga kai, wāhi tapu and significant traditional sites within the central city area.

Marae Policy (p4.5)

This policy refers to the development of urban marae or Māori community centres and states that:

- New marae must have consent of those with turangawaewae in the relevant area. That is tikanga Māori.

The policy goes on to explain that

there is a difference between a marae which is the property of those with turangawaewae and a Community Centre for other Tribes [or hapū], but both can live together....failure to take account of Māori kawa could lead to land-use planning difficulties and potentially serious political problems if the requirements of inter-tribal custom are not observed by planners (p4.5).

This policy is particularly important in that it elucidates the importance of recognising and involving the manawhenua in the planning of the House of Tahu. While not a marae or Māori community centre, the House of Tahu will be a significant cultural building, therefore it is critical that Ngāi Tūāhuriri are involved and give manawhenua consent for the building of the House of Tahu. As stated, this is 'tika' and upholds the kawa of the iwi.

Water Policy (p4.19-4.21)

This policy positions water as a critical resource management issue for Ngāi Tahu stating:

The maintenance of water quality and quantity are perhaps the paramount resource management issues for Ngāi Tahu (Tau et al, 1990, p4.19).

The policy outlines strong opposition to the discharge of contaminants into waterbodies and supports the specific protection and restoration of waterways, wetlands, native riparian planting, the use of modern storm and wastewater systems, and the storage and reuse of excess water.

Specifically it states:

- That no discharge into any waterbody should be permitted if it will result in contamination of the receiving water.
- That the quality and quantity of water in all waterways be improved to the point where it supports those fish and plant populations that were sourced from them in the past and that these mahinga kai are fit for human consumption.
- That the disposal of effluent [be] onto land rather than into water.
- That investigations should be undertaken to determine if more modern technology would permit an improvement in the quality of any discharge.
- That the more efficient use of water be encouraged and that any water 'saved' be returned to waterways to enhance river flows.
- That methods for storing excess water, for example wetlands, be actively encouraged, and that wetland areas be created and expanded.
- That Councils should encourage land owners or occupiers to plant vegetation on riparian strips to prevent contaminated run-off into any wetland, waterway or lake.

Mahinga kai Policy (p4.24)

Mahinga kai was, and is central to the Ngāi Tahu way of life...the collection of mahinga kai, in its numerous forms, should continue to remain an integral part of their culture (Tau et al, 1990, p4.24).

This policy highlights the importance of mahinga kai to Ngāi Tahu and the desire of the tribe to see the mahinga kai species and ecosystems protected and restored, wherever possible, particularly those in and around waterways and wetlands. Again, it reinforces the pivotal importance of water based issues and wetland restoration.

Wāhi Tapu / Wāhi Taonga Policy (p4.25-4.28)

Wāhi Tapu ... are places held in reverence according to tribal custom and history. Some are important to the iwi, while others are important to individual hapū and whānau (Tau et al, 1990, p4-25).

This policy outlines the issues and positions associated with culturally significant sites such as urupā, pā, turanga waka and other archeological sites. In particular it discusses the importance of the appropriate involvement of Ngāi Tahu in both dealing with any accidental finds and in properly interpreting tribal history, culture and whakapapa within the landscape, including traditional place names.

Specifically it states:

- That urupā must be given full statutory protection and access to those sites must be guaranteed.
- That all archeological sites of interest to Ngāi Tahu Whānui be given formal protection, and that the right to modify them shall remain solely with Ngāi Tahu.
- That all archaeological sites which may reasonably be expected to be affected by any development activities are investigated.
- That all excavating and subsequent processing must be undertaken with the measure of cultural sensitivity that the sites merit and that tikanga Māori must be observed.
- That no burials should be disturbed. Should human remains be revealed, the excavation should stop immediately until approval for recommencement is given from the Rūnanga concerned.
- That any interpretation of Ngāi Tahu histories for either public or commercial reasons must be approved by the appropriate Rūnanga. This includes identification of traditional place names.

Ōtautahi Policy (p5.20-5.25)

This policy discusses the historical associations of Ngāi Tūāhuriri and Ngāi Tahu Whānui with Christchurch and explains that the idea of an urban space for Ngāi Tahu within the city is not new.

It lists the sites of importance within the central city area, including Puari, near the House of Tahu site, and explains how attempts by Ngāi Tūāhuriri tūpuna in the mid to late 1800s, to both claim and develop these were unsuccessful and met opposition within the establishing Christchurch community.

Other traditional sites of importance within the city discussed include Te Ihutai, Ōpawa, Ōtakaro, Ōtautahi, Ōruapaeroa, Little Hagley Park, Pūtaringamotu and Te Oranga. All of these sites were important mahinga kai and many were associated with wetlands or waterways that have since been degraded. This further highlights the central importance of water, mahinga kai and wāhi tapu/taonga issues for Ngāi Tahu.

The policy specifically states:

- That remaining wetland areas around Christchurch be maintained and expanded.
- That Ngāi Tūāhuriri Rūnanga should be consulted and actively involved in the management of all mahinga kai resources.
- That no further reclamation be allowed in the Avon and Heathcote Rivers, or their estuaries.
- That Ngāi Tahu access to, and rights to use resources from forests, parks and reserves be guaranteed. This includes materials such as pingao and harakeke.

5.1.2 Te Whakataurua Kaupapa o Murihiku 1997

Te Whakataurua Kaupapa o Murihiku, being written in a similar format to the Canterbury edition, contains largely consistent policy positions to those outlined above. Papatipu Rūnanga in Murihiku are currently looking at a review and update of this plan.

5.1.3 Te Taumutu Rūnanga Natural Resources Plan 2003

The Te Taumutu Rūnanga Natural Resource Management Plan was the first of a new generation of Ngāi Tahu iwi management plans created after 10 years of RMA experience.

The plan is mostly consistent with the major issues of manawhenua, water, mahinga kai, and wāhi tapu outlined within Te Whakataurua Kaupapa, but provides a number of more specific and more recent policy positions of relevance to the House of Tahu project. These include those relating to efficient water use, onsite stormwater and sewage treatment and disposal, building and earthworks, and native riparian and wetland restoration. The plan also introduces policy in relation to air discharges, global air issues and celestial darkness related to urban development.

The Taumutu plan confirms the paramount importance of water and water related resource management issues to Ngāi Tahu, as already highlighted in Te Whakataurua Kaupapa. It also specifically mentions wetland and native riparian restoration as a key objective in relation to water and mahinga kai issues. Specific policies of relevance to the House of Tahu include:

Water Quality and Use (p80-83 & 89)

- In the case of water abstractions and use, best practice and more efficient use of water is encouraged.
- Any water “saved” through efficient use is to be returned to waterways to enhance river flow, not re-allocated to other out of stream users.
- That water quantity in rivers and their tributaries is such that it improves and enhances water quality, wetlands, springs and mahinga kai.
- No discharge of contaminants, in particular effluent, into waterways.

Stormwater and Sewage Treatment and Disposal (p71-73)

- No discharge of treated sewage into waterways. Dilution of pollution is not acceptable.
- No direct discharge of stormwater to waterways and that greater consideration be given to the development of improved onsite swale systems. Stormwater discharge must be to land.
- Sewage, post-treatment, should be filtered through land, not discharged into water. Advocate the use of native riparian and wetland plants to minimise adverse effects on land from discharges.
- All efforts must be made to use the best possible treatment methods, particularly on-site before sewage is discharged.
- That the effects of effluent on water be minimised through the employment of onsite treatment and purification systems, that are upgraded as technology becomes available.
- That the duration of discharge consents not exceed the lifetime of the disposal or treatment system. All consents must be considered in terms of cumulative and long term impacts.

Building and earthworks activity (p74-75)

- Any earthworks activity near a wāhi taonga management or other areas considered culturally significant, including sites of past occupation and settlement, is only permitted providing appropriate consultation with the rūnanga has occurred and all protocols for accidental finds must be followed.
- Efforts shall be made to minimise damage of indigenous vegetation and any activities that result in significant damage to existing vegetation shall include provisions for replanting with indigenous vegetation.
- Earthworks activity must leave a buffer of at least 20 m from waterways.

Riparian and Wetland and Native Species Restoration (p90-92)

- All waterways must have sufficient buffer zones (minimum 20 m) to protect riparian areas and support mahinga kai.
- Advocate for the restoration of riparian zones, with indigenous species, where they have been degraded. Restoration should be a component of consent applications.
- Actively encourage restoration of wetland areas, with indigenous vegetation and endemic plants.
- Wetland creation and restoration should be a component of any sewage discharge scheme, in order to utilise the natural capacity of these systems.
- Advocate for habitat enhancement and the restoration and reintroduction of indigenous species.

Air and Atmosphere (p47-49)

- Any harmful contaminants that may threaten the life supporting capacity of air should not be discharged or kept to an absolute minimum.
- That any activity resulting in discharges to air evaluates and proposes measures to prevent adverse effects on public health.
- Work with and support other agencies to reduce emissions of greenhouse gases.
- Promotion of the use of indigenous planting projects (i.e. stands of indigenous bush) by industry to offset and mitigate industrial air discharges.
- Light suppression shall be used in any new subdivisions and that existing lighting is replaced with light suppression techniques, when such lighting needs to be replaced or upgraded.

5.1.4 Kāi Tahu Ki Otago Natural Resource Management Plan 2005

The first Kāi Tahu Ki Otago Plan was developed in 1995, being the second Ngāi Tahu iwi management plan created, but importantly the first within the RMA era. It contained key policy and issue statements in relation to consultation methods with manawhenua, wāhi tapu, water quality, mahinga kai (particularly kai moana), sewage discharge, native flora, fauna and habitat protection and restoration (Kāi Tahu Ki Otago 1995). The 1995 plan was revised and superseded by a new plan completed in 2005.

The 2005 plan sets out a number of specific policies that support and extend on the policies within Te Whakatau Kaupapa and the Taumutu Plan. In particular the cultural landscape policy outlined below provides clear guidance for some of the key bottom lines for cultural environmental issues to be provided for within significant urban developments, such as the House of Tahu.

The major policies of relevance to the House of Tahu are summarised below:

Wai Māori / Water (p59-63)

- No direct discharge of human waste and minimised discharge of other contaminants - require land disposal for discharges.
- Encourage use of new/alternative technologies, and on site stormwater treatment for the minimisation of sedimentation and discharge of contaminants.
- Promote efficient use of water including dual flush toilets and efficient showers and the reticulation and treatment of stormwater.

Wāhi Tapu (p63-64)

- The protection of wāhi tapu from inappropriate activities.
- Better interpretation of wāhi tapu via tangata whenua through good process and consultation.
- Use of archaeologist and Accidental Discovery Protocols and recording of all material Including earth disturbance and discharges.

Mahika Kai (p65-68)

- To restore and enhance biodiversity with particular attention to fruiting trees to facilitate native bird populations and by creating corridors and a linked network of habitats.
- Protect and enhance access to mahinga kai sites.

Cultural Landscapes (p69-73)

- Recognising the relationship of Ngāi Tahu in all developments.
- Protection, maintenance and enhancement of significant cultural landscape values.
- Identify and protect important sites and features (including vistas, marae, wāhi tapu etc) and require interpretation of historical heritage (by Ngāi Tahu).
- Encourage and promote the use of traditional place names and consultation with Ngāi Tahu over naming of new reserves, (streets, buildings) and areas.
- Require earthworks to avoid adverse impacts on natural landforms and areas of indigenous vegetation and soil structure and require re-vegetation (and monitoring) of disturbed sites.
- Subdivisions should take into account cultural values, visual amenity, water requirements, stormwater and wastewater treatment and disposal, landscaping and location of buildings.
- Require public foot access along lakeshores and riverbanks within developments.

Air and Atmosphere (p73-74)

- Require earthworks and discharges to consider impacts of dust and other airborne contaminants during development
- Encourage reduced vehicle emissions and promote indigenous planting to offset carbon emissions
- Promote clean forms of domestic heating
- Require light suppression techniques for new subdivisions

5.1.5 Te Poha o Tohu Raumati – Te Rūnanga o Kaikōura Environmental Management Plan 2005

The Kaikōura Rūnanga Environmental Management Plan was officially launched in early 2006, and is the most recent Ngāi Tahu iwi management plan to be developed. Its key policy and issue statements further support the major issues of significance to the House of Tahu, as outlined in the other plans already reviewed. However, being the most recent plan, and one that was developed within an area of escalating urban, residential and commercial development, it provides specific policy in relation to current urban development issues of direct relevance to the House of Tahu.

The plan therefore contains policy consistent positions on water, mahinga kai, wāhi tapu, coastal and cultural landscape issues. It extends the position on Atmosphere and Air by identifying a link between global and local air and climate issues and energy production, as well as the use of native species to protect natural darkness issues. Most importantly however, its extensive policy on urban issues including residential development, subdivision, building, and related sewage and solid waste concerns provides key guidance for the House of Tahu project. The desire to see alternative and/or onsite, land or wetland-based sewage and stormwater treatment and disposal systems, rainwater collection, greywater separation and recycling, and to reduce reliance on existing infrastructure are particularly important in the context of House of Tahu.

The key points from these policies are outlined below.

Atmosphere and Air policies (p43-48)

- To support and encourage efforts to reduce emissions of greenhouse gases.
- To support and encourage sustainable transport initiatives that decrease our reliance of fossil fuels and non-renewable sources of energy and address local and global impacts on the environment, human health and our communities as a result of greenhouse gas emissions.
- In some areas, Te Rūnanga o Kaikōura may recommend light suppression or limitation and or height restrictions on buildings to protect amenity values including celestial darkness.
- Any new development that may have high visual impacts on the natural or cultural landscape may be encouraged to use suitable screening devices, such as indigenous plant species and cultural materials and to work with the rūnanga to discuss and agree on appropriate design for the proposed development.

Urban Development Issues (p103)

- Protection of waterways, wetlands, wāhi tapu, wāhi taonga and other landscape values (including places names, history and traditions).
- Servicing requirements and the added pressures of development on existing infrastructure. Eg. Increased water demands from development.
- Appropriate and alternative disposal and treatment of stormwater and sewage.
- To encourage the adoption of waste reduction and cleaner production (looking for alternatives).
- Riparian margins and management.
- Monitoring of building performance. Eg. water, energy inputs, stormwater, wastewater/sewage outputs etc.
- Impacts of buildings on skyline and landscape.

Residential Development, Land Use and Building (p103-109)

- To require developments to establish new, or where possible use existing means of disposing of sewage.
- To avoid the use of water as a receiving environment for the direct or point source discharge of contaminants such as stormwater. Generally all discharge must first be to land.
- To avoid impacts on water and on land as a result of inappropriate discharge ...treatment and purification systems, including wetland systems ... must be part of any discharge activity.
- To promote wastewater management schemes that separate greywater and stormwater from blackwater and that incorporate the reuse / recycling of greywater and stormwater for non-hygienic purposes such as garden use and irrigation.
- To promote the use of rainwater retention / recycling tanks in any new subdivision, to store excess water for non-hygienic purposes such as garden use and irrigation.
- Accidental discovery protocols and monitoring agreements for wāhi tapu.
- To promote the use of buffer zones and covenants on titles to ensure preservation of areas of indigenous vegetation and other culturally important features and places.
- To reflect and protect the landscape values indigenous plants (eg. Ti kouka, harakeke) should be included in any large development proposals.

Sewage Disposal and Solid Waste (p117-119)

- To require that sewage discharge involves filtration through land and not discharge into water.
- To recommend where appropriate that wetland creation be a component of any sewage discharge.
- Te Runanga o Kaikoura is committed to the development of tools and techniques to reduce waste generation and maximise re-use, recycling and recovery.
- To encourage zero waste including composting and recycling programs in commercial and residential contexts.

5.1.6 Te Rūnanga o Ngāi Tahu Freshwater Policy 2000

The Ngāi Tahu Freshwater Policy was developed in 2000 and remains as one of only a handful of iwi policy statements created at a tribal level. This point reinforces the fact that freshwater issues are considered to be the most important tribal environmental concern.

The plan outlines integrated management, Ngāi Tahu involvement, water quality and quantity, mahinga kai and wāhi tapu as key issues and values in relation to freshwater. It also includes key policy statements in relation to:

- ✂ Damming, irrigation, point and non-point discharges and cumulative effects;
- ✂ Habitat management and restoration; and
- ✂ Access to, and enhancement of, mahinga kai.

The policy has been important in informing a number of Cultural Impact Assessments, submissions and positions taken on a range of key resource management matters including the opposition to Meridian Energy's Project Aqua hydro-development and the Christchurch City wastewater consents, which are outlined in greater detail below.

5.1.7 Ngāi Tahu 2025

Ngāi Tahu 2025 is a tribal development plan completed in 2001 and that involved extensive tribal consultation to identify, prioritise and plan the development aspirations for the tribe over a 25 year timeframe.

It includes goals and objectives for 9 key areas including:

- ✕ Te Ao Tūroa / Natural Environment
- ✕ Ko Ngā Whakapāpatanga / Tribal Communications & Participation
- ✕ Tō Tātou Ngāi Tahu tangata / Culture & Identity
- ✕ Te Whakaariki / Influence
- ✕ Te Whakatipu / Papatipu Rūnanga Development
- ✕ Whānau / Social Development
- ✕ Mātauranga / Education
- ✕ Te Kaitiakitanga me te Tāhuhu / Governance & Organisational Development
- ✕ Te Pūtea / Investment Planning

The Te Ao Tūroa/Natural Environment section explicitly identifies that Ngāi Tahu wish to exercise rangatiratanga and kaitiakitanga over wāhi tapu, mahinga kai and other taonga tuku iho, thereby influencing the impact of resource use and management methods in the areas of:

- ✕ Pollution, habitat degradation and species extinction;
- ✕ Water quality and quantity degradation;
- ✕ Intensified and changing land use; and
- ✕ Global warming and climate change (p9).

Key 25 year goals state that:

- The abundance of, access to and use of mahinga kai is increased.
- All waterways are enhanced and restored meeting cultural standards ... having indigenous riparian corridors, with water quality and quantity sufficient to support healthy populations of species of cultural significance.
- All wāhi tapu, mahinga kai and other taonga tuku iho are adequately and appropriately protected according to Ngāi Tahu values and interests.
- All Te Rūnanga o Ngāi Tahu assets are managed in a manner consistent with Ngāi Tahu environmental practices and policies (p11).

Importantly, the issues and objectives outlined in Ngāi Tahu 2025 serve to reinforce and clarify the major policy areas of water, mahinga kai and wāhi tapu identified within the rūnanga planning documents. Furthermore, Potiki (2005) states:

The House of Tahu development therefore provides an extraordinary opportunity to realise these elements of Ngai Tahu 2025 in a small but focused way. It has the potential to add significant value to the tribe, particularly if it is one of the most sustainable buildings in New Zealand. It also allows the tribe to bring together various concepts in the one building – people, history, location, culture and environment (p1).

5.1.8 Te Rūnanga o Ngāi Tahu Submission on the Christchurch City Wastewater Discharge and Ocean Outfall 2002

Te Rūnanga o Ngāi Tahu and the Papatipu Rūnanga with an interest in Christchurch City worked extensively on the Christchurch City Wastewater Discharge throughout the late 1990s and into 2000. The initial option chosen by the Christchurch City Council was to continue the discharge of tertiary treated sewage and wastewater to Te Ihutai / the Avon-Heathcote Estuary, along with significant treatment plant and oxidation pond upgrades, including the development of a wetland system. This option was largely influenced by Ngāi

Tahu opposition to the ocean outfall option and the policy position within Te Whakatau Kaupapa that required treatment and disposal involving land or wetlands.

The tribal submission delivered by Te Rūnanga o Ngāi Tahu to Environment Canterbury in 2002 put forward a pragmatic argument to keep the discharge within the estuary to protect the otherwise unspoilt mahinga kai / kai moana resource of Pegasus Bay. In particular, the provision for wetland development within the consent allowed the tribe to support the resource consent application.

Public opposition to the estuary discharge however, persuaded the Council to review its application and later apply for a consent to discharge to Pegasus Bay via an ocean pipeline. While this option included plant and pond upgrades it did away with the development of wetlands to further treat the discharge. With significant frustration, Ngāi Tahu did not oppose the ocean outfall application but asked for significant monitoring work to be undertaken to ascertain any potential risk to mahinga kai. The submission of Ngāi Tūāhuriri stated that the:

discharge of human effluent to any water body is considered by Ngai Tahu to be unacceptable or Tapu, and an affront to Ngai Tahu's Mana. Therefore this situation is tolerated and not supported in any manner other than the effluent has to go somewhere. For what is a sustainable mahinga kai/ kai moana resource to be utilised as a refuse disposal system by the community is viewed as a significant breach of Treaty of Waitangi principals (p2).

The position of the tribe in this matter is significant to consider in the context of the House of Tahu, as it supported the desire for land or wetland based sewage and stormwater treatment and the protection of water and water related mahinga kai. It compels Te Rūnanga to look at alternatives so as to not add to the significant problems it has with the Christchurch sewage system.

5.1.9 Te Rūnanga o Ngāi Tahu Submission on Project Aqua 2004

Te Rūnanga o Ngāi Tahu, in conjunction with Te Rūnanga o Arowhenua, Te Rūnanga o Waihao and Te Rūnanga o Moeraki worked on Meridian Energy's Project Aqua Hydro-electricity development planned for the Waitaki River between 2001 and 2004. This involved the development of a comprehensive 120 page CIA, site visits and numerous meetings. A number of critical concerns were raised with the development throughout this process, which were finally summarised and included in a submission by Te Rūnanga o Ngāi Tahu that stated:

We oppose the application by Meridian Energy Ltd[due to]:

- The possible effect on the Ngāi Tahu Rock Art sites adjacent to Project Aqua, especially during the construction period through truck movements, vibration, dust and climate change once, and if, the scheme is operational.
- The impact of Project Aqua on the lower Waitaki River flow regime, sedimentation and coastal processes along the South Canterbury and North Otago coastline, and the lower reaches of the river and its mouth/hāpua.
- The potential effects of land use change/activities in and around the lower Waitaki catchment that directly result from availability of reliable water supplies facilitated by the Project Aqua canal structure and water take.
- The effect of groundwater drop and sustainability of wetland areas adjacent to the Project Aqua scheme (p1).

This was a significant position taken by the tribe in that it further emphasised the critical nature of water, mahinga kai and wāhi tapu issues but also advocated for the need to look at alternative energy production systems other than hydro-development. It suggests that there is a desire for Te Rūnanga to see a decrease in the reliance on hydro-electric generation due to the unavoidable and irreversible impacts such developments have on critical cultural values within the natural environment. The position also compels Te Rūnanga to 'walk the talk' in relation to its own commercial developments.

5.1.10 Te Rūnanga o Ngāi Tahu Submissions on the Avon River, Christchurch Biodiversity and Urban Development Strategies and the Christchurch City Council Long Term Community Council Plan.

A number of tribal submissions focused on Christchurch City issues have been developed that provide important policy positions of relevance to the House of Tahu. These include Christchurch City Council strategies for the Avon River, biodiversity and future urban development as well as the Long Term Community Council Plan.

The submissions of Te Rūnanga on the Draft Avon River and Biodiversity Strategies, written in 2004, in-conjunction with Te Ngāi Tūāhuriri Resource Management Committee, Te Hapū o Ngāti Wheke and Te Taumutu Rūnanga, identified a number of critical issues for the tribe including:

- The proper and consistent use of the name Ōtakaro as required by the Ngāi Tahu Claims Settlement Act 1998, and other Ngāi Tahu place names
- The adequate protection and enhancement of the waterways, significant springs, wāhi tapu and native fish and bird habitats;
- The appropriate interpretation and education of Ngāi Tahu environmental and heritage values within the city (p2-4).
- The recognition of the ecological and cultural values inherent in the 'landscape'.
- The establishment of a more natural indigenous system that than which currently exists.
- A management strategy that encourages the use of indigenous plants and promotes indigenous ecosystems.
- Areas of cultural significance to Ngāi Tahu are recognised and enhanced through the planting of indigenous species and re-introduction of species of importance to Ngāi Tahu.

The submissions of Te Rūnanga on the Greater Christchurch Urban Development Strategy (UDS) and the Christchurch City Council Long Term Community Council Plan (LTCCP) completed in 2006 highlighted the issues of adequate acknowledgement and involvement of Ngāi Tahu in the future development of Christchurch. Both submissions were critical of the lack of recognition of the cultural and heritage values of Ngāi Tahu within Christchurch as well as the tribe's significant development aspirations in the region, such as the House of Tahu. The LTCCP submission stated that Te Rūnanga o Ngāi Tahu have a desire:

to see the City reflect the unique indigenous cultural heritage and values that Ngāi Tahu bring to Christchurch and Banks Peninsula.

A City that values and celebrates cultural diversity would ideally begin with the acknowledgement and reflection of the foundations of the bicultural nature of New Zealand, rather relegating Ngāi Tahu to the position of just one of a range of ethnic minorities.

A key element of cultural well-being for Ngāi Tahu is the recognition of our identity and belonging to this area of Te Waipounamu. To see this reflected in the Community Plan would be a good representation of strong and effective relationship between Ngāi Tahu and the City Council, and we look forward to future plans to see the changes that strong working relationship between our two organisations might bring (p1).

5.1.11 Mō Tātou Tribal Survey 2004

The Mō Tātou Tribal Needs and Ambitions survey was carried out in late 2003 and completed in 2004. The survey was posted to over 4000 registered Ngāi Tahu aged 16 years and older and focused on following key objectives:

- ✕ Gaining information on the needs and ambitions of Ngāi Tahu Whānui;
- ✕ Monitoring progress on the meeting of Ngāi Tahu 2025 outputs and outcomes over time; and
- ✕ Informing Ngāi Tahu policy and strategy development in a range of areas including whānau, education, environment, communication, culture and identity and rūnanga development (p8).

In particular, the survey quantified tribal perceptions about the state and health of the natural environment and the major environmental issues of concern. It found that:

- Older respondents were more likely to express concern about environmental issues, although there were higher levels of enthusiasm for increased involvement with the environment and associated activities evident in younger age groups.
- Illegal and/or over-fishing was of most concern to respondents, with poor water quality, air pollution and pest and weed management also featuring prominently amongst respondents' environmental concerns.
- Active rūnanga participants were most likely to share a significantly less positive perception of the state and health of the natural environment in Te Waipounamu (p9).
- Urban areas were perceived to be in the poorest state overall: [only] a third of the respondents felt that these areas were in a 'good' or 'very good' state (p30).

The Mō Tātou results further reinforce the position of water and mahinga kai issues as critical tribal environmental concerns. Importantly it also clarified the significance of urban development and urban restoration issues for the tribe.

5.1.12 Tiaki Para Waste Management Survey 2005

The Tiaki Para survey was undertaken by Te Rūnanga on Ngāi Tahu in conjunction with Manaaki Whenua Landcare Research in 2005. It was focussed on gathering Ngāi Tahu values and perspectives on waste management issues, with a particular focus on the treatment, disposal and reuse of sewage wastewater and biosolids. The survey was sent to over 500 registered Ngāi Tahu tribal members aged 18 and over and received 82 responses.

In terms of the options for the management of sewage, not surprisingly 99% of respondents disapproved of raw sewage being discharged to water. Other options that met with high levels of disapproval included disposal of treated effluent to freshwater (87%), recreation areas (78%), marine environments (70%), and food crops (61%). On the other hand, options with highest levels of approval include waste used for generating electricity (89%), and application of treated effluent to forestry (58%), wetlands (55%) and a non-food crop (49%) (Baker, Ahuriri-Driscoll, Langer, Goven, Ataria & Pauling 2005).

In relation to the most preferred sewage system there was a significant trend towards using individualised and self contained systems, such as composting toilets, clear water systems or greywater recycling systems. While the majority of people (63%) were currently using and/or connected to a centralised flush toilet, council system, the respondents indicated that if given a choice they would prefer something different, with individualised systems being most favoured. Preference for centralised systems dropped from 63% to 35% (a net change of -28%), while those preferring individual systems rose from just 4% to 28%.

Furthermore, of those who currently had an individual system only 1 preferred to change to a central system (Pauling, Ataria & Tremblay 2005). This result is shown in Figure 7 below:

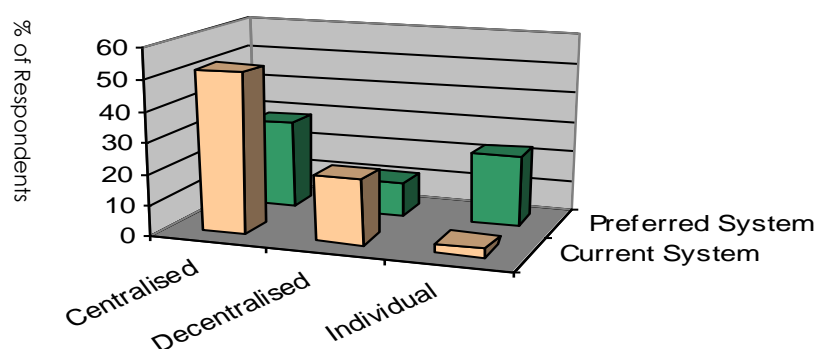


Figure 7: Current and Preferred Sewage Systems for Ngāi Tahu (Pauling, Ataria & Tremblay 2005)

5.1.13 Christchurch Urban Development Survey 2006

As part of its work on the Christchurch Urban Development Strategy, Te Rūnanga o Ngāi Tahu were involved with a survey of Ngāi Tahu individuals living in Christchurch which attempted to ascertain Ngāi Tahu perspectives on the future development of Christchurch. In particular the study asked a number of questions about the importance of protecting water quality, protecting and enhancing native biodiversity and investing in alternative water, waste and energy solutions for Christchurch. The survey specifically mentioned greywater recycling, waterless toilets, composting waste, and solar and wind power as alternative solutions.

The survey, which was completed by 42 respondents, found that 100% considered that water quality was very important to protect, followed by 86% who stated that alternative water, waste and energy solutions were very important to invest in, and 79% who answered that protecting and enhancing native biodiversity was very important. Not one respondent felt that these issues were not important. This is shown in Figure 8 below:

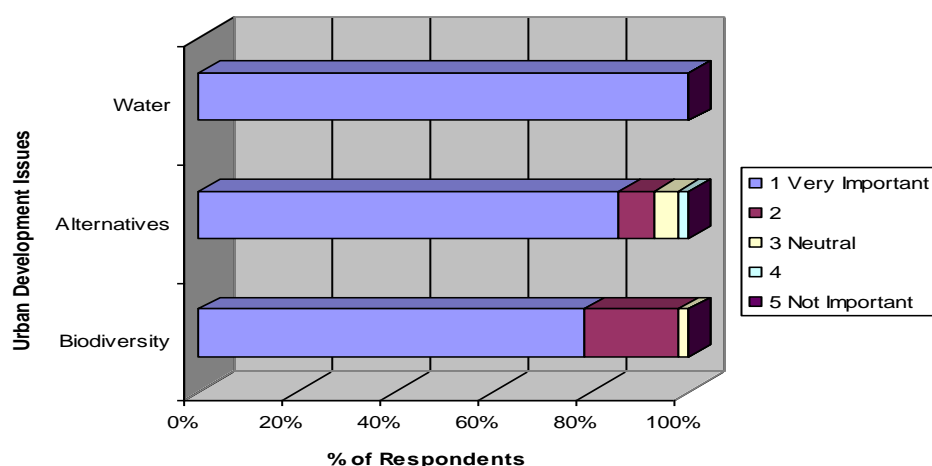


Figure 8: Importance of Urban Development Issues for Ngāi Tahu (Pauling 2006)

The result around water, waste and energy alternatives was both significant and surprising as the respondents considered this of greater importance than native flora and fauna restoration, which has been shown through the policy review to be a major tribal environmental concern. Together with the Tiaki Para survey results in relation to alternative sewage systems, the result above both supports and clarifies the desire of Ngāi Tahu to see the implementation of alternative, low impact and more sustainable systems for water use, waste treatment and energy generation.

5.1.14 Cultural Impact Assessment for the Wairimu Subdivision

The Wairimu Subdivision is a current initiative being proposed by Ngāi Tahu Property to develop 28-35 house lots on Wairimu Station, a 700 hectare property north of Kaikōura. To obtain information on the actual and potential effects that the proposal may have on the values and interests of the manawhenua, Ngāti Kuri, and the ways to avoid, remedy and/or mitigate these, Ngāi Tahu Property sought input from Te Rūnanga o Kaikōura and commissioned a Cultural Impact Assessment (CIA).

The CIA involved a review of existing information, an on-site investigation and an archaeological assessment of the proposed site. The final CIA report contains background information on historical, legislative, planning and policy issues as well as an outline of both positive and negative aspects of the proposal. The aspects identified through, and contained within, the CIA again provide guidance for the House of Tahu development. They are particularly relevant to the House of Tahu, being identified within an urban building development with significant infrastructure, water, waste, energy, biodiversity and wāhi tapu issues. Furthermore, the development is being led by Ngāi Tahu Property and is a very recent ongoing project.

Positive aspects of the development identified by Te Rūnanga o Kaikōura include:

- ✕ Early Consultation;
- ✕ Covenanting areas of native bush;
- ✕ Low density housing; and
- ✕ Ngai Tahu Property as the owner and developer (p21).

Concerns with the development include:

- ✕ Adequately providing for the relationship between Ngāti Kuri and the Wairimu area;
- ✕ Cumulative environmental and social effects of subdivision including greater demands on water resources, increased sewage and stormwater discharges and future affordability of land for whanau; and
- ✕ Effects on cultural heritage values of wāhi tapu and wāhi taonga, waimāori (freshwater), native biodiversity, mahinga kai, coastal areas and natural landscape features.

To address these issues the CIA put forward a number of recommendations and processes to ensure the rūnanga have an ongoing role in the project and that benefits are realised locally through formal agreements, setting aside of reserves for Ngāi Tahu use, covenanting, internal policies and future employment and management opportunities. Further to this the CIA made specific recommendations in relation to culturally acceptable sustainable design features of the subdivision, stating that Ngāi Tahu Property should:

Demonstrate creativity, innovation and sustainability in project design and development, and strive for standards beyond local authority requirements. Examples include:

- Rainwater storage tanks (that are integrated into the landscape)
- Waste minimisation and recycling
- Energy efficiency
- Innovative waste treatment – e.g. reusing grey water
- Landscaping that focuses on “living with the natural landscape”
- Best practice stormwater management
- Allowing only native plants to be used for landscaping/ gardening, ideally species that are suited to the coastal location of the property (p35).

5.2 Interviews with Tribal Natural Resource Managers

Results from the interviews undertaken within the cultural sustainability assessment show consistency with the major policy issues, positions and aspirations already outlined. Those interviewed all had extensive experience in dealing with urban development issues including major subdivision consents involving sewage, stormwater, mahinga kai and wāhi tapu issues, and considered urban issues to be extremely important to deal with. Major issues and bottomlines identified from interviewees included:

- Early and targeted consultation with Papatipu Rūnanga, including a CIA, hui, site visits, and ongoing rūnanga involvement, during implementation (e.g. plantings, naming, opening) to recognise the relationship of tangata whenua with the particular site.
- The use of traditional place names (e.g. road, building, office and room names) and accidental discovery protocol's for wāhi tapu.
- Enhancing the quality of the site e.g. native plant species to restore.
- Setting aside/retaining reserves with opportunities for cultural use.
- Designing in connections with natural features such as rivers, maunga, awa, coast and bush.
- Decreasing reliance and impact on infrastructure through on site, self contained systems, energy efficiency, zero waste policies, stormwater and sewage.

Specific environmental considerations identified in addition to the above included:

- Wastewater - culturally appropriate disposal methods, landbased.
- Onsite stormwater treatment (e.g. vegetation swales, wetlands).
- Enhancing wildlife values including native birds and fish.

Specific cultural considerations identified included:

- Designed, so cultural values and sites are not affected
- Any cultural interpretation should be provided/authorised by rūnanga
- Reclaiming cultural landscapes, using native flora, pou whenua, and maintaining/enhancing views to/connections with landscape features
- Ongoing involvement in development eg. opening ceremonies "to stamp your mark on the place and take ownership, so we feel like it is ours"

Specific social considerations identified included:

- Improving public access through development, to waterways/coast/bush,
- Protecting and highlighting the things that the local community find important and that they identify with – "the things the make a place feel like home" "Developers are never quite going to feel the way we do about our home – so its our job to advocate for this"

Specific economic considerations identified included:

- Return/retention of reserves/areas for Ngāi Tahu use
- Jobs and employment opportunities and access for tribal members
- Economic return for the iwi
- Supply of cultural materials removed during construction

A summary remark made by one of the interviewees neatly highlighted a major expectation of the House of Tahu development for tribal members, stating:

We are looking for leadership from Ngāi Tahu, so that rūnanga can then recommend to other developers the best way to do things – it's a credibility thing – it's about setting a standard.

5.3 House of Tahu Design and Planning Information Review

The review of design and planning information for the House of Tahu revealed critical aspirations identified through tribal wānanga and hui (see Section 2.2) as well as a number of questions about the current design of the House of Tahu. These questions are outlined below:

Water

- What is the significance of the water feature at the rear of the building?
- Where are the three streams representing the three strands of tribal whakapapa?
- Can the water features be tied to the Otakaro physically or symbolically?
- What material is the HOT roof and what impact do these materials have on runoff?
- Could a garden roof be installed on the tower block?
- Could building runoff be captured and treated through stream/wetland?
- Are there any performance specifications for the reed bed filtration system?
- Are vehicle surfaces pervious or impervious where exposed to rainfall?
- Greater focus on water issues including onsite treatment of stormwater, composting toilets and/or the reuse of greywater into toilets to eliminate the use of freshwater for flushing?

Landscaping and Biodiversity

- Explicit incorporation of key mahinga kai plant species or species to attract native birds in landscaping?
- Do the trees have a cultural interpretation?
- Can excavated soils be used to create contour on the site?
- Connection to gardens and Otakaro? Sight lines?
- How does landscaping enhance outdoor environment in terms of prevailing winds and rain in winter and creating breeze in summer.

Waste and Energy

- Have composting toilets been considered? And if not are low flush toilet systems being used?
- Is water reuse adopted ie rainfall – handbasins – toilets - ?
- How does the design avoid waste heat and light emissions?
- Greater consideration of onsite energy generation?

Building Structure, Material and Performance

- Natural light and external views – connections to maunga, awa etc?
- Are the vertical motor operated louvers necessary and practical?
- Greater use of culturally significant building materials, pounamu, serpentine, totara?
- Possibility of using recycled building materials, eg. Native timber doors and etched windows from current Te Waipounamu House?
- Why is sustainably harvested indigenous timber too hard?
- Incorporating more cultural symbolism into the building structure, ie: louvres representing tukutuku panels, roof shapes representing whata?? Pouwhenua etc??
- Could the crown façade use a roof garden to depict cultural perspective and could other building features better depict cultural depth and artforms?

5.4 Cultural Sustainability Aims and Indicators

The policy and information review and interviews revealed the following list of cultural sustainability indicators for the House of Tahu. These were provided to participants of the Cultural Sustainability Assessment workshops.

Environmental Dimension

- ✕ Protection and enhancement of significant waterways, particularly the Ōtakaro/Avon River
- ✕ Protection and enhancement of significant native flora and fauna, particularly mahinga kai species.
- ✕ Efficient, effective and acceptable use and/or reuse of water (including mainswater, rainwater and grey wastewater)
- ✕ Efficient, effective and acceptable treatment, reuse and/or disposal of stormwater, wastewater, sewage and solid waste
- ✕ Efficient, effective and acceptable use of energy, including considerations for energy conservation and on site generation.
- ✕ Efficient, effective and acceptable use of materials, particularly accredited sustainably harvested native and/or local (to the rohe) timber, stone etc
- ✕ Recognition and provision for air and atmosphere issues, including enhancing natural ventilation and light, minimizing air, noise and 'natural darkness' pollution.

Cultural Dimension

- ✕ Acknowledgement of the kawa, tikanga and history of the manawhenua (Ngai Tahu), particularly in relation to naming of rooms, buildings, monitoring construction and having an ongoing presence and role in the building.
- ✕ Acknowledgement, protection and enhancement of culturally significant sites in construction and operation (wahi tapu/taonga)
- ✕ Whanaungatanga and Turangawaewae - Providing a place where Ngai Tahu whanui are welcome, encouraged and proud to visit, gather and work in.
- ✕ Mana and Manaakitanga – having a place and facilities to appropriately greet, welcome and meet ope/manuhiri, as well as providing for tribal members, both young and old, including entrance/whakatau, hui/meeting rooms, kitchen/dining areas, special rooms/spaces (kamatua/tamariki/parents/whanau), carparking, library/archiving (particularly whakapapa/claim) and accommodation.
- ✕ Rangatiratanga and Tohungatanga – Expressing leadership and skill through creative and sustainable design and development and providing a place to hold and show taonga, cultural symbols (such as whata, tukutuku) and the artwork of tribal members

Social Dimension

- ✕ Providing educational opportunities for the community about Ngai Tahu environmental and cultural values, history and aspirations, particularly in relation to Christchurch, through interpretation.
- ✕ Overall lessening of reliance and impact on existing infrastructure (sewage, transport, water etc) through sustainable design
- ✕ Providing a positive example for the community of culturally based sustainable design and development, through interpretation of 'sustainable' features and the ongoing monitoring and reporting of building operation (energy use etc)
- ✕ Providing additional commercial, community and cultural services including café, crèche/child day care, gallery and leaseable office space
- ✕ Acknowledging and providing interpretation about the wider history of the area/site, including its history as Puari and King Edward Barracks.

Economic Dimension

- ✕ Effective use of resources during construction and operation
- ✕ Efficient operational costs through sustainable design
- ✕ Providing employment opportunities
- ✕ Providing a return from commercial activities on site

5.5 Cultural Sustainability Workshop

5.5.1 Analytic Hierarchy Process

The two focus groups for this exercise were generally made up of Ngāi Tahu whānui and the project consultants and client representatives. Each focus group had a facilitator and carried out successive pair-wise comparisons of the mauri of taiao / ecosystem, hapū / iwi, community, and whanau / family. These pairwise comparisons used the scale shown previously in Figure 3 (p14), and once the pair-wise comparisons were complete, totals were determined for each dimension. These totals provide an indication of the relative importance of each dimension.

The results from the focus groups are provided in Tables 2 and 3 below:

Mauri	Taiao / Ecosystem	Hapu/Iwi	Community	Whānau/Family	Sum
Taiao	0	-1	+2	+1	+2
Hapu	+1	0	+3	+1	+5
Community	-2	-3	0	-1	-6
Whanau	-1	-1	+2	0	0
Ranking	2	1	4	3	= +1

Table 2: Pair-wise Comparison using Mauri for Group 1- Ngāi Tahu Whānui

Mauri	Taiao / Ecosystem	Hapu/Iwi	Community	Whānau/Family	Sum
Taiao	0	+2	+2	+1	+5
Hapu	-1	0	+1	-1	-1
Community	-2	-1	0	-1	-4
Whanau	0	+1	+1	0	+2
Ranking	1	3	4	2	= +2

Table 3: Pair-wise Comparison using Mauri for Group 2 – Design Consultants

A number of observations can be made from the results of these workshops. These are provided below:

- ✂ The sum total for all dimensions is one indication of overall ranking consistency. In this regard, Group 1 performed well, where as the Group 2 result (+2) indicated a more fluid understanding of relative importance of dimensions.
- ✂ The maximum range between dimensions is 18. The ranges achieved for the two focus groups indicate both their willingness to differentiate between the dimensions as well as the degree of differentiation. In this regard Group 1 (range = 11) differentiated slightly more strongly than Group 2 (range = 9).
- ✂ However the focus groups achieved these outcomes for different dimensions and also had different rankings in their results. This outcome identifies a lack of alignment between the understanding of the priorities for the House of Tahu project on the part of the consultants on one hand and the expectations of Ngāi Tahu whānui on the other. Note that the significant difference related to the importance of the hapū / iwi dimension or the cultural well-being criterion.
- ✂ In relation to the House of Tahu project, the mauri of the hapū / iwi was considered paramount by Ngāi Tahu whānui, whereas the consultants ranked this dimension as very similar to the mauri of the community. It is noted that one sticking point for the development has been the unresolved support for the project by all of the Papatipu Rūnaka and in particular Ngāi Tūāhuriri.

- ✂ The relative importance of hapū differs significantly for each group. Note this reflects the cultural dimension. For the consultants this was considered moderately more important than community where as for Ngāi Tahu, recognition of the hapū dimension was extremely more important based on these two dimensions being their poles, that is 11 points apart.
- ✂ The two focus groups were consistent for community but it must be asked do the project design priorities reflect this?
- ✂ The point differential between community and whanau was consistent for both groups (+6), indicating similar relative importance for both focus groups.
- ✂ The point differential between community and ecosystem was also consistent for both groups (+9 and +8) indicating similar relative importance for both focus groups, and reinforcing the higher importance of the mauri of the ecosystem.
- ✂ The consultants group considered the whanau and ecosystem aspects to be most important with the ranking reflecting acknowledgement of stronger sustainability ethics similar to the Earth charter thesis.
- ✂ The Ngāi Tahu group believed conversely that the ecosystem and hapū were not distinguishable at times due to their interchangeable characteristics within the indigenous paradigm.

From this assessment, preliminary conclusions indicate that the design process and output has not fully delivered on hapū expectations. It is also possible that whānau (economic) considerations may have been overstated somewhat at the expense of hapū.

It is possible to normalise the results from the AHP to determine a percentage weighting for the four mauri dimensions. This is shown in Table 4 below:

Group 1	Hapū	Taiao	Whanau	Community
Score	+5	+2	0	-6
Normalised	14	11	9	3
Percentage	38%	30%	24%	8%
Group 2	Taiao	Whanau	Hapū	Community
Score	+5	+2	-1	-4
Normalised	14	11	10	5
Percentage	35%	28%	25%	12%

Table 4: Percentage Weighting of Mauri Dimensions for Focus Groups

If these results are expressed in terms of the wellbeing criteria from which the Mauri Model derives the priorities identified in the workshop provide significant insights as shown in Table 5 below:

Group 1	Cultural	Environmental	Economic	Social
Percentage	38%	30%	24%	8%
Group 2	Cultural	Environmental	Economic	Social
Percentage	25%	35%	28%	12%

Table 5: Percentage Weighting of Mauri Dimensions for Focus Groups

Both groups made some interesting ranking decisions that are reflected in Table 5 and discussed below.

Group 1 demonstrated the following traits in their analysis:

- Rankings within dimensions matched overall rankings well
- Ranked Taiao and Whanau equal against Hapū
- Ranked Taiao and Hapū equal against Whanau

Group 2 demonstrated the following traits in their analysis:

- Ranked hapū and community equal against both of the other dimensions!
- Ranked whanau and ecosystem equal, however the reciprocal relationship showed moderate differentiation.
- Ranked Hapū and whanau equal against community.

Note that the Group 2 dimension weightings are all higher at the expense of cultural well-being. These traits bore some resemblance to the overall ranking, however the equal rank of the hapū and community suggests an inadequate understanding of the cultural dimension in this project.

5.5.2 Charette Presentations

The charette presentations provided the opportunity for the focus groups to expand the rationale for their decisions regarding the relevant importance of the dimensions. The charette presentations are provided as delivered:

Group 1

Hapū (Cultural)

38%

- Recognition of manawhenua – engagement and consultation, kawa, tikanga, purakau
- Upholding the cultural integrity of the site/area – history, place names, wahi tapu/taonga
- Interpretation and memorials to express history etc
- Building in wider Ngāi Tahu identity and representing all hapū (eg. pou?)
- Clarification of purpose
- A place that is welcoming, engaging and able to manāki the whānui
- A place that makes a statement about the iwi but that upholds the mana of all the marae and encourages connection back to the ahi kaa.

Ecosystem (Environment)

30%

- Walking the talk and setting high (Ngāi Tahu) environmental standards
- Harmony / Reflecting / Reclaiming the cultural landscape
- Composting toilets, alternative energy sources, recycled materials, water reuse to reduce costs and impacts on infrastructure (that are often unacceptable eg. sewage discharge to water, hydropower and impacts on native fish, flow etc)
- Use of natural materials and elements (including passive solar, shading, natural light, views, stone and timber)
- Native flora and fauna, encouraging native birds and wider corridors
- Not adding to air, water and /or land pollution

Whanau (Economic)**24%**

- Pragmatic but with impact – but not pretentious or excessive (like pounamu?)
- Intergenerational costs, opportunities and liabilities
- Balance between utilizing 'prime' real estate and open space – gaining a return and enhancing the cultural landscape / environment
- Communication with the tribe
- Setting standards to create leverage with other developers

Community (Social)**8%**

- Manākitanga – being able to manāki manuhiri – the absolute importance of the entrance
- Representing the bicultural 'treaty' relationship between Maori and Pākehā
- Providing an experience to the community (and tourists) – café, gallery
- An icon for the city – a long standing and important building (in the league of the cathedral)
- Reflecting and educating of Ngāi Tahu culture, history and identity

Commentary associated with Group 1 presentation included a statement that;

INTEGRITY OF THE CULTURAL DIMENSION IS PARAMOUNT

The rationale given for this was; *Why do it unless it is for the cultural reason?*

Group 2**Ecosystem (Environmental)****35%**

- Responding to natural rhythms of the environment
- Enhancing the ecology (native flora and fauna) of the site and beyond
- Connection to important aspects of the environment – Ōtakaro / river / water / flora / fauna
- Minimise cost to the environment to build and building
- Minimise cost to the environment to operate the building

Whanau (Economic)**28%**

- Economic return
- Enhancing the capital and mauri of Ngāi Tahu whanau
- Enhancing pride and identity of Ngāi Tahu whanau
- Provide a place for Ngāi Tahu to grow the wealth and core values of Ngāi Tahu – both tangible and intangible

Cultural (Hapū)**25%**

- Have cultural practices / issues been considered?
- Are these demonstrated in the building & landscape?
- Is the story of Ngāi Tahu told? Recognition of traditions?
- Mahinga kai and settlement – are these demonstrated or reestablished?
- Is there restoration of the settlement and mahinga kai?
- Wider context of Maori, NZ and the world

- Enhancing Ngāi Tahu place in and connection to the community
- Ngāi Tahu values become part of the wider community
- Changing ideas of Ngāi Tahu in community
- A place/path for the community through the site/place of Ngāi Tahu
- A place to look forward and back
- Exemplar of how resources are used and positive impact of city
- Recognition of the history of site

The charette exercise also required that each focus group indicate their final ranking of dimensions and comment on this outcome. The ranking for Group 1 is provided here and graphically represented in Figure 9.

Group 1 Ranking: Hapū Taiao Whanau Community

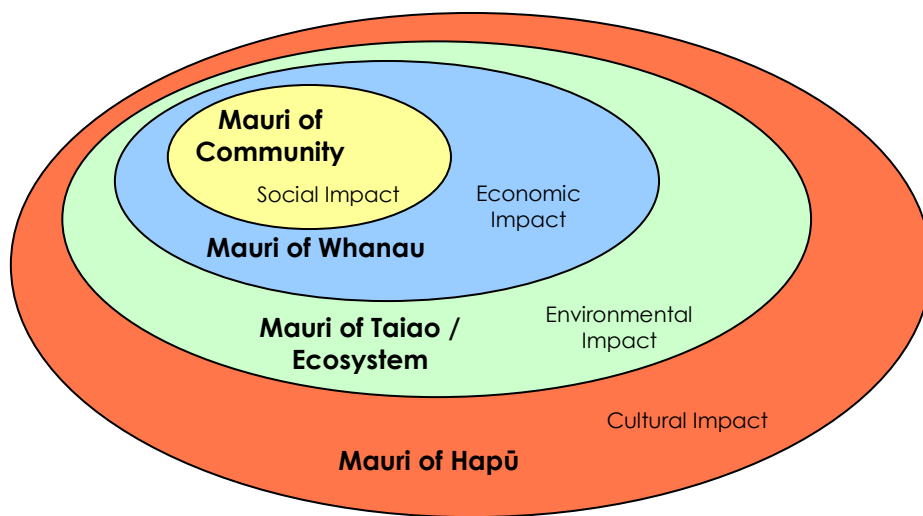


Figure 9: Group 1 Rankings represented as a series of concentric circles

The ranking for Group 2 is provided here and graphically represented in Figure 10.

Group 2 Ranking: Taiao Whanau Hapū Community

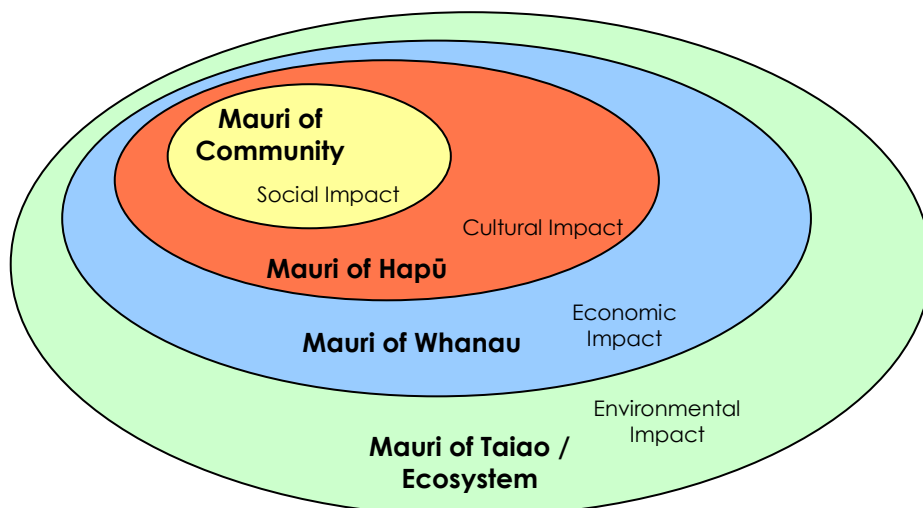


Figure 10: Group 2 Rankings represented as a series of concentric circles

5.5.3 Cultural Performance Indicators for House of Tahu

Following the charette presentations on definitions of the dimensions and the ranking of these, an overview of the development proposal and historic policy documents was provided. This presentation (see Appendix H) identified a preliminary list of cultural performance indicators.

The key points from the presentation were;

- ✕ The House of Tahu development must WALK the TALK
- ✕ Ngāi Tahu commitment to demonstrating environmental sustainability
- ✕ This is in addition to the importance of HoT as the home of Te Rūnanga o Ngāi Tahu
- ✕ Description of sustainable base design features, noting additional opportunities
- ✕ How can we rate sustainability from a cultural perspective?
- ✕ Relative importance of aspects different for different cultures
- ✕ Ngāi Tūāhuriri relevance as Manawhenua
- ✕ Papatipu Rūnaka support for sustainability approaches (approval if sited in their rohe?)
- ✕ Reclaim the cultural landscape.

From a review of Ngāi Tahu Natural Resource Policy, interviews and background information on the House of Tahu, areas of focus for a 'culturally' sustainable building were determined as:

- **Ngā Wai Tupuna:** Protection of natural waterways and the appropriate use/reuse, treatment & disposal of water (particularly onsite and/or landbased systems for stormwater, greywater and wastewater).
- **Ngā Otaota Māori:** Protection & enhancement of native flora, fauna, habitats and ecosystems, particularly waterways & wetlands).
- **Wāhi Tapu/Taonga:** Acknowledgement, protection, interpretation and enhancement of culturally significant sites.
- **Kaitiakitanga:** Reduction of pollution emissions (air, land, water, coast) and reliance on existing infrastructure (sewage, stormwater, energy)
- **Tikanga:** Sustainable buildings that are energy efficient and have ongoing monitoring and reporting in design, construction and operation.
- **Whakapapa/Matauranga:** Use of native, local, recycled and/or renewable resources that provide a connection to and protect/enhance the local landscape and Ngāi Tahu identity/integrity.
- **Whanaungatanga/Turangawaewae:** Providing a place where Ngāi Tahu are welcome, encouraged and proud to visit.
- **Mana/Mauri/Manaaki:** The ability of the building to manaaki manuhiri and provide a healthy, inspiring work environment for staff.
- **Rangatiratanga:** The expression of te reo, kawa, tikanga, history, identity, cultural symbols and artwork of Ngāi Tahu whānau, hapū and iwi.
- **Tohungatanga:** Cost effective and efficient construction and operation and the ability to provide a return on investment – balancing economic, social, cultural and environmental wellbeing.
- **Manawhenua:** Acknowledgement, recognition and provision for Ngāi Tūāhuriri kawa, tikanga, history and ongoing mana.

5.5.4 Cultural Performance Indicator Assessment

The cultural performance indicators were then assessed by five smaller focus groups using the sustainability barometer shown in Figure 6 earlier (p14).

A rating to be achieved for each cultural sustainability metric is +1. Therefore the cultural sustainability metrics need to achieve average ratings near or greater than +1 (Mauri pai) to be considered sustainable. Metrics that rate nearer 0 or have negative values would require further work.

The combined ratings for each group and the average ratings for each metric are provided below. The combined rating for each group is an indication of the cultural sustainability of the House of Tahu project determined by each group. While the average rating for each metric indicates the cultural sustainability of that metric considered in isolation. The findings from this workshop are provided in Table 6 below:

No.	Metric	Group 1	Group 2	Group 3	Group 4	Group 5	Average
1	Ngā Wai Tupuna – Water	1	1	-1	0	1	0.4
2	Ngā Otaota Māori – Biodiversity	0	1	-1	2	1	0.6
3	Wāhi Tapu / Taonga – Heritage	2	2	1	2	1	1.6
4	Kaitiakitanga – Reducing Impacts / Self Sufficiency	1	-1	-1	1	1	0.2
5	Tikanga - Energy and Resource Efficiency	1	0	-1	1	1	0.4
6	Whakapapa/Matauranga – Cultural Materials & Design Elements	2	1	-1	1	1	0.8
7	Whanaungatanga/ Turangawaewae	2	1	1	2	2	1.6
8	Mana / Mauri / Manaaki – Hospitality & Wellbeing	2	1	1	2	2	1.6
9	Rangatiratanga – Te Reo, Kawa, History & Identity	1	1	1	2	2	1.4
10	Tohungatanga – Long Term Cost Effectiveness & Efficiency	2	1	0	2	1	1.2
11	Manawhenua – Recognition & Provision of Ngai Tuahuriri	-2	-2	-2	-1	-1	-1.6
Total (out of -22 : 22)		12	6	-3	14	12	8.2

Table 6: Scores for Cultural Sustainability metrics using the Mauri Barometer

Analysis of these results suggests that participants considered that the House of Tahu project has the potential to deliver a culturally sustainable outcome for all performance metrics with the exception of Manawhenua. Furthermore, Kaitiakitanga, Water and Energy aspects rated at below 0.5, and would require further work to allow them to achieve a more sustainable score.

In addition it appears that Group 3 were consistently more conservative than the other four groups, rating the sustainability of the project negatively (ie. unsustainable) at this stage. This issue requires further investigation to confirm that the ratings provided were consistent with the same analysis as the other groups. If it is found that group 3 have an accurate understanding of the assessment process, it may call into question the clarity of the other results. That is, were the participants measuring the actual House of Tahu project in its current state or in a projected future state once their concerns and aspirations had been taken into account. In any case, the metrics were all rated as diminishing mauri by Group 3 and therefore are not considered sustainable by that group.

The results of this analysis can be placed on the sustainability barometer by group result. This identifies each groups determination of cultural sustainability for the project as shown in Table 7, and Figure 11 below:

Group	Group 1	Group 2	Group 3	Group 4	Group 5
Total	12	6	-3	14	12
Average	+0.55	+0.27	-0.14	+0.64	+0.55

Table 7: Averaged group scores from Metric cultural sustainability analysis

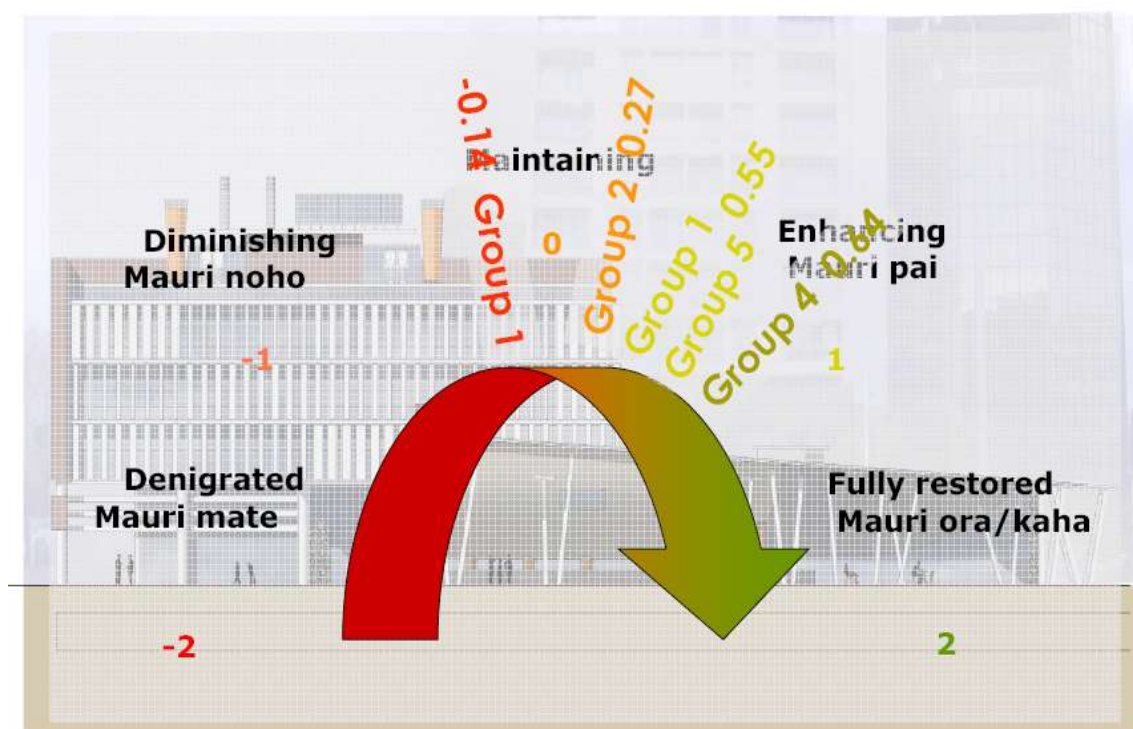


Figure 11: Sustainability Barometer with averaged group scores

The results of this analysis can also be placed on the sustainability barometer as individual metrics to indicate their relative sustainability and potential areas for further improvement as shown in Figure 12 below:

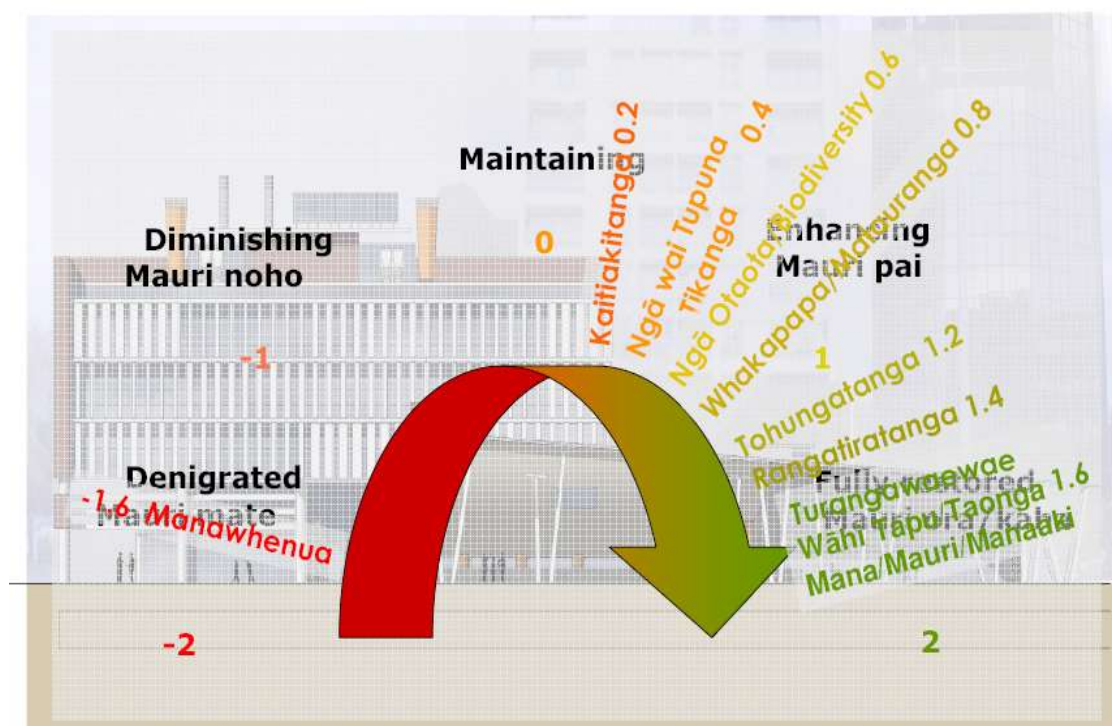


Figure 12: Sustainability Barometer with individual metric scores

The results therefore indicate that the proposed design could be enhanced with regard to the following aspects:

- 11: Manawhenua inclusion
- 4: Reduced environmental impact and reliance on infrastructure
- 1: Improved waterway connection, protection and onsite water management
- 5: Improved energy and resource efficiency
- 2: Enhanced biodiversity, with a focus on mahinga kai species
- 6: More materials and design elements that confirm cultural identity and connection.

Key considerations and approaches in relation to these aspects are discussed in the next section and provided in detail in the recommendation section of this report.

6 Whakawhiti Kōrero / Discussion

6.1 Process

The process used for this cultural sustainability assessment is considered very appropriate and the use of the Mauri Model as a decision making framework and decision making facilitator was successful. The process created the opportunity to identify and openly discuss several critical issues whose priority had not previously been fully understood.

Having said this, the successful result was due to several other contributions, not the least of which was the introduction to the House of Tahu project by Tony Sewell. Tony explained at the beginning of the workshops, that the original King Edward Barracks site acquisition was driven by a purely economic priority. However the philosophy has now changed. Spirituality is the new starting point, because it is understood that the House of Tahu project stands for more than just an economically successful endeavour. There is currently division within Ngāi Tahu on proceeding as the underlying issues have been coming to the fore. These issues were summarised from feedback as; 'this must be an exemplar and walk the talk'; 'we don't want a messy backyard'; and it is intended that the site will become iconic for future development within the Ngāi Tahu rohe.

The analysis of relevant policy relating to the House of Tahu development has involved significant effort. The cultural performance indicators identified and presented to the workshops formed the basis for the second stage of cultural sustainability analysis and ensured that the workshop outputs had a strong relevance to the review focus. Anecdotal feedback indicated that the participants were positive about the workshop process. Additional insights were provided into the House of Tahu project that identified several issues requiring a focused effort to move the project forward.

The actual value of the Mauri Model is yet to be fully demonstrated in relation to the House of Tahu project. Work to date suggests it will work in tandem with the other project requirements to better define the opportunity for indigenous (Māori) input during design, construction, and operation. The decision support framework has achieved this by using the concept of mauri that is central to the indigenous paradigm, and categorising the perceived impacts on mauri in terms of the legislative requirements. This has allowed enhanced identification of the priorities from an indigenous viewpoint and enhanced understanding from the practitioner's viewpoint.

The decision support framework has further advantages in that it also allowed the indigenous practitioners to express the relationships between the dimensions that in the design consultants' paradigm had been treated as separate considerations that were not interdependent and given different priorities. The consultants' analysis may have been further compromised where their cultural background has influenced the ranking of the criteria, which is subjective, and hence incorporates the relative importance based on each design consultant's expertise. The framework exposed any existing bias by specifically identifying weightings at the outset before the metrics were ranked.

6.2 Outputs and Key Considerations

The policy review and workshop outputs have provided several valuable insights into the cultural sustainability of the House of Tahu proposal, not the least of which is an enhanced understanding for the participants. These outputs indicate that further work is necessary to ensure that the HoT development will measure up to

Ngāi Tahu expectations. While the current design received largely positive feedback from the workshop participants and incorporates a number of sustainability features, there is definite room for improvement.

In particular, issues relating to manawhenua inclusion, water management, waterway, mahinga kai and wāhi tapu protection and enhancement, and the restoration of cultural landscapes are seen as critical. The process also confirmed and reinforced an overwhelming desire by tribal members for Te Rūnanga o Ngāi Tahu to show leadership, set standards and walk the talk in the area of sustainable development.

Policy positions and the views of workshop participants also revealed a need to decrease the overall impact on existing infrastructure, and to find and implement alternative, low impact and self sufficient solutions for water, waste, energy and biodiversity issues. Importantly, the incorporation of the following solutions are either specifically mentioned within Ngāi Tahu environmental policy, or were reiterated during the workshop:

- Composting or waterless sewage systems;
- Rainwater collection;
- Greywater recycling;
- On-site, or land or wetland based stormwater and sewage treatment and disposal systems;
- Solar or wind based energy generation;
- Waste minimisation and efficient resource use; and
- The enhancement of native flora, fauna and habitats, with a focus on potential mahinga kai and cultural use

Ngāi Tahu opposition to both Project Aqua and the Christchurch City wastewater discharge, along with the results of the Tiaki Para Waste Management and Christchurch Urban Development surveys provide the clearest support for the above approaches. Such support is due to the unavoidable and irreversible impacts such developments have on critical cultural values within the natural environment. These positions also compel Te Rūnanga to 'walk the talk' in relation to its own commercial developments.

Also outlined within the assessment process was the significant issue of restoring cultural landscapes through:

- Native restoration,
- Enhancing views and connections to landscape features,
- Appropriate and mandated historical interpretation; and
- The use and incorporation of traditional materials, design elements and artwork.

The recent tribal submissions on the Avon River, Christchurch Biodiversity and Urban Development Strategies and the Christchurch City Council Long Term Community Council Plan serve to highlight and reinforce these points.

With respect to manawhenua inclusion, the most succinct guidance comes from Te Whakatau Kaupapa. Its policies give clear indication that there is a need to adequately acknowledge and provide for the historical connection of the Ngāi Tūhauriri within the development. This was clearly reiterated by members of other hapū and rūnanga during the assessment workshop, as it is felt that this was critical for the "cultural integrity of the whole project".

Engaging Ngāi Tūāhuriri and making explicit the linkages and significance of the surrounding sites through appropriate naming, design features, view shafts, memorials, sculpture, artwork and interpretation would be important. Furthermore, Ngāi Tūāhuriri could be given an ongoing role within the running of the House of Tahu by being represented on a committee of tribal representatives for the building, overseeing construction, setting the underlying kawa and tikanga for cultural activities on the site, as well as maintaining a presence in the building in much the same way as is being done with the Te Papa exhibition in Wellington.

Discussion following the charette exercise provided additional questions and comments that could be considered within the final House of Tahu design process by the consultants and committee:

- ✂ Is the separation of roles / space necessary? It is all Ngāi Tahu?
- ✂ Location for meetings - challenged assumption that all of these be in Christchurch?
- ✂ Need for long term relevance of HoT to Ngāi Tahu (whanau)?
- ✂ Current mode of operation within Ngāi Tahu is whanau.
- ✂ What will make HoT welcoming to Ngāi Tahu whānui ~ encouraging to visit?
- ✂ Adopting 'integrity assessment' in dimensions (re limited understanding of Mauri)?
- ✂ How can the House of Tahu project provide more value?

7 Te Whakamutunga / Conclusions

Indigenous knowledge is holistic in nature and it is this characteristic of the indigenous paradigm that is synergetic with sustainability concepts. The Indigenous Charter from the Second International Indigenous Peoples Forum on Climate Change (2000) states;

Our traditional knowledge on sustainable use, and conservation and protection of our territories has allowed us to maintain our ecosystems in equilibrium. This role has been recognised at the Earth Summit and is and has been our contribution to the planet's economy and sustainability for future and present generations.

It is unlikely that this will be the total extent of the indigenous peoples' contribution to achieving sustainability. Indigenous knowledge continues to be relevant and of value to addressing this challenge.

The Ngāi Tahu Mō Tātou exhibition at Te Papa Tongarewa includes the following quotation:

Toitū Te Ao Tūroa

As kaitiaki of the land, we have a long history
of managing our resources in sustainable ways,
along with effective conservation practices.

He kaitiaki mātou mō te whenua,
ā, he taukiuki a mātou tikanga whakauka
hei whakahaere rawa kia ukauka ai, kia pumau ai.

These sentiments are still strongly held by Ngāi Tahu Whānui, as evidenced by the policy review and workshop results. The use of the Mauri Model sought to integrate the complex and interactive dimensions of social, economic, environmental and cultural effects that define sustainability in New Zealand and within the House of Tahu project. The effective integration of these dimensions is normally difficult because western scientific approaches tend to treat knowledge in a compartmentalised manner isolating or ignoring information that other knowledge systems would consider highly relevant and indeed essential for a truly holistic approach.

While the process used requires further development and refinement to be sufficiently robust for broad application, the workshop process has defined a direction with a higher probability of acceptance amongst Ngāi Tahu Whānui.

The cultural sustainability assessment therefore illustrated the complex and multi-faceted analysis necessary to achieve consistency with the holistic perspective demanded by the indigenous paradigm of Ngāi Tahu for the House of Tahu project.

mō tātou, ā, mō kā uri ā muri ake nei

for us and our children after us

8 Te Ara Whakamua / Recommendations

The final design and development of the House of Tahu should include the following approaches:

1. Manawhenua Inclusion

- a) Negotiation of a formal relationship between Ngāi Tūāhuriri and the HoT project.
- b) A meeting with Ngāi Tūāhuriri leaders to discuss any issues with the current development and the ways to remedy these.
- c) A presentation of the project to Ngāi Tūāhuriri and the wider rūnanga on their marae.
- d) Agreement on the role of Ngāi Tūāhuriri going forward such as:
 - o Being represented on a committee of tribal representatives for the building;
 - o Overseeing final design, construction and opening processes;
 - o Setting the underlying kawa and tikanga for cultural activities on the site;
 - o Having a role in the naming of buildings, spaces and rooms;
 - o Maintaining a presence in the building similar to what is being done with the Te Papa exhibition, such as a kaikorero / kaikaranga / kaumātua 'in-resident' (either chosen or filled by Ngāi Tūāhuriri) - also as a way to support/foster marae leadership); and
 - o Other roles such as ringawera (cooks) for hui, groundspeople etc.
- e) Undertaking a Mauri Model workshop with Ngāi Tūāhuriri.

2. Improved water management, waterway connection, protection & enhancement

- a) Incorporation of a green roof or roof garden for tower block to control and treat runoff and provide for native restoration.
- b) Composting toilet / low-flush with urine separation / waterless urinals
- c) Revisit water feature functionality and design, with a view to incorporate:
 - o An onsite wetland;
 - o Symbolism of the three tribal strands of Waitaha, Mamoe and Tahu (that was part of the initial designs); and
 - o Bringing it to the front of the building following toward Cambridge Terrace and Ōtakaro / The Avon River and thus creating a greater connection with the river (either physically or symbolically).
- d) Incorporation of the ECOplus Water Recycling Systems, invented by Ngāi Tahu member Don Sorensen (see <http://www.wastewater-recycling.co.nz/>), to separate and treat greywater for use in low flush toilets.
- e) On-site stormwater disposal via the creation of a wetland.
- f) Ensuring that stormwater runoff is largely managed onsite to protect or enhance and not pollute the Avon or any other waterway (including during construction).
- g) Ensuring a visual or physical link with the river, perhaps through planting and landscaping beyond the site, in-conjunction with CCC.
- h) Achieve a top or higher score on the greenstar or similar rating for water.
- i) Low water use fittings and appliances

3. Reduced Environmental Impact and Reliance on Infrastructure

- a) Incorporation of odourless composting toilet systems (such as Clivus Multrum, see <http://www.clivusmultrum.com/>) or at least low-flush toilets with urine separation and waterless urinals.
- b) Permeable pavements and bulk stormwater disposal on-site, via the creation of a wetland.
- c) Zero stormwater discharge off-site
- d) To reconsider the use of bronze skirting at base of concrete structural elements to reduce potential heavy metal leaching into stormwater.
- e) Reducing nocturnal light emissions, through light suppression technologies to maintain cultural connection with night sky.
- f) The reduction of volatile organic compounds, formaldehyde, harmful refrigerants and other chemicals through the use of natural materials or other alternatives.
- g) Development and certification of an accredited internal environmental policy and management system (Enviromark, EBEX 21, Carbon Zero and E-Manage) to monitor and report on sustainability performance and to assist in reducing waste, increasing resource and energy efficiency and offsetting any external effects of the development. Would also include a purchasing policy.
- h) Advanced communications technologies to help move towards paperless building.
- i) Introduction of topographic relief / contour to the site using excavated soil, to save this going to landfill.

4. Improved energy and resource efficiency

- a) Consider horizontal louvers to avoid mechanical energy demand for the vertical option.
- b) Passive solar opportunities to utilise thermal mass (eg. South wall of cultural centre)
- c) Use of boulders as thermal mass with heat pump.
- d) Carpark ability to accommodate corporate vans and electrical recharge of hybrid vehicles.
- e) Suitability and layout of plant species for shelter from UV radiation.
- f) Using recycled building materials, in particular the native timber doors and etched windows from the current Te Waipounamu House, as well as investigating the use of recycled concrete, such as the material on the site currently.
- g) Achieve a top or higher score on the greenstar or similar rating for energy.
- h) Use of low energy appliances and fittings (both in use and in manufacturing) with connection to an internal policy for energy use and appliance purchasing.
- i) Specific inclusion of spaces and facilities to allow for easy recycling by building users and staff, including provision of a worm farm/composting system for food scraps, which can be distributed to the landscaped gardens once established.

5. Enhanced biodiversity

- a) Green roof / Roof garden for tower block (The creation of a 'green roof' could also offset carbon use of the operating building, be a place for staff to work, relax and as a place to view the landscape).

- b) Assessing whether the water features could be compatible with aquatic life forms and native fish or invertebrates.
- c) Planting/landscaping of site in traditionally important mahinga kai species and/or species that can attract native birds and insects.
- d) Planting of species that link to the existing remnant at Pūtaringamotu / Riccarton Bush.
- e) Obtaining planting advice from Colin Meurk of Landcare Research to achieve the above.
- f) Creation/Restoration of wetland on site or offsite (Avon River).
- g) Offsite mitigation of impacts of sewage, energy use, carbon credits etc if not dealt with on site.
- h) Protection and enhancement of the existing native plants along the Cambridge Terrace entrance.

6. More materials and features that confirm connection

- a) Greater use of culturally significant building materials, such as pounamu, serpentine, other stones from around Te Waipounamu and certified native timbers totara, tawhai/silver beech
 - o NB: Te Rūnanga o Ngāi Tahu own natural deposits of serpentine under the Pounamu Vesting Act 1996. Serpentine is also a relative abundant stone and has been used as paving stones previously.
 - o Te Rūnanga o Ngāi Tahu is a member of the Forest Stewardship Council and would be committed to using certified timber for the House of Tahu. The Waitutu Inc silver beech operation at the Longwoods forest in Southland has FSC certification. This would provide a very unique opportunity for the Ngāi Tahu to support the flaxroots – Longwood silver beech was used by Olympic Committee for the Olympic torch.
 - o The Ngāi Tahu/Department of Conservation's Cultural Material Banks or other tribal sources could also be looked at for access to timber and other materials.
- b) Provision of visual view shafts to, or interpretation panels about Puari and associated urupā, Ōtautahi, Pūtaringamotu, Little Hagley Park and the Ōtakaro (Avon River) as well as the mountain ranges, sky (Raki) and coast (Takaroa) if possible in higher levels (and/or on roof) of the building. This could have the added benefit of bringing in more natural light and ventilation to the building.
- c) Inclusion of a monument to identify the urupā associated with Puari that is near the site.
- d) Use of traditional local place names for particular parts of the site, such as meeting rooms or the different buildings on the site.
- e) Appropriate native plantings to symbolise heritage and enhance site and consider the possibility of future cultural harvest from the site by tribal members.
- f) Use of traditional or culturally symbolic colour schemes, design elements artforms, such as the incorporation of 'whata' that was a predominant feature in most pre and early post European Ngāi Tahu villages (see Figure 2, p7). Other opportunities include the use of horizontal louvers to symbolise tukutuku panels as well as the use of waharoa and pouwhenua.
- g) Leading Ngāi Tahu artists and craftspeople should be engaged to submit ideas for such designs and elements. Eg. Ross Hemera, Simon Kaan etc

7. Other

- a) Create an ongoing tribal committee for the House of Tahu similar to those developed for Mō Tātou, Whai Rawa and the Ngāi Tahu Fund, involving key representation from Ngāi Tūāhuriri – in particular to oversee the final design process, construction and opening of the building.
- b) Creation of / agreement on an appropriate name for the House of Tahu.
- c) Development and implementation of a communications strategy to better inform the tribe and the wider community about the House of Tahu development.
- d) A follow-up workshop after the House of Tahu proposal has been enhanced following the consideration of this report. This hui could also negotiate and agree the weightings against which the final HoT proposal is to be measured, including ranking the metrics most important to each dimension from a Ngāi Tahu perspective.
- e) Appropriate interpretation of the design/development features of building to educate the wider community and demonstrate mana / rangatiratanga / kaitiakitanga. This could make use of panels in and around the building and site to explain all features – eg. rainwater collection/reuse, construction materials, biodiversity enhancement, heritage etc.
- f) Ongoing monitoring and reporting of sustainability performance of building, site and surrounding 'receiving' environments. Could be achieved through the Enviro-mark and E-manage systems as well as the use of the State of the Takiwā Environmental Monitoring system developed by Ngāi Tahu. This would include the collection, monitoring and reporting of energy use/generation, water use/recycling, carbon use/mitigation, waste production/recycling and purchasing.
- g) Completion of a NABERS environmental rating for the building by Robert Vale of Landcare Research.

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Apitihanga / Appendices

Appendix A: Te Kawenata o Ngāi Tahu

Appendix B: 2004 House of Tahu Brief

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Appendix A: Te Kawenata o Ngāi Tahu

TE KAWENATA O NGĀI TAHU

The **Kaupapa Whakatuwhera** of this Charter is that the House of Tahu is set up amongst us to nurture our people, to shelter our people and to serve our people. It is both the symbol of our identity as Ngāi Tahu Whānui and the Whare Whataraki of that which we together own.

The **Kaupapa Poutokomanawa** of this Charter is the protection and growth of the pūtea.

The **Kaupapa Tahuhu** of this Charter is the accountability of those charged with responsibility for the pūtea to our Papatipu Rūnanga, to our people and to future generations.

The **Kaupapa Poutahu** is the principle that the assets of Ngāi Tahu will be managed separately from the bodies that spend and distribute the income earned from those assets.

The **Kaupapa Whakahuataka** of this Charter is that all those entitled by whakapapa to the benefits of the House of Tahu shall be protected in their right to benefit.

The **Kaupapa Whakakotahi** is that the poupou of the House of Tahu are the Papatipu Rūnanga of our people each with their own mana and woven together with the tukutuku of our whakapapa. In them resides the tino rangatiratanga of Ngāi Tahu. Its collective voice is Te Rūnanga o Ngāi Tahu.

Appendix B: 2004 House of Tahu Brief

House of Tahu: The Home of Te Rūnanga O Ngāi Tahu

Te Rūnanga o Ngāi Tahu comprises the 18 Papatipu Rūnanga of Ngāi Tahu and is a body corporate with perpetual succession established under Te Rūnanga o Ngāi Tahu Act 1996.

As the cultural home of Te Rūnanga o Ngāi Tahu, the House of Tahu will symbolise Te Rūnanga o Ngāi Tahu history, presence and affinity with the land and establish a place of respect and understanding for Te Rūnanga o Ngāi Tahu and its place in Christchurch, Te Waiponamu, and Aotearoa. Te Rūnanga o Ngāi Tahu, while remembering the historic uses of the site to add to the cultural base of Christchurch and aid Te Rūnanga o Ngāi Tahu's connection with the wider community.

The House of Tahu will be pivotal to the site and will set the environment for the other buildings and structures. It will enhance the landscape and aid circulation through the site. Positive connections (conceptual and physical) will be required between the House of Tahu and other Te Rūnanga o Ngāi Tahu occupation on the site. The House of Tahu will offer shelter and invitation to passers-by; visitors and neighbours, showcasing treasures of Te Rūnanga o Ngāi Tahu and providing space for events and hui/wananga to occur.

A rationalisation of land occupied by the NZ Police will be required to ensure the best commercial use of the site.

House of Tahu: Spatial Requirements Brief

General Requirements for the House of Tahu:

- A space to greet, a space to welcome
- An external space large enough to cover the heads of 120 people
- A naturally lit boardroom to accommodate a maximum of 28 people including 18 Rūnanga representatives staff.
- An upper area for visitors to observe from
- Internal area for the assembly of generally up to 100 persons but large enough to accommodate a maximum of 200 persons
- Shelter for the elderly in wheelchairs
- A direct link between the Te Rūnanga O Ngāi Tahu (TRONT) Building and the House of Tahu
- Space for permanent staffing of 4
- Whakapapa unit; requiring space for 2-3 people representing the registration face of Whakapapa unit.
- An area for the Kaumātua and Whakapapa, the Kaumātua room to be at the lowest level
- A space to encourage youth
- A small relaxing area
- Tea room / dining facility
- Toilets with parenting space
- Storage space
- Currently archival documents are stored off-site and any design should make storage space available near the Whakapapa Unit.

House of Tahu: Suggested Spatial Arrangement

Canopy Structure

The House of Tahu roof extends beyond the building edge to provide a sheltered colonnade edge to the garden edge.

Entry Foyer / Welcome Space

A large double height foyer space is proposed adjacent to a Cashel St / Rūnanga building access and large external porch.

Hui/Wananga Space

The foyer space is positioned next to the Wananga room; these two spaces can be used independently or combined to form one large space. A mezzanine at level one gives the ability for public viewing down into the Wananga and Foyer spaces.

Walkway to Rūnanga Building

A level one internal access to the Rūnanga building provides connection between the office levels and gives additional shelter at ground level to Cashel Street.

Staff Offices

Staff offices can be housed on the ground floor or mezzanine level of the House of Tahu.

Café

A ground level café is shown on the northern side off the colonnade and connecting to an exhibition space. The café may service the Hui/Wananga room, or this may be serviced by an additional upstairs dining area.

Whakapapa

Final positions of the area has not been fixed but may be sited behind the Wananga Room, facing the gardens at the North

Kaumātua

Final position Kaumātua has not been fixed but may also be sited behind the Wananga Room, facing the gardens at the North.

Archival Area

Archives can be housed in the basement car park. This can be accessed by stair from the ground level of the House of Tahu, or directly from the basement (goods / services).

Building Access

A public lift will access the basement and all levels of the Rūnanga Building. Lift access to the mezzanine of the House of Tahu will be possible via the Rūnanga building or the Public lift and stair (across walkway.)

Te Rūnanga O Ngāi Tahu: The Rūnanga Building

Specific Rungana office requirements are yet to be determined, however they may include:

- Meeting rooms/ areas at every level
- Rūnanga offices
- Onsite crèche / day-care
- Space for a representative lounge with workstations included
- Food and beverage

Specific space requirements for the TRONT building are to be provided by Ngāi Tahu Properties.

Site Access

Any access to the site must be obvious, generous and welcoming to both pedestrians and vehicles. There is a distinctive need for entry impact and a sense of place. The main entry should preferably face north-west as there is already a feeling of open space leading through to the Arts Centre. This progression should be strengthened and continued through the site.

Vehicular Access to the Site

The site in part has been marginalised by the one way street system on Montreal Street and Cambridge Terrace. The least attractive entries to the site would be off the one way systems.

Te Rūnanga O Ngāi Tahu should have a strong interest in any development of the one way street system undertaken by the city council. Te Rūnanga O Ngāi Tahu should aim to avoid any changes to Hereford or Cashel streets but encourage a change in the one way street systems. As a result there needs to be a continuing dialogue between the city council and Te Rūnanga O Ngāi Tahu Property Development.

Any discussions with the Council should also centre on developing the street landscape (see section below). The Cambridge Terrace side of the site is seen to be symbolically connected to the river and treatment of the area should reflect this. To the motorist the streets should emulate the importance of the area they are moving through. Again, this should be seen as part of the city responsibility in collaboration with the aspirations of Te Rūnanga O Ngāi Tahu.

Access for Buses and Taxis

Any bus or taxi access should in no way obstruct major entries but should be close enough to deliver manuhiri to the main entry and under sufficient cover. Any design must cater for at least 2 buses containing up to 40 people each and a lay-by must be provided.

Parking

Car parking for the site and the neighbourhood will be a significant element of any development. A footprint of parking is appropriate at this stage to establish potential parking area. Currently Te Rūnanga O Ngāi Tahu Property Group operates a successful car park from the site with 200 reserved parks and a further 100 public parks.

Future parking requirements entail at least:

- 100 spaces for Ngāi Tahu staff and visitors
- Police requirements
- Public parking, at least 600 parks should be provided given that there is no equivalent area in the CBD. There exists the possibility of one level of parking for public and another more flexible level dedicated to Te Rūnanga O Ngāi Tahu and commercial users.

Car parking should be arranged to allow easy management with co-located entry and exit. Lanes for entering the building should not hinder the flow of traffic. Any parking development should provide generous spaces (2.7m centre to centre minimum) and include bike parking, children/parent parking and disabled parking and endeavour to be the premier facility in Christchurch.

Pedestrian Access to the Site

Pedestrian access to the site is compromised by the current relationship between the Bridge of Remembrance and the Cashel Street face, the lack of shelter, the lack of custodial activity (except for the Police) in the immediate vicinity and the shadowing effect of the postal centre. Any proposed design should strengthen the pedestrian links to, from and through the site.

The site arrangement needs to encourage passage across the site at anytime night and day with a feeling of safety.

People should be able to flow in and out of the site easily.

Any landscaping development should protect the pedestrian and make the passage open and friendly in addition to reflecting the bond between the river and Te Rūnanga O Ngāi Tahu site. For example a path could be provided from the river.

Re-igniting the Links between Site and the Bridge of Remembrance

The historical link from Cashel Street under the Bridge of Remembrance to the site should also be celebrated. The existing journey down Cashel Street from the west is terminated by the Bridge of Remembrance. Any addition to the journey needs to involve an easy transition. This responsibility would involve a collaboration of the City Council with Te Rūnanga O Ngāi Tahu development to ensure that the historical connection is respected and enhanced.

Landscape

Generally there needs to be determination to create a positive public space. Sunlight is very important.

Beyond the east face there should be 3 themes of landscape which reflect the orientation of the site. These are:

The north face shaded by the postal centre
The west face with a building component; and
The south face with the framing of the footpath in mind

The Banks of the Avon River

A direct physical link to Oxford Terrace across the river is not important as it has already been captured by the Bridge of Remembrance, however the link to the river is important. The link between the river and the site has significant historical associations which need to be strengthened physically in the style in

which the landscape develops. The banks of the river need to reflect historical planting and any landscaping should carry all the way through to the east face and into the site.

Within the Site

Landscape and building should be integral/complementary, creating outdoor rooms with transparent interfaces. Any large pieces of art should also be integral to the overall design, and inclusion of sculptors at an early stage in the design is therefore essential.

It is important to try and link the landscape with ancestral history and settlement.

There will need to be shelter - respect for both sun and wind. The site arrangement needs to encourage passage across the site at anytime night and day and feel safe, people should be able to flow in and out.

Lighting needs to be an important part of the site and emphasis should be placed on:

- Security lighting
- entry to the site
- Entry to buildings
- Light from buildings
- Light in trees

The use of solar lighting and sustainable energy should be considered for the external lighting.

Soft landscape should include grasses and ground cover common in the Canterbury and South island environments. Hard landscape should include the references to the Canterbury Plains environment, ie river stone under foot. Pounamu should have a significant place in the presentation of the hard landscape. Large pounamu boulders or grey wacke stone could be combined with water features.

Almost all aspects of water (movement, spray, sound, fishing ancestry etc...) could potentially be celebrated in the sites landscaping.

Sculpture should reflect the space between the landscape and the buildings and should be used to modulate and develop the landscape.

The invitation to any space should be strong enough to minimise the need for signage. General directional signage should be integrated with regulatory signage and this could also include an art element within it.

Planting

Trees are an important consideration to the overall site and should be selected to suit the urban environment, deciduous species such as kowhai, or taller trees, such as Tī Kōuka or lancewood without a high level of foliage are preferred in building environments.

Any planting should reflect the traditional mahinga kai. This includes any planting done on the street edge. For example, Tī Kōuka were first planted by Waitaha as landmarks to guide travellers between Banks Peninsula and their

settlements on the plains (CCC Heritage Pamphlet).

Planting specifically suitable native trees is essential to the sites development (see appendix 1). Di Lucas (Lucas and Associates) in collaboration with the City Council developed a vegetation map covering pre-settlement Christchurch and Port Hills. The maps illustrate which native plant species were present in particular areas prior to clearance. Ngāi Tahu needs to be specific about any species they would see planted since anything done by the Council would be predictably token "Maori" in manner.

The Department of Conservation, and Motukarara nursery provides a local source for native species.

Details on grouping or clustering of trees are also important given that avenues of trees may not truly reflect traditional environmental grouping.

Complimentary Users

As the House of Tahu will be the cultural and spiritual home of Te Rūnanga O Ngāi Tahu and embody Ngāi Tahu tribal values, it is important that other users of the site including existing users such as the Police need to be complimentary to the cultural heart of the developed site. Such complimentary users should show respect for Te Rūnanga O Ngāi Tahu culture and spirituality and the historical associations with the site.

The scale of the House of Tahu and the TRONT Office Building should add to the quality of the space between buildings and adjoining buildings as a good neighbour.

Small Office Building to the South-East

As a basis for discussion with this neighbour, consideration should be given to any potential relationship for shared parking, landscaping and streetscape. As an alternative to purchasing this land arrangements may be made with boundary lines and landscaping to suit development of the overall site. Early efforts in communication should revolve around being a good neighbour. The footpath around the building may be reconfigured given possible future relationships with the City Council.

The Police Station

The police building should be considered in the overall context of the site. Te Rūnanga O Ngāi Tahu properties have a 17 year lease from 2000 with the New Zealand Police on this part of the site. The lease schedules in details of the spaces occupied by the police and is contained in appendix 04. An initial meeting is required between Te Rūnanga O Ngāi Tahu properties, a representative of the House of Tahu committee and the architect to establish a continuing dialogue of co-operation between the Police. The objective is to establish a more satisfactory physical relationship and achieve the best long term result for the House of Tahu.

Any delegated Committee to liaise with the Police should address the following questions:

- Parking: How many spaces are required? Where? What sort of security is

required? What sort of access is required? Can the access be restricted?

- Activity on the Site: Can the activity at ground floor level be changed? And/or replanned to establish a better relationship with the tower building?
- The Police Building: Does it meet the future requirement of the Police? Can the activity at ground floor be changed? Can the address of the building be changed to provide a different approach to the building?

Post Office

Usage of the post office in the future? Implications on the brief?

Potential External Uses to Encourage

- gym
- crèche
- medical Centre
- 24 hour pharmacy
- residential area / apartment blocks
- food and retail
- performing arts / theatres

Potential External Uses to Discourage

- manufacturing industry,
- gambling,
- fast food,
- police dogs – although possibly could stay
- police cells on the ground floor of Police Building
- hotels
- petrol

Land Ownership

Establish a recommendation that the site remains one and is never sold. Advise that discussions regarding the site are made in relation to the entire site. Any separate interest is protected by leasing the land. There is definitely room to accommodate others in order to utilise the entire site.

Appendix C: Sustainable House of Tahu



A Sustainable House of Tahu

Following the decision at the September meeting of Te Rūnanga to proceed with the House of Tahu development a new discussion is required. The overall site concept and the general brief have been approved to progress to the next stage. Part of the concept includes a place to house and display Ngāi Tahu taonga but it is also an opportunity for Ngāi Tahu to epitomise their principles and values within the overall development.

Ngāi Tahu 2025

In *Ngāi Tahu 2025* it is identified explicitly that Ngāi Tahu wishes to exercise rangatiratanga and kaitiakitanga over wāhi tapu, mahinga kai and other taonga tuku iho, thereby influencing the impact of resource use and management methods in the areas of:

- Pollution, habitat degradation and species extinction
- Water quality and quantity degradation
- Intensified and changing land use
- Global warming and climate change

It further states that all Te Rūnanga o Ngāi Tahu cultural and commercial properties will be managed consistent with Ngāi Tahu environmental practices and policies.

The House of Tahu development provides an extraordinary opportunity to realise these elements of *Ngāi Tahu 2025* in a small but focused way. It will add significant value to the site particularly if it is one of the most sustainable buildings in New Zealand. It also allows us to bring together various concepts in the one building – people, history, location, culture and environment.

Sustainable Buildings

When it comes to the question of sustainability the focus is often on the direct use of energy but sustainable building is a much more complex consideration than that. Through better design and operation of buildings, many significant economic and environmental outcomes can be improved. These include energy, water and materials use, generation of waste and wastewater, and influence on travel patterns of occupants. Better employee health, morale and productivity can also be obtained. These changes do not have to cost more than for conventional buildings; in fact, resource efficiencies can often create major net benefits over the life of the project. Despite this there is a degree of apprehension that sustainability is 'bad for business' and there is dearth of practical and relevant information about sustainability and sustainable buildings.

Globally, the building industry contributes significantly to the environmental burden:

use of raw materials	(30%)	pollution emissions	(40%)
energy	(42%)	water effluents	(20%)
water	(25%)	solid waste	(25%)
land	(12%)	other releases	(13%)

1. building industry contribution as a % of overall environmental burden

The impact on the environment results from pollutants, energy consumption, water consumption, land degradation, resource consumption, waste production and loss of biodiversity incurred throughout the life cycle of buildings, from raw material extraction, processing, construction, building operation and demolition. There are also considerations over the lifespan of the building including general maintenance and refurbishments as required (in Europe about a third of all construction activities involve office refurbishment).

For Ngāi Tahu to have an exemplar facility there are many things to consider from the outset of the project, through to its completion and the long-term life of the building itself.

Issues for Ngāi Tahu

1. Buying in to the concept

Promote debate immediately around the question of a sustainable building with Te Runanga, Papatipu Runanga, staff and iwi members. This will mean further wananga and information to Te Runanga and Papatipu Runanga as well as dedicated time at this year's Hui-a-tau.

More immediately certain people need to be on board. Ian Athfield, the architect. The House of Tahu Committee and Te Aparangi need to buy in to the idea and a champion needs to be identified to carry the concept further. Ngai Tahu Property need to be on board early as they are our preferred and proposed project managers and developers. All parties will benefit from Ngai Tahu Property being as close to the action and the early debates on sustainability.

We also need to keep all staff informed and involved in the discussion and behind the development. As we promote the concept more widely the more people that are able to articulate the concept clearly the better.

2. Local Availability of Resources

Sustainable building is an emerging and important development but, as yet, there is not a great depth of industry expertise available here in the South Island. The Christchurch City Council has released a sustainable building guide that is focused primarily on residential developments and presently does not extend to commercial developments.

Manaaki Whenua – Landcare Research, has built a sustainable building at the University of Auckland's Tamaki campus and has relocated its entire Auckland operation to the new facility. The new building, completed mid 2004 is a functional working facility and is a benchmark for the future design of sustainable construction in New Zealand.

Construction costs were kept to the same as a conventional building of the same nature. The power savings, through using energy efficient design and sensible operating of the building, are projected to be a 60–70% reduction equating to approximately \$70K a year. It operates with reduced energy consumption, reduced dependence on mains water and reduced waste. Water use is projected to be about half normal consumption through good water management and appropriate re-use.

The new building incorporates many new waste reducing features. These include composting toilets, stormwater recycled for toilet flushing and irrigation of gardens, solar powered water heating, and waste heat "harvested" and reused in the building. It minimises heat transfer between the inside and exterior, which is estimated to save around \$70,000 a year on electricity. The building should be regarded as a pointer to achievable urban design for all development, business and residential.

The architects (Chow: Hill) and the engineers (Connell Mott MacDonald) worked with Manaaki Whenua to develop integrated systems that mimic natural ecosystem processes. Even though there may not be specific local construction experience in the area of sustainability some expertise is available within New Zealand.

Manaaki Whenua are also running a low impact urban design project with specific Maori outcomes. Dr Charles Eason who is based in the local Manaaki Whenua office is managing the entire project. The programme seeks to advance the concepts of low impact urban design and development improving urban environments and urban sustainability. Specific outcomes for Māori include restoration strategies for sites of special value and improved urban design guidelines and district plans incorporating Māori values.

3. Other Considerations

Specific attention will need to be given to:

- Identifying a project champion and
- Developing a sustainable design brief that considers long term durability, use of materials, energy consumption, water and waste.
- Ongoing research
- Ngai Tahu as leaders in sustainability and how it fits within broader reputation and influence objectives

Appendix D: Cultural Sustainability Assessment Scope

House of Tahu

Office Role Scope

Background

Te Rūnanga o Ngāi Tahu has approved the proposal to develop a new office building and House of Tahu building on the King Edward Barracks site. This decision has followed significant work by Ngāi Tahu Property and the House of Tahu Steering Committee on the use and design of the development.

The proposal has received resource consent and is poised ready for construction to commence.

Scope of work to be performed

As a sub-area of the project work is required to:

- Ensure the design and fit out of the administration building to be used by Ngāi Tahu companies meets their needs both now and in the future
- Identify and integrate Ngāi Tahu cultural and environmental bottom lines to be incorporated into the design and development of the site and to develop Ngāi Tahu's understanding of its standards for sustainable building design and operation
- Clarify the design and intended utilisation of the House of Tahu including developing an increased understanding of the capital and operational cost and other implications

Detailed breakdown of work:

Area	Work to be performed	Anticipated Output	Completion date
Administration building design and fit-out <i>Purpose: Layout of the workspace</i>	1. Prepare a discussion document for CEO's and Senior Managers for consideration and decisions to identify parameters for development of fit out and workshop for outcome. 2. Identify who will be accommodated in the admin building.	<ul style="list-style-type: none"> • Clear outcome for fit out which is aligned with HR and Business Strategy. • Snapshot of groups and employee numbers as at 6 Oct. • Clear list of requirements for each work 	Mid-Oct 2006 Mid-Oct 2006
<i>is to support staff to achieve the Ngāi Tahu vision. Maximising design efficiency will increase productivity and promote job satisfaction.</i>	3. Facilitate a series of workshops to gather input from employees of their requirements. 4. Assemble working group comprising representatives from each part of the organisation/companies and functional groups (eg admin) to drive the process within their respective groups. 5. Manage a closed tender to companies specialising in workspace design and fit out, and select. 6. Prepare a report outlining recommended fit out which will provide flexibility to meet future needs of the organisation.	<ul style="list-style-type: none"> • and functional group. • Each area is actively involved in ensuring their workspace meets their requirements. • Ensure the most suitable provider is contracted to design the workspace and manage the fit out. • Report outlining recommended fit out is submitted. 	Mid Nov 2006 Mid Nov 2006 Mid Oct 2006 20 Dec 2006
Sustainable building	1. Review existing Ngai Tahu (Te Rūnanga & ngāi rūnanga) policy and planning documents and identify any policies, issues, values etc that have been developed/identified for similar (urban/building development) issues 2. Interview key tribal resource management experts and selected external experts in relation to the policy review, and to identify any further issues, values, design elements, or bottom lines for sustainability 3. Develop draft report of Ngai Tahu values and cultural design elements for sustainable urban/building development 4. Hold hui with selected experts to discuss report findings, review HoT designs and ESD ratings and those of comparable buildings to identify both bottom line and priority design features of the HoT 5. Develop final report and recommendations for the final design of a culturally sustainable HoT	<ul style="list-style-type: none"> • Preliminary list of key values collated and referenced providing an important link to 15+ years of resource management related work by the Iwi • List of key values confirmed and/or extended providing feedback on key bottom lines from key people within and outside of the tribe (a peer review process) • Key values and design elements for 'sustainable' urban building developments clearly identified • Recommendations developed on the bottom lines and priorities for final 'sustainable' design of HoT • Final report outlining recommended sustainable design qualities and a Ngai Tahu urban development policy/standard is submitted. 	Mid-Oct 2006 End-Oct 2006 Mid Nov 2006 Early Dec 2006 20 Dec 2006
HoT utilisation	1. Obtain clarification on the intended utilisation and associated capital expenditure for the House of Tahu part of the building 2. Conduct market research amongst the four identified target audiences to explore fit with their requirements 3. Consider market research and refine utilisation as necessary 4. Develop detailed functional brief for the intended utilisation and understand the interface with the administration building 5. Develop operational budget	<ul style="list-style-type: none"> • Document outlining current intended utilisation for each area of House of Tahu, complete with budget for fit-out • Report on response of target audiences to proposed utilisation • Report outlining revised functional utilisation of space including detailed breakdown of areas and fit-out requirements, operational requirements including staffing, management responsibility and capital and operational costs 	By 6 October By 11 November By 15 December

Team

The Office has nominated the following resources to take responsibility for delivering the outputs outlined above:

Administration Building design and fit-out	Patsy Bass
Sustainable Building	Craig Pauling
House of Tahu utilisation	Jenn Bestwick

The above resources will work with and be part of the Ngai Tahu Property Project Team on the project and as such be accountable to the Project Manager.

Budget		
Area	Cost Item	Cost
Administration Building design and fit-out	Visit to comparable office fit outs	\$1,500
	Workspace Design Brief	tba
	Salary split	\$25,000
Sustainable Building	Interviews (travel/koha to participants)	\$2,000
	Hui (travel/kai/venue/presenters/koha to participants)	\$7,000-10,000
	Salary split	tbc
House of Tahu utilisation	Visit to comparable Galleries (travel)	\$1,500
	Market research (external and Ngai Tahu Communications)	\$15,000
	Consultant	\$25,000

Appendix E: CSA Invitation Letter



Te Rūnanga o NGĀI TAHU

Whitu / November 2006

Tēnā koe,

House of Tahu – Cultural Sustainability Assessment

Nau mai haere mai ki te hui i pānuhia ki raro nā. Ko te ia o tōna kaupapa he whatukarokaro te takata, toitū te whenua. Ko te urupounamu kei mua i a tātou, "Me pēhea tātou e haka whare hai whakaruruhau mō tātou, oirā hai ruru hoki mō te whenua, mō te wai māori, a mō te ao tūroa katoa."

In late 2005, Te Rūnanga o Ngāi Tahu confirmed the development of the former King Edward Barracks site in central Christchurch as the future home of the tribal organisation and subsidiary companies. At the same time the idea of ensuring that the House of Tahu is a strategic investment through developing a 'sustainable' building was also raised. While environmental values were always a consideration throughout the planning work of the House of Tahu advisory committee and Ngāi Tahu Property, there was little guidance as to what constitutes a sustainable building from a Ngāi Tahu perspective, meaning that further work is needed to fully identify what a sustainable building means to the iwi. Therefore, there is now an opportunity for a working group of interested Ngāi Tahu to come together to discuss these issues and contribute to the final design of the House of Tahu. It is also hoped that the process will lead to a framework for influencing future urban developments by the tribe so that these may be consistent with over 15 years of resource management experience within the iwi.

The process we are proposing to develop a sustainable House of Tahu is very new but we trust that it will help to ensure that cultural and environmental bottom lines and priorities will be incorporated into the design and development of the site. It will involve a review of current tribal and Papatipu Rūnanga policy and planning documents, interviews with tribal members and staff, and a hui/workshop in early December. This hui will clarify the aims and performance indicators of the House of Tahu project and provide a process for assessing the current design, ranking the relevance of different features and identifying and discussing the priorities that may require further work. This will be written into a report to assist the final design of the House of Tahu. A number of documents are attached that give further information about the process.

This letter is to invite you to be part of this process. You will be asked to be available for the possibility of an interview, to be involved in the hui planned for the 4 and 5 of December 2006 and to give comment on the final report developed from the process. If you are interested in being involved please fill out the registration form attached and return it to Craig Pauling by Friday the 24th of November. Craig will also be in touch over the next few weeks to ensure you got this letter and information.

I look forward to having you involved in this exciting process.

Heoti anō

Tahu Potiki
CEO, Te Rūnanga o Ngāi Tahu

Te Rūnanga o Ngāi Tahu Level 6, Te Waipounamu House, 158 Hereford Street, PO Box 13-046, Christchurch, New Zealand
Phone: 64 3 366 4344 Fax: 64 3 365 4424 Email: info@ngaitahu.iwi.nz www.ngaitahu.iwi.nz

Appendix F: CSA Interview Form

House of Tahu CSA Survey/Interview

Name(s):			
Date of Survey / Interview:		Place of Interview:	
Gender:		Age:	
Place of Birth:		Place of residence / interest:	
Place of residence prior to living in current area:		Length of time living in current area:	
Ethnicity / affiliations:			
Occupation:			
Experience/Background (Education, work etc):			
Other:			

<p>Have you dealt with any consents or planning issues in relation to urban development, such as subdivisions, commercial buildings (museums, office buildings, carparks, business parks etc), or urban air, wastewater, sewage and stormwater discharges?</p>
<p>If so, please list any specific examples (particularly note ones where CIAs have been done?)</p>
<p>Are these types of consents/issues a major issue across all of your work (eg. What % of your time/effort do they take up? Or how much weight to you place on these issues?)</p>

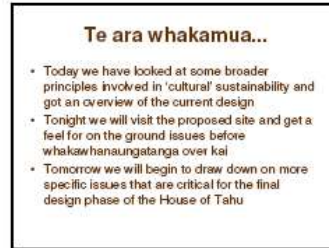
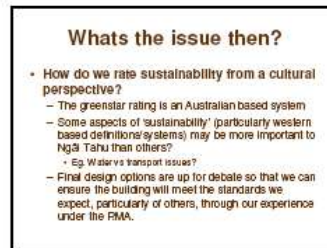
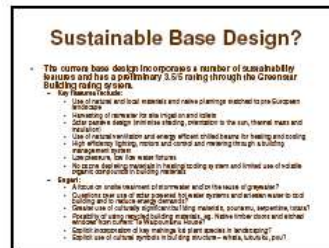
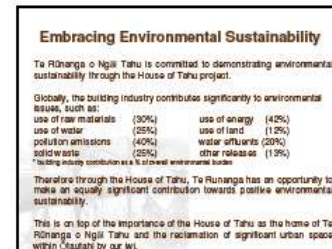
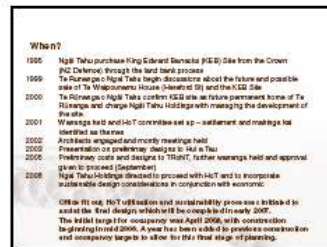
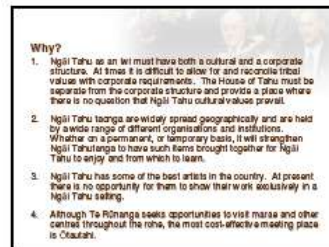
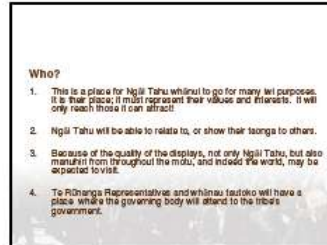
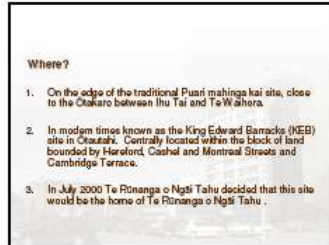
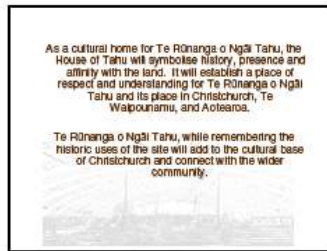
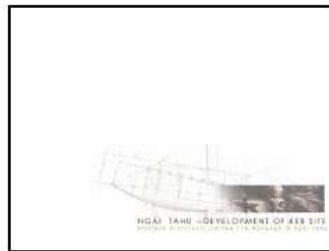
If a commercial building or urban development was being proposed in your area, what would be the key issues and/or bottom lines you would bring up?? (eg. Naming / interpretation, wastewater, stormwater, energy, materials, native restoration, wahi tapu etc)
What process would you expect from the developers of such a building?
Are there any specific economic considerations that you take into account when dealing with these projects?
Are there any specific environmental considerations are taken into account when dealing with these projects?
Are there any specific cultural considerations are taken into account when dealing with these projects?
Are there any specific social considerations are taken into account when dealing with these projects??
Of all the issues / considerations raised, what is the most important for you and why?
Are there any other things you would like to raise?

Aku mihi nui ki a koe mo ou awhi mo ou tautoko ki te kaupapa nei.

Thank you for your time and effort in supporting this process.

I will send you a copy of the information I have recorded from this interview before including it in any other report. Hei kona, noho ora mai.

Appendix G: House of Tahu Overview Presentation



Appendix H: Agenda, Background, and List of Information Given to Participants for CSA Workshop

Te Kaupapa o Te Whare:

House of Tahu Cultural Sustainability Assessment Workshop

Te Waipounamu House, Ōtautahi / Christchurch - 4-5 December 2006

Wā / Time	Kaupapa / Topic	Kaimahi or Facilitator
Rā Tuatahi / Day 1 – Rāhina/Monday 4 Waru /December 2006 – Groundfloor Boardroom, TWP House		
3.00pm	MIHI /Welcome and Introductions	Tahu Potiki
3.30pm	Paramanawa / Afternoon Tea	
4.00pm	1. Kōrero Tīmatatanga / House of Tahu and the Mauri Model	
	Introductory Presentation about the Mauri Model and the process to be undertaken in the context of House of Tahu	Kepa Morgan
4.30pm	2. Tautuhi Whainga / Identifying Aims for House of Tahu	
	Group Work to identify the aims of the House of Tahu project in terms of the four dimensions of the Mauri Model. This exercise will allow the groups to identify any of the dimensions that require more definition and confirm the interdependencies / hierarchy of the dimensions for the House of Tahu project.	Kepa Morgan / Craig Pauling
5.15pm	3. Mahi Waitohu / Identify and Rank Performance Indicators for the House of Tahu	
	Group work to identify metrics / performance indicators that reflect the dimensions and a ranking of these in terms of relevance to each dimension. The outputs from these workshops will identify how effectively the consultants have interpreted and met their design brief and any areas of the design that present new opportunities or require further work.	Kepa /Craig
6.00pm	Hiko/travel to HOT Site for a kōrero about the historical significance of the wider Puari / Ōtakaro / Ōtautahi area and Takiwā site assessment	Te Maire Tau (to be confirmed) / Tahu / Craig
7.00pm	KAI a te po / Dinner – To be held at the XO lounge overlooking the HOT site and Ōtakaro River	
	Accommodation for those from out of Christchurch at Holiday Inn, Cashel Street	
Rā Tuarua / Day 2 – Rātu/Tuesday 5 Waru / December 2006 – Groundfloor Boardroom, TWP House		
9.00am	Kōrero Whakahounga / Revision - Charette type presentation of each groups previous days work to the whole hui.	Kepa/Craig
9.30am	4. Kōrero Whakaputaina	
	General discussion of the new ideas and revealed perspectives that each group gained (of the other and their own group), and potential opportunities.	Kepa /Craig
10.30am	Paramanawa / Morning Tea	
11.00am	5. Mahi Whakaaro Tahī	
	Agreement on collective definition of aims, weightings etc within the Mauri Model framework for this project and debate / negotiation of new or divergent perspectives to identify new approaches that satisfy both groups expectations	Kepa /Craig
12.00pm	KAI a te poutu / Kōrero whakamutunga & Hākari	
	Finally we wrap up the kōrero with a 'leader' from each group (self selected) and hākari	

Te Kaupapa o Te Whare:

House of Tahu Cultural Sustainability Assessment

Whakataki / Introduction

Te Rūnanga o Ngāi Tahu are committed to developing a multi-functional tribal building that balances and expresses both the cultural and commercial face of the modern iwi, while recognising the foundations and traditions that have allowed the iwi to flourish.

Through its design, development and operation, the House of Tahu will be the physical symbol of the tribal whakatauki *mō tātou, a, mō kā uri a muri ake nei*, being a place where Ngāi Tahu Whānui and their manuhiri are welcome, encouraged and proud to visit, gather and conduct their work.

Along with the adjoining administration building, House of Tahu will be the place where the staff of Te Rūnanga and its' subsidiary companies will carry out their work on fulfilling the vision of Mō Tātou. It is also intended that the building will be open to manuhiri, displaying Ngāi Tahu history, culture and identity, while generating income through commercial activities, such as a café, as well as encapsulating the sustainability principle of Mō Tātou through sustainable design, development and interpretation.

While planning has been underway since 2000 and tribal consultation has taken place through tribal representatives on the House of Tahu committee, wānanga and presentations and displays at Hui ā Tau, there is now a final opportunity to identify and make recommendations for aspects of the final design that are critical to Ngāi Tahu cultural values and aspirations. This 'Cultural Sustainability Assessment' will draw on our significant resource management experience and expertise to integrate cultural and environmental bottom lines and develop the tribes understanding of its standards for sustainable building design and operation. In this sense – 'Te Kaupapa o Te Whare' will ground the building and set a platform for future development.

Tāhuhu Kōrero / Background

The House of Tahu is not a new idea. Ever since we have had an organised tribal structure, we have needed a place to gather, meet and conduct the business of the iwi. For example, in our recent history, the Ngāi Tahu Māori Trust Board used to rent a small office in Kaiapoi, before moving to a Christchurch office in Oxford Terrace, then the former Te Waipounamu House in Armagh Street, before settling at the current Te Waipounamu House in Hereford Street for the past 8 years.

It was in 1995 that we purchased the King Edwards Barracks site in Christchurch, and in 2000 that it was formally identified as the future permanent home of Te Rūnanga. Our tribal association with the area surrounding the site, however, is also important to put into context, as in another sense, the House of Tahu is also about developing an urban space for our people in a place we once knew as 'home'.

It is also worth remembering that our Claim and Settlement have allowed us the honour of reclaiming such an urban space as well as building a formidable portfolio of cultural revitalization and commercial success. Our ancestors were not so lucky. In 1868, Hakopa Te Ata o Tu, Pita te Hori and others of Ngāi Tūāhuriri made unsuccessful claims to the courts to have a number of significant sites in Christchurch City put aside as mahinga kai and other reserves. These included the site of Ōtautahi on Kilmore Street and Puari near the current day High Court – just a few hundred metres from the proposed House of Tahu site. Our generation now has the opportunity to secure some of these sites, keep watch over them, relight the home fires, and to develop them in ways that are appropriate and effective for us. The House of Tahu is one such chance to build on these earlier foundations. Another important consideration is that if the tribe does not take this opportunity, then it is highly likely that someone else will, and developments that we have little control over would take its place. In this respect, the House of Tahu is an important expression of our rangatiratanga and mana in the post-settlement era and looking out towards the future.

Te Kauneke / Process

Put simply, like many of the things that our iwi embarks on - we are entering uncharted territory. It is definitely a first for us, so the process we are proposing is completely new, but significant, and we hope that this will be considered as we make our way through it.

The Cultural Sustainability Assessment is an opportunity for tribal members to provide feedback on the current design concepts, and to identify and prioritise the critical cultural design features of the final building. It is our chance to provide a positive contribution to the look and feel of our tribal headquarters and this important urban space within our tribal rohe.

The first step is a desktop exercise to identify existing policy, issues or values that have been developed for similar issues through the collective experience of the tribe in resource management related areas. This will involve reviewing policy and planning documents such as Te Whakatau Kaupapa (Canterbury and Murihiku), Kai Tahu Ki Otago and more recent plans such as Te Poha o te Tohu Raumati.

Following this, a working group of interested Ngāi Tahu with a range of resource management experience will be interviewed in relation to the policy review. They will also be asked to identify any further issues or values in regards to urban building developments. This feedback will be collated and drafted into a document to be discussed at a hui / workshop to help determine cultural design preferences in the context of the House of Tahu.

The hui will be facilitated by Kepa Morgan (see attached profile) using a cultural values based decision-making and assessment tool he has developed called the Mauri Model (see attached information). This will involve a series of workshop sessions run over two consecutive days and involving both Ngai Tahu representatives and the House of Tahu consultants group (Engineers, Architects, Project Manager, Ngai Tahu Property staff etc). The workshop sessions will help clarify the aims and performance indicators of House of Tahu project in terms of community (social), whānau (economic), ecosystem (environmental), and hapū/iwi (cultural) wellbeing and provide a process for assessing the current design, ranking the relevance of each dimension and identify and discuss the priorities that may require further work.

A visit to the House of Tahu site will be run at the tea break to allow people to get a feel for the site, give an overview of the historical significance of the area and to provide an opportunity to undertake a Takiwā/Cultural Health Index assessment of the current site and surrounding area/environment, including the Ōtakaro/Avon River and nearby Puari Pā. The purpose of this site assessment is to provide a baseline for comparing the House of Tahu site, post-construction.

All feedback from the hui will be developed into a final report to give guidance for the final design phase of the House of Tahu.

The report will also include recommended policy/guidelines for future urban development work to assist resource consents of this nature as well as providing a Ngai Tahu standard or assessment framework to guide the work of Ngai Tahu Property.

The hui will start at 3pm on the 4th and wrap up after lunch on the 5th of December 2006, and will be held in Christchurch, with the first workshop sessions taking place at the Groundfloor Boardroom, Te Waipounamu House, before moving to Rehua Marae (to be confirmed / subject to availability) in the evening and for the concluding workshop sessions the following day. If Rehua is not available alternative arrangements will be made for the remainder of the hui and for accommodating people from outside Christchurch. A draft agenda for the workshop is outlined and the end of this document.

Kāhui Tangata / People Involved

The people involved in the Cultural Sustainability Assessment include a range of Te Rūnanga staff, Papatipu Rūnanga Representatives and Resource Management kaimahi, Te Rūnanga Group Board Members as well as the consultants and staff working on the House of Tahu. Urban researchers from Manaaki Whenua Landcare Research will also be invited to assist in recording, writing up and providing an independent review of the workshop.

A full list of the people invited to be involved in the process is outlined on the following page.

PAPATIPU RŪNANGA RESOURCE MANAGEMENT

Claire Williams (Ngāi Tūāhuriri)
Edward Ellison (Ōtakou)
Jane Davis (Oraka-Aparima)
Raewyn Solomon (Kaikōura)
Kara Edwards (Makaahwio)
Aaron Leith (Awarua)
Iaeen Cranwell (Wairewa)
Hirini Matunga (Taumutu)
Te Ao Hurae Jo Waaka (Arowhenua)

TRIBAL GOVERNANCE

Mark Solomon (Kaiwhakahaere/TRONT Rep. Kaikōura Rūnanga/NT Governance Board)
Te Maire Tau (TRoNT Rep. Ngāi Tūāhuriri Rūnanga/NT Governance Board)
Andy Pearce (External Rep. NT Governance Board)
Wally Stone (Chair Ngāi Tahu Holdings Board / NT Governance Board)
Tahu Potiki (CEO/Governance Board)
Linda Constable (Ngāi Tahu Holdings Board)
Donald Couch (TRoNT Rep. Rāpaki Rūnanga / Deputy Kaiwhakahaere/HoT Committee)
Steven Bragg (HoT Committee Chair and TRoNT Rep. Awarua Rūnanga)
Michael Skerrett (TRoNT Rep. Waihopai / Te Ao Marama)

TE RŪNANGA STAFF

Andrew Harrison (Ngāi Tahu Holdings Corporation)
Tony Sewell (Ngāi Tahu Property, General Manager)
David O'Connell / Nigel Scott (Toitū Te Whenua)
Rachel Puentener (Toitū Te Whenua)
Iranui Stirling (Toitū Te Mana)
Arapata Reuben (Toitū Te Mana)
Vicki Ratana (Toitū Te Iwi)
Te Whe Phillips (Toitū Te Iwi)

HOUSE OF TAHU CONSULTANTS/PROJECT TEAM

Russell Pyne – Ngāi Tahu Property, HoT Project Leader
Grant McKenzie – RCP Consulting, HoT Project Manager
Matthew Gray – Powell Fenwick, Project Engineer
Ian Athfield – Athfield Architects Ltd, Project Architect
Jeremy Perrott - Athfield Architects Ltd
Jenn Bestwick – HoT Utilisation (Gallery etc)
Patsy Bass – Toitū Te Mana, Admin Building Design and Fit out
Laurie Aznavoorian - Geyer Australia (Fit out consultants)

Hui Facilitation/Organisation:

Craig Pauling – Toitū Te Whenua, HoT Cultural Sustainability Assessment Project Leader
Kepa Morgan – Mahi Maioro Professionals – Hui Facilitation

Communications:

Janet Wright – Ngāi Tahu Communications

Independent Review/Write up:

Robert Vale – Sustainability Architect, Manaaki Whenua Landcare Research
Shaun Awatere – Project Leader, Tū Whare Ora Project, Manaaki Whenua Landcare Research
Shad Rolleston – Māori Urban Design PhD Student, Auckland University / Tū Whare Ora Project, Manaaki Whenua Landcare Research

List of Information provided to workshop participants

- a. Letter of invitation to cultural sustainability assessment workshops
- b. Draft workshop agenda
- c. Background information on Mauri Model workshops
- d. Profile – Kepa Morgan
- e. MORGAN, T.K.K.B. (2006) 'Lifting the lid on LID in Aotearoa/New Zealand', NZWWA Stormwater Conference, Rotorua, New Zealand, 4-5 May 2006
- f. MORGAN, T.K.K.B. (2006) 'Water pollution mitigation using the Mauri Model', Water 06 Conference, Auckland, New Zealand, 2-4 August 2006

Appendix I: Mauri Model Presentation

House of Tahu
Cultural Sustainability Assessment Workshop
Te Waiapu House
4-5 Hāhakea 2006

The Mauri Model
House of Tahu Design Evaluation Exercise

Civil & Environmental Engineering
THE UNIVERSITY OF AUCKLAND
Faculty of Engineering

Te Kōwhiri Kōwhiri Morgan
MScEng, MEng, MPhil, PhD, CEng, CPEng, CIPD
Senior Lecturer / Associate Dean (Acad)

Te Arawa is the canoe my ancestors journeyed on
Ngāi Pihiao are the people I belong to
Matawhaia is our mountain

Te Rōtiro i kitea a Ihenga are our waters
Te Ranginui is our eponymous ancestral bond
Te Parāwhakareira a Raukawa is our marae

Acknowledgement and Salutations to you all

Indigeneity (Dunin, 2005)

- Unity with the environment (holistic)
- Geographic relationship/belonging (place)
- Endurance over many generations (time)
- Development of a distinctive culture (identity)
- System of knowledge
- A unique language
- Sustainability

An enduring relationship between peoples, their territories, and the natural environment

Workshop Aim

Identify the critical cultural design features for House of Tahu.

How?

A holistic decision-making framework will be used to determine the priorities for sustainability from an indigenous viewpoint.

This process is expected to integrate the indigenous values / beliefs of Kai Tahu into an enhanced holistic design.

The Mauri Model

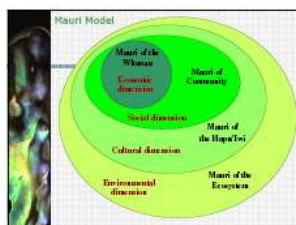
- mauri principle as sustainability indicator
- land, forests, waters, and all the life they support, together with natural phenomena such as mist, wind and rocks, possess mauri (Marsden, 1992)
- mauri is the binding force between the physical and the spiritual (Dunin, 1998)
- permeates all Maori thinking as central concept in the genealogy of creation

What is the Mauri Model?

Particular framework of effects and well-being assessment using four dimensions of sustainability (see LGD2002, Action Plan 2003)

- Social
- Economic
- Environmental
- Cultural
- Community
- Whanau
- Ecosystem
- Hapu

Four key aspects of our well-being
How should these inter-relate?



Environmental well being
Mauri of the Ecosystem

- State of the ecosystem reflects its mauri
- water catchments and aspects of hydrological cycle
- mountains, puna, ua, awa, roto, moana - Otago
- physical health and proliferation of flora and fauna
- whenua, ngahere, manu, ngahanga, kararehe, etc...

Whātungaro te tangata, tu tonu te whenua

Cultural well being
Mauri of the Hapu / Iwi

- Manawhenua, kawa, tikanga, wahi, whānau, whānau
- Mana, mana, mana, mana, mana, mana, mana, mana
- Mana, mana, mana, mana, mana, mana, mana, mana
- Mana, mana, mana, mana, mana, mana, mana, mana
- Mana, mana, mana, mana, mana, mana, mana, mana

Whānau, mana, mana, mana, mana, mana, mana, mana, mana

Social well being
Mauri of the Community

- Tangata Whenua, Tuarāwhiri, Non-Māori
- provide public health, safety and well-being
- education, recreation, leisure associated with local Tahu
- exemplar and employment opportunities
- commercial and cultural services - e.g. gallery, offices
- reducing risk and impact on infrastructure

Ki māi ki au, he aha te mea nui? Māku e ki, he tangata, he tangata, he tangata.

Economic well being
Mauri of the Whanau (family)

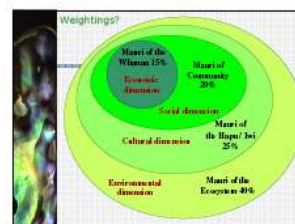
- Affordability of particular design choices
- effective use of resources during construction
- efficient concept operation and service delivery
- return from commercial activities on-site
- integrated employment opportunities
- impact on whanau health and well-being

Application of model

- Determine hierarchy of dimensions
- Identify and prioritise metrics
- Establish current status / default
- Identify options for change
- Determine option sustainability
- Sustainability ratings compared individually and in aggregate
- Make decision

Analytic Hierarchy Process (AHP)

	Environment / Ecosystem	Whānau / Family	Community / Social	Whānau / Family	Total
Mauri					
Environment / Ecosystem					
Whānau / Family					
Community / Social					
Whānau / Family					



Workshop

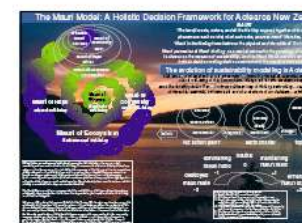
- Participant acceptance of framework.
- Confirmation of ranking / hierarchy.
- Determine performance indicators for ecosystem, hapu/iwi, community, whānau mauri (well being equivalents)
- Assess options including status quo.
- Decide on best option(s) available.
- Compare to parallel workshop choices?
- Report as recommendations.

Assessment Approach

- Ecosystem metrics
 - Threat / loss of quality or quantity
 - Land, water, air demand (physical / ecological)
 - Environmental mitigation
- Hapu metrics
 - Threat / loss of amenity value
 - Limitation / enhancement of cultural practices
 - Relevant environmental mitigation
- Community metrics
 - Public issues
 - Relevant environmental mitigation
- Whānau (family unit) metrics
 - Economic impact and services variation

Sustainability barometer

Diminishing Mauri roho -1
Designated Mauri roho -2
Maintaining 0
Enhancing Mauri pai 1
Fully restored Mauri ora/Raua 2



Conclusions

- Past decision-making has not included the full benefit potentially contributed by Maori knowledge and values
- The Mauri Model is a potential improvement
- The Mauri Model removes hidden bias (transparent)
- The Mauri Model is useful in identifying approaches that are culturally acceptable (greater success with design)
- The Mauri Model analysis identifies potential for conflict but also allows enhanced understanding of cultural effects

Combined contributions of two knowledge systems provides the potential for enhanced urban and rural landscape design

Ko te pae tawhiti whāia kia tata
Ko te pae tata whakamaua kia tina

Seek distant horizons and hold fast to those you attain

Mauri ora ki a tatou katoa

Analytic Hierarchy Process (AHP)

	Environment / Ecosystem	Whānau / Family	Community / Social	Whānau / Family	Total
Wellbeing					
Environment / Ecosystem					
Whānau / Family					
Community / Social					
Whānau / Family					

