

Ngā Mihi / Acknowledgements

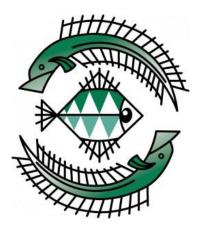
The writers wish to acknowledge the support of the following people and organisations who assisted with this report:

Liz Brown and the Te Taumutu Rūnanga Mātauranga Portfolio

Mātauraka Mahaanui

Takerei Norton and the Te Rūnanga o Ngāi Tahu Cultural Mapping Team

Nei rā te mihi uruhau ki a tātou



Prepared by Bridget Robilliard and Craig Pauling on behalf of Te Taumutu Rūnanga November 2015





Mihi Whakatūwhera

Hoki mai koe ki te pa a Ngāti Moki e Tū ana ki te taha o te kahu tai pouri o Te Waihora moana E rere ana ki a tatou e

> Te tuna kohaka Whāriki o te piharau Ripo o te inaka Moeka o te mohoao

Tai timu tai pari kā wai o Mahaanui ki te Poupou a Te Rakihouia Te takiharuru ki te pīkao mumura o Kaitorete whenua

Pūpu mai ka hau o Tawhirimatea i whakapurea te awa huka me te whenua pakihi Waitaha e Tihei mauri ora!

Let us return to the village of Ngāti Moki That stands beside the darkened waters of Te Waihora That flows to us all

> Gathering place of the eel Floormat of the lamprey Spawning swamps of the whitebait Sleeping ground of the black flounder

The tides of Mahaanui Rise and fall against the great eel weir of Te Rakihouia And the blazing sand sedge lands of Kaitorete

The winds of Tawhirimatea blow forth
Cleansing the snow fed rivers and the great spread out lands of Waitaha
Behold the life giving forces!





Rārangi Ūpoko / Contents:

1.	Tāhuhu Kōrero	1
1.1	Report Purpose	1
1.2	Educational Hub	1
1.3	Process	
2.	Manawhenua	2
2.1	Ngāi Tahu Whānui and Te Rūnanga o Ngāi Tahu	2
2.2	Ngāi Te Ruahikihiki and Te Taumutu Rūnanga	2
2.3	Kōrero Pūrākau - History and Traditions of Te Waipounamu & Te Waihora	3
2.4	Mahinga Kai - Working the Land	θ
3.	Ngā Tūtohu Whenua - Cultural Landscape Values	7
3.1	Whenua Tāwhito – understanding landscape change	7
3.2	Wāhi Taonga - Key Sites of Cultural Significance	9
3.3	Other sites	13
4.	Whakaaro Toi – Design in the educational institution environment	16
4.1	Mana – Relationship with Manawhenua	16
4.2	Whakapapa – Identity, Names and Naming	16
4.3	Tikanga – Protocol including mihi whakatau	17
4.4	Whare – Cultural Buildings	17
4.5	Te Reo Māori – Use of Māori language	17
4.6	Mahi Toi - Artwork and Graphic Integration / Representation	18
4.7	Taiao – Landscaping and Cultural Planting	18
4.8	Mauri Tū – Sustainable Design	19
4.9	Te Aranga Māori Design Principles	21
5.	Whakamutunga / Conclusion	22
5.1	Ngā Marohi / Recommendations	22
6.	Kōhika kōrero / References	24
7.	Appendices	25
Арр	endix 1: Indigenous Plants for the Southwest Area	25
Ann	endix 2: Mahinga kaj and taonga species associated with the Taumutu takiwā	20





1. Tāhuhu Kōrero

1.1 Report Purpose

This report has been commissioned by the Ministry of Education as one of a series of similar packages for 'hubs' of educational facilities around the Canterbury Region.

The purpose of this report is to provide insight into the cultural history of the educational institutions' surroundings to allow these aspects to be incorporated into the design of existing and new educational institutions. For this report 'design' refers to both physical (buildings, planting etc.) and non-physical (curriculum, values, kaupapa etc.) aspects of the educational institutions.

This report was prepared on behalf of Te Taumutu Rūnanga in the expectation that this information will aid in the educational institutions engagement with Te Ao Māori (The Māori World), including mana whenua, as well as the whakapapa and cultural history of the Educational institution's wider environment.

1.2 Educational Hub

The educational hub of Ngā Matapuna o Te Waihora currently contains the following educational institutions:

Primary

- Dunsandel School
- Leeston School/ He Puna Karumata
- Southbridge School/ Te Kura o te Whata

Secondary

• Ellesmere College/ Te Kāreti o Waihora

Early Childhood

- Children First Pre School
- Dunsandel Childcare and Preschool Ltd
- Dunsandel Playcentre
- Leeston Playcentre
- Southbridge Playcentre
- Treasure Trove Kindergarten

1.3 Process

In creating this document the following process has been undertaken:

- Gathering of information from a range of trusted references and creation of draft report;
- Consultation with educational institutions/ clusters on design ideas;
- Consultation with cultural specialists;
- Integration of information from consultations into final document

It is expected that an ongoing process of engagement between Te Taumutu Rūnanga and educational institutions will assist with the implementation of ideas and reccomendations from this report, particularly in relation to new educational institutions development as well as the redevelopment/renewals of existing educational institutions.



2. Manawhenua

Manawhenua refers to the mana or 'authority' held by an iwi, hapū or whanau over the land or territory of a particular area. This authority is passed down through whakapapa (genealogy) and is based on the settlement and occupation of, and continued use and control of natural resources within, an area. Manawhenua is also used to describe the people who hold this authority, and who are also considered the kaitiaki (guardian/caregiver, steward etc.) of their particular area or takiwā.

2.1 Ngāi Tahu Whānui and Te Rūnanga o Ngāi Tahu

Ngāi Tahu Whānui are the iwi (Māori tribe) who hold manawhenua over a large proportion of Te Waipounamu – the South Island. The modern iwi originates from three main tribal strands; Waitaha, Ngāti Mamoe and Ngāi Tahu. Through intermarriage, warfare and alliances, these tribal groups migrated, settled, occupied and amalgamated and established manawhenua over their tribal area prior to European arrival. Specific hapū or sub-tribes established control over distinct areas of the island and have maintained their mana over these territories to this day.

Te Rūnanga o Ngāi Tahu is the mandated iwi authority established by Ngāi Tahu Whānui under Section 6 of the Te Runanga o Ngai Tahu Act 1996 to protect the beneficial interests of all members of Ngāi Tahu Whānui, including the beneficial interests of the Papatipu Rūnanga of those members. Te Rūnanga o Ngāi Tahu is governed by elected representatives from each of the 18 Papatipu Rūnanga and has an administrative office as well as a number of commercial companies.

Papatipu Rūnanga are the administrative councils of traditional Ngāi Tahu hapū (sub-tribes) based around their respective kāinga / marae based communities and associated Māori reserves, pā, urupā and mahinga kai areas.

2.2 Ngāi Te Ruahikihiki and Te Taumutu Rūnanga

The Ngā Matapuna o Te Waihora educational hub falls within the takiwā of Te Taumutu Rūnanga, one of 18 Ngāi Tahu Papatipu Rūnanga, based at Ngāti Moki Marae, Taumutu. While, Te Taumutu Rūnanga and Te Ngāti Tūāhuriri (traditionally based at the Kaiapoi Pā) have shared interests in the Selwyn area, as part of the Education portfolio agreement, Te Taumutu is recognised as the kaitiaki of the educational institutions in the district.

The takiwā (territory) of Ngāi Te Ruahikihiki (the hāpu who are represented by Te Taumutu Rūnanga) is centred around Te Waihora (Lake Ellesmere) and extends across the central part of Kā Pākihi Whakatekateka o Waitaha (the Canterbury Plains) to Kā Tiritiri o Te Moana (The Southern Alps) to the west, the Waimakariri River in the north and to the Hakatere (Ashburton River) in the south. It shares interests with Te Ngāi Tūāhuriri Rūnanga, Te Rūnanga o Arowhenua, and Wairewa Rūnanga to the north, south and east respectively, as well as other rūnanga based on Te Pātaka o Rākaihautū (Banks Peninsula) who have traditional associations with Te Waihora.

The people of Te Taumutu Rūnanga descend from the tīpuna or *ancestor*, Te Ruahikihiki and his son Moki (II) who settled at Taumutu in the seventeenth century. Te Ruahikihiki moved from Akaroa Harbour to Taumutu on the southern shores of Te Waihora. Te Ruahikihiki settled at the pā, Orariki, which is where the present day Hone Wetere church and hāpu urupā are located. Moki (II) established his pā site nearby at Taumutu, on the site where the present Ngāti Moki marae is located, near the south-western edge of Te Waihora. In 1891 a wharenui, named Moki, was opened on the site of the original historic Pā o Moki. The meeting hall has undergone many alterations and additions and is now known as Ngāti Moki. Grass covered mounds of earth can still be seen at the Ngāti Moki pā site. These ramparts run parallel to Pohau Road and are the remains of the traditional battle defences of the original pā (Te Taumutu Rūnanga 2014).





2.3 Korero Pūrākau - History and Traditions of Te Waipounamu & Te Waihora

Aoraki and Tū Te Raki-haunoa

According to Ngāi Tahu tradition, the South Island is formed from the wreckage of Te Waka o Aoraki – the canoe of Aoraki, the eldest son of Raki and Pokoharuatepo. Aoraki and his brothers came down from the heavens where they lived with their father Raki (Sky father) in their waka to visit their step mother Papatūānuku (earth mother). While on their visit they encountered a great storm, while reciting a karakia (enchantment) to return them to safety they made a mistake which caused their waka to be upturned. Aoraki and his brothers climbed onto the upturned waka where they turned to stone, they can now be seen as the principle mountains of the Southern Alps, of which Aoraki (Mt Cook) is the highest. It is from this story that the South Island is also referred to as 'Te Waka o Aoraki' (Te Taumutu Rūnanga, 2008)

Following the wreckage of Te Waka o Aoraki, Raki sent a number of his mokopuna from the heavens to transform the waka into land that would sustain human life. Among these demi-gods were Tū Te Raki-haunoa whose job was to carve the keel of the upturned waka into mountains and valleys, Kahukura who forested the bare landscape and filled it with animals, and Marokura who carved bays, inlets and estuaries and populated them with fish of many varieties. The mana of Tū Te Raki-haunoa remains to this day given his ongoing residence as the Atua Tiaki (a supreme guardian) for Te Waihora. His resting place at Whakamātakiuru (Fishermans Point) gives the mana to the people of Taumutu as the tangata tiaki for this area.



Whakaahua 1. Carving by Cliff Whiting depicting Tū Te Raki Haunoa and his relatives making Te Waka o Aoraki ready for human habitation. Source: E ai ki ngā korero mai I Taumutu (Te Taumutu Rūnanga, 2008)

Waitaha and Rākaihautū

The first people to arrive in the central Canterbury area were those on the Uruao waka under the captaincy of Te Rakihouia. Te Rakihouia had been instructed by his father Rākaihautū to seek out the rich resources of the coastal area (ki tai) while he traversed the mountain regions identifying the resources of land (ki uta). Te Rakihouia discovered the wetland of Te Waihora that teemed with fish and birds and upon reuniting with his father took him to the lake where Rākaihautū proclaimed Te Waihora as Te Kete Ika a Rākaihautū – The Great Fish Basket of Rākaihautū. Te Rakihouia equally named the coastline of this area as Kā Poupou a Te Rakihouia.





Whakaahua 2. Carving depicting Rākihautū which hangs in the Ngāti Moki Marae. Source: E ai ki ngā korero mai I Taumutu (Te Taumutu Rūnanga, 2008)

Ngāti Mamoe and Tutekawa

Some generations later a Ngāti Māmoe chief named Tutekawa, who had been embroiled in skirmishes with his chiefly relations in the North Island, came to live at Ōhōkana near Kaiapoi. After a time Tuekawa heard that the eels of Te Waihora were of a better quality so he moved to the shores of the lake and built the pā of Waikākahi. His son Te Rakitāmau meanwhile built his pā at Taumutu which he named Hakitai. Surrounded by his allies, and at a distance from his enemies, Tutekawa felt quite safe. After many years though his hapū were growing anxious with the rapid southward advance of Ngāi Tahu. They urged the old chief to escape while the opportunity remained but his only reply was "What will then become of the basket of flat fish spread open here?" Tutekawa was killed when the Ngāi Tahu forces arrived at Waikākahi, and the various chiefs of Ngāi Tahu set out to secure land for themselves.

Ngāi Tahu and Te Ruahikihiki

Prior to the arrival of Ngāi Tahu on Banks Peninsula, a young chief Te Ruahikihiki had received reports about the abundance of īnaka, pātiki and tuna in Te Waihora and proclaimed "Tāku kāika ko Orariki" (Orariki at Taumutu is

my place), thus placing a tapatapa (claim) on it. Once at Banks Peninsula though, Te Ruahikihiki claimed several places with his first landing at Wainui (Akaroa) where he commenced to dig fern root and cook it. He then passed around the coast leaving his stepson Manaia at Whakamoa, other relatives at Waikākahi, and finally took up his permanent residency at the pā of Orariki, Taumutu. The ahi kā of Ngāi Te Ruahikihiki remains at Taumutu to this day, and together with the residence of Tūterakihaunoa at Whakamātakiuru, instils the responsibility of kaitiaki for Te Waihora.



Whakaahua 3. Hone Wetere, The Taumutut Mãori Church which is located at Orariki, Te Ruahikihiki's Pā. Source: Taumutu Te Wāhi me te Taiao (Te Rūnanga o Taumutu, 2008)



Taumutu and Ngāti Moki Marae

A place of occupation for over 600 years, Taumutu has a longstanding cultural history and has been the site of much archaeological interest for this reason. Borrow pits are visible in the paddock across from Ngāti Moki marae. These large depressions in the ground are the result of the removal of earth for use in what are considered to be some of the southernmost kūmara gardens in the South Island.

Taumutu means the 'end of a ridge', or a 'high ridge'. The name may also be a shortened version of Te Pā o Te Ikamutu - a traditional site in the area. The swampy environs of Te Waihora including Waiwhio (Irwell River), Waitātari (Harts Creek) and Waikekewai provided the prime environment for tuna (eels), pātiki (flounder), kanakana (lamprey) and waterfowl such as pūtakitaki (paradise duck). This bounty provided for those living at Taumutu but also afforded them a ready currency for bartering with other hapū all over the South Island.

The 19th century saw the kāinga at Taumutu embroiled in the turmoil of the Kai Huaka feud from 1825-28. The kāinga was then doubly threatened by Te Rauparaha's invasion of the south and the arrival of increasing numbers of European farmers and fishermen.

European immigrants worked to harness the bounty of the lake and develop its surrounding lands into pasture. Ngāi Tahu influence in the area was rapidly eroded culminating in the 1848 Kemp Purchase that saw much of the land at Taumutu passing out of Ngāi Tahu control. Although Ngāi Tahu reserved Te Waihora from the sale, and sought the gaurantee of acess to mahinga kai, exploitation of the lake and its resources continued and the European presence led to the population at Taumutu being in serious decline by the end of the 19th century.

Despite the decreasing population, a new meeting hall was built and officially opened on 7 May 1891. It replaced an earlier structure that had stood on the same site. The hall was named Moki after the tipuna whose original historic pā had stood on the same ground. Moki has undergone extensive modernisation and additions over the years and so bears little resemblance to its original 1891 form. Since the 1980's there has been a gradual resurgence in the Ngāi Tahu population at Taumutu, with the marae being frequented for monthly Rūnanga meetings, as well as wānanga, whānau events, educational institution visits and other hui. The marae is a favoured spot for wānanga and educational hui and Te Taumutu Rūnanga has invested much time and energy in restoration of the riparian margins of the two streams that meet up at, and run past the marae into Te Waihora.



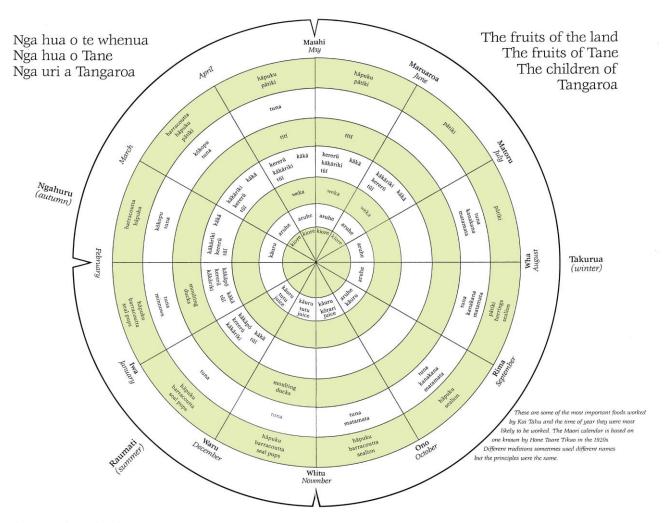
Whakaahua 4. Ngati Moki Marae. Source: Taumutu Te Wāhi me te Taiao (Te Rūnanga o Taumutu, 2008)



2.4 Mahinga Kai - Working the Land

Mahinga kai, and the associated custom of kai hau kai (exchange of food/resources), is of central importance to Ngāi Tahu culture and identity. Literally meaning 'to work the food', it refers to the gathering of food and resources, the places where they are gathered and the practices used in doing so. Traditional mahinga kai practice involved the seasonal migration of people to key food gathering areas to gather and prepare food and resources to sustain them throughout the year. These hīkoi also provided opportunities to reinforce relationships with the landscape and other whanaunga (relations), develop and share knowledge and provide the resources that could be used for trade.

The mahinga kai chart shown below, based on one known by Hone Taare Tikao in the 1920s and developed by Bill Daker (1990), outlines the major foods worked by Ngāi Tahu, including tuna (eels), matamata (whitebait), tītī (muttonbirds), kererū (wood pigeon), aruhe (fernroot) and kāuru (cabbage tree root), and the time of the year they most were likely to be gathered.



Whakaahua 5. Mahinga kai chart.

From their settlements in and around the Te Waihora, Ngāi Te Ruahikihiki gathered and utilised natural resources from the network of sites across their takiwā that provided food as well as material for housing, garments, adornments and tools. Te Waihora was the key mahinga kai (food source) and the following whakatauki encapsulates the significance and abundance of these food resources:

Ko ngā hau ki ētahi wāhi; Ko ngā kai kei Orariki

No matter which way the wind blows (season), one can always procure food at Taumutu





3. Ngā Tūtohu Whenua - Cultural Landscape Values

The name for the Ellesmere schools' educational hub, Ngā Mātāpuna o Te Waihora, meaning the source of Te Waihora, gives reference to the importance of Te Waihora (Lake Ellesmere) as a taonga of Ngāi Te Ruahikihiki. It was Te Waihora, or Te Kete Ika a Rākaihautū, which attracted Taumutu tūpuna (ancestors) to the area, and sustained them through the generations, as well as continuing to provide for and be of great value and importance to the hapū.

The Ngā Matapuna o Te Waihora education cluster is situated within a traditional network of Ngāi Tahu settlements and mahinga kai areas spread across the central part of Kā Pākihi Whakatekateka o Waitaha (the Canterbury Plains), which are of particular significance to Ngāi Te Ruahikihiki. This network played an important role in traditional lifeways, and remains significant to the heritage and ongoing identity of manawhenua. The network includes numerous wāhi tapu and wāhi taonga such as pā (fortified villages), kāinga (villages), urupā (burials), ara tawhito (trails) as well as mahinga kai (food gathering) areas. Collectively, these places, along with their associated creation, migration and settlement traditions, form a cultural landscape which reflects the ongoing and enduring relationship Ngāi Tahu have with the land.

Of particular importance to this network were the travelling routes and connections between the main settlement of Taumutu, the numerous mahinga sites spread around the shore of Te Waihora and along each of the lakes tributaries, as well as those across the plains and linking to the Waimakariri River in the north and the foothill forests and mountain passes to the Tai Poutini (West Coast). Links were also maintained to the key Ngāi Tahu pā and kāinga on Te Pātaka o Rākaihautū (Banks Peninsula), such as Rāpaki and Wairewa, as well as those in Ōtautahi (Christchurch) and further north to Kaiapoi.

The map on the following page provides an indication of the extent of this network as well as some key landscape features that existed in the past. Further information on landscape change is given below, followed by details of the key culturally significant sites known to exist within the Ngā Matapuna o Te Waihora hub area.

3.1 Whenua Tāwhito – understanding landscape change

Prior to European arrival, the area within and surrounding the hub area was very different to the highly modified agricultural and urban landscape that now exists.

Te Waihora, for example, was much larger than its current extent, with the lake level being much higher, and its associated repo or wetlands forming an extensive buffer that reached up towards current day Lincoln and Springston. Critically it provided an abundance of native freshwater fish and waterfowl which made it one of the most significant traditional food sources within Te Waipounamu.

The Cantebury Plains or Kā Pākihi Whakatekateka o Waitaha were covered with a mixture of dryland vegetation such as tussock grasslands and kōwhai groves as well as forest patches and a network of snow, spring and rainfed rivers, wetlands and waterways.

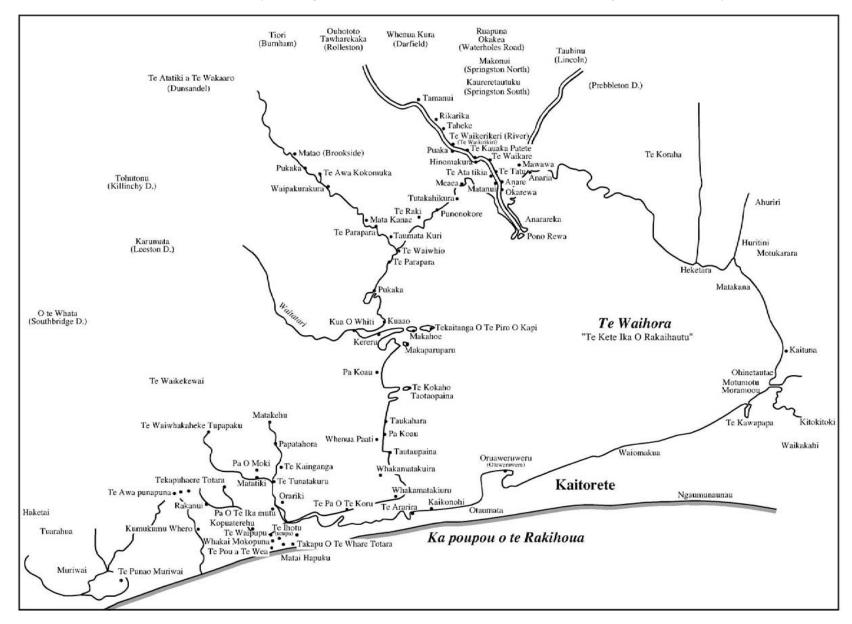
The Waimakariri was known to flood across the plains with several old river beds, channels and braids providing evidence of this, including the former 'South branch' which formed the islands known today as Mcleans and Coutts Islands.

Much of land on which the city of Christchurch now sits was a complex network of wetlands and swamps providing habitat for many mahinga kai species. The plains were also home to several flightless native birds including the Eastern buff weka, koreke (native quail) as well as the kiore (polynesian rat), all valuable food species, but now either locally or totally extinct.

The foothills and mountains making up part of Kā Tiritiri o Te Moana (the Southern Alps) and Te Pātaka o Rākaihautū (Banks Peninsula) were extensively forested providing for an abundance of native forest birds such as kākā, kererū and kiwi, which provided both food and feathers for adorning korowai (cloaks).







The landuse change which followed European settlement, largely associated with agriculture and urban settlement, along with the introduction of exotic animals and plants, altered the landscape and lifestyle that Ngāi Tahu tūpuna enjoyed. Most significant was the gradual draining of wetlands and the lowering of the level of Te Waihora, as well as the removal and/or displacement of native vegetation on the plains, foothills and the peninsula. This resulted in a degradation of both habitat as well as the species Ngāi Tahu relied on for food and other resources. In particular, several inland wetlands, such as Tararerekautuku (Yarrs Lagoon) and Ahuriri (located in the lower Huritini/Halswell River catchment) were completely drained and turned into farmland. Combined with the loss of access to mahinga kai areas following the 1848 Crown purchase of Canterbury resulted in the traditional network being gradually broken down and degraded. The importance of this network and the sites within it, however, remain significant to manawhenua, who still utilise mahinga kai where it is safe.

3.2 Wāhi Taonga - Key Sites of Cultural Significance

Taumutu

The Taumutu area, on the South-western edge of Te Waihora has been the home of Ngāi Te Ruahikihiki for many generations. There are numerous settlement sites in this area and extending along Kaitōrete Spit, with many now being eroded as the coastline has moved inland. The two main pā that are still visible and utilised today include Ōrariki and Te Pā o Moki. Other pā include Hakatai, Te Pā o Te Ika Mutu and Te Pā o Te Korua (see below). As well as the pā sites, there were numerous other sites and structures around Taumutu, such as the kumara borrow pits which are still visible in the paddocks across the road from Ngāti Moki marae, the Hone Wetere Church at Ōrariki, Awhitu House, Whakamātakiuru (Fishermans Point), the Koru, Waikekewai, and the springs of Te Waiwhakaheketūpāpaku.

Hakatai

Te Rakitāmau, the son of Ngāti Māmoe chief Tutekawa, established his pā Hakatai at Taumutu near the traditional lake opening site. With the changing landscape of Taumutu, the site of Hakatai has been reclaimed by the sea, but its important history as one of the earliest pā sites of the area is a valuable part of the cultural narrative and landscape.

Ōrariki

When Ngāi Tahu arrived in the top of the South Island and began their migration further down the Island, the young chief Te Ruahikihiki heard of the abundant resources at Te Waihora from Kaiapu and Tamakino who had earlier journeyed south with the chief Waitai. Upon hearing that Te Waihora was rich with pātiki, tuna and ducks, he laid claim to the area. After first establishing a pā at Whakamoa (near the southern headland of Akaroa Harbour), he subsequently established his pā Ōrariki on his arrival at Taumutu. The pā site is now the location of the hapū urupā (burial ground) and the Hone Wetere church, which was opened in 1885. The earth ramparts of the pā can still be seen around the urupā. Te Taumutu Rūnanga is currently undergoing efforts to help restore some of the surrounding land by creating Te Repo Ōrariki - a constructed wetland -between the church and the sea.

Te Pā o Moki

Moki (often known as Moki II), the youngest son of Te Ruahikihiki, later established his pā at Taumutu, not far from Ōrariki, at the site of the current day Ngāti Moki marae. Like at Ōrariki, ramparts that were built to the north of the pā are still visible and form a unique entrance to the marae. Waikekewai and Te Waiwhakaheketūpāpaku streams surround the site, along with a maze of springs and wetlands that once existed, which meant the pā site was well protected. In 1891 a meeting hall was opened on the site which replaced an earlier building and since then there have been many alterations and additions that have created the marae complex as it stands today.





Te Pā o Te Ikamutu

Te Pā o Te Ikamutu, like Ōrariki was built on the narrow section of land between the sea and the historic lake level. Its name is said to mean 'the village of the backwash of the fish' and was located opposite Ōrariki on the coastal side of Waikekewai Stream.

Te Pā o Te Korua / Te Koru

Te Pā o Te Korua was a pā located on the inland shores of the lagoon area that exists between Taumutu and Whakamātakiuru (Fishermans Point) – known as Te Korua or the 'Koru' for short. The lagoon was created in the past by being the area where the lake used to build up and break to the sea. It also forms the mouth of the Waikekewai Stream as it enters the lake.

Awhitu House

In the late 19th century, the M.P. for Southern Māori, Hori Kerei (H.K.) Taiaroa, moved to Taumutu. Taiaroa had ancestral ties to Taumutu and was an eminent leader and very influential figure in both Māori and Pākehā worlds. A major focus of his life's work was seeking resolution of 'Te Kerēme' or the Ngāi Tahu Claim. His family home, Awhitu House, was built at Taumutu in 1878. Awhitu House was the scene of many important gatherings and later became the residence of the much loved and revered Riki Te Mairaki Ellison. Awhitu house was used as a whanau marae for Taiaroa family gatherings. In April 2003, this whare tāwhito (heritage building) was tragically burnt to the ground resulting in the loss of not only the building but irreplaceable taonga tuku iho (treasures handed down) housed inside. A memorial garden has been established among the foundations and chimney stacks that remain standing on this historic site. The site is still used for hapū events.

Whakamātakiuru

Whakamātakiuru is the traditional name of Fishermans Point, which is located opposite where the lake is currently opened to the sea. As the English name suggests, it is famous as being a fishing village but is also known as the resting place of Tū Te Raki-haunoa – the atua tiaki of Te Waihora. The village is still resident to numerous privately owned houses who lease land from Te Taumutu Rūnanga, who owned the village reserve.

Te Waihora / Te Kete Ika a Rākaihautū and its Tributaries

The traditional name for the lake was Te Kete Ika o Rākaihautū (the food basket of Rākaihautū), a reference to the abundance of native fish and other mahinga kai found there. The key fish species of Te Waihora include: pātiki (flounder), tuna (eels) and aua (mullet). Te Waihora is also a famed mahinga kai for manu waimāori (waterfowl) including numerous native duck species, such as the pūtakitaki (paradise duck) and pārera (grey duck). Today, however, the richness of Te Waihora as a mahinga kai has been severely degraded, largely as a result of agricultural land use, lower lake levels due to drainage to the sea, and the loss of its significant wetland buffer. Despite this, it remains as a key mahinga kai of Ngāi Te Ruahikihiki and neighbouring hapū.

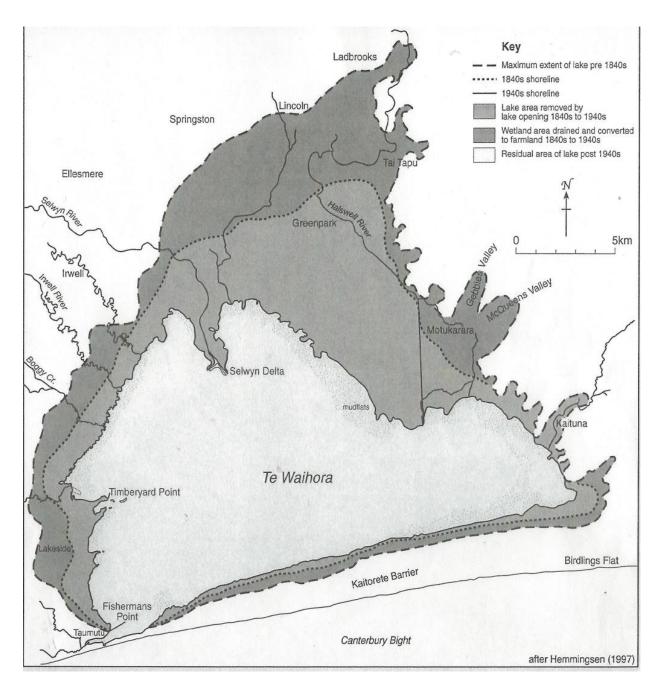
In the past, the lake was much higher than at present and it was controlled by the people of Taumutu when it was almost breaching the spit. Kōrari or the flowering stalks of harakeke / NZ Flax were dragged across the sand to make the initial opening of the water to the sea. This management allowed for the regular passage of fish to and from the lake and maintained the abundant kai of Te Waihora. The diagram on the following page provides an overview of past lake levels.

There are seven key tributaries of the lake, including Kaituna; Huritini (Halswell River); Ararira (LII River); Waikirikiri (Selwyn River); Waiwhio (Irwell Stream); Waitātari (Harts Creek) and Waikekewai. Four of these occur within the Ngā Matapuna o Te Waihora hub area and more information on these is outlined below.

Due to its significance, the lakebed of Te Waihora was returned to Ngāi Tahu through the Ngāi Tahu Claims Settlement Act 1998 and is subject to a Joint Management Plan developed by Ngāi Tahu and the Department of Conversation.







Ngāi Tahu kaumātua have vivid recollections of the Te Waihora environment from not so long ago, including:

- a clear lake with a shingle bottom;
- that it was used as a source of drinking water;
- a large pipi in the lake bed;
- a much higher lake covered a much larger area;
- an abundance of tuna in Te Koru;
- large healthy pātiki;
- abundant traditional resources that were safe to eat watercress, puha, tuna, herring, pātiki, smelt, īnanga;
- higher salinity, as the lake was open for longer periods of time;
- more fluctuation of wet and dry at Greenpark Sands; and
- a more productive environment for waterfowl and other birds.





Waikirikiri

The Waikirirkiri is a treasured landscape feature of Ngāi Te Ruahikihiki, being one of the main tributaries of Te Waihora. Numerous kāinga and mahinga kai existed along its course including the key settlement of Te Waikari near modern day Chamberlains Ford. The river and its surrounds were important for tuna (eels), inaka (whitebait), pūtakitaki (paradise duck), pārera (grey duck), pākura (pukeko) and aruhe (fernroot).

Waiwhio, Waitātari, Waikekewai and Waiwhakaheketūpapaku

The swampy surrounds of Te Waihora, and the rivers and streams which were part of these wetlands, included the Waiwhio (Irwell River), Waitātari (Harts Creek) and Waikekewai. These areas provided the prime environment for native fish such as tuna (eels) and waterfowl such as pūtakitaki (paradise duck). Of particular importance to Ngāi Te Ruahikihiki is Waikekewai, which originates just south of Southbridge and flows past both Te Pā o Moki/Ngāti Moki marae and Ōrariki, before entering the lake at Te Koru. Waikekewai, like the Waiwhio and Waitātari are spring fed rivers, prized for their very clear and cool waters. Part of the Waikekewai catchment includes the very important springs known as Waiwhakaheketūpāpaku, which were used as water burial springs for significant tūpuna. To this very day, Ngāi Te Ruahikihiki are committed to ensuring the quality and quantity of water in Waikekewai (and other tributaries) protects the wāhi taonga and wāhi tapu status of these waterways and the values they hold.

Muriwai-o-whata and Te Awa Punapuna

Just South of Taumutu is located another special taonga of Ngāi Te Ruahikihiki. Muriwai or Coopers Lagoon is a small coastal lagoon that is like a 'mini' Waihora, and regarded as an important mahinga kai site – renowned for a special variety of eel that were provided to manuhiri (guests). As the late Cath Brown stated "Muriwai was where whānau caught the brown thinner skinned eels which were the ones families liked to eat." Te Awa Punapuna is key tributary of Muriwai flowing from a springhead located near the end of McLachlans Road. The bed of Muriwai was also returned to Ngāi Tahu as part of its settlement, and is subject to a management plan that is focussed on protection and ehancement of this special mahinga kai.

Rakaia

The Rakaia river is another significant cultural landscape feature of Ngāi Te Ruahikihiki. In particular, the area around the mouth of river which includes the Rakaia lagoon and Rakaia Island is part of a wider cultural landscape extending to Taumutu and Kaitōrete Spit in the north. A considerable number of recorded Māori archaeological sites exist in this area. Once the site of extensive settlement, the Rakaia river mouth continues to be important for mahinga kai and historical and cultural heritage values. Ōtepeka, Tahuatao, Te Awa Tumatakuru, Te Hemoka o Pakake and Te Waipohatu are all settlements and food gathering/production sites at or near the river mouth. The area surrounding and including the Rakaia Huts settlement is recognised as one of the most important complexes of archaeological sites in the South Island and is registered as a wāhi taonga/tapu management area in the Selwyn District Plan. The cultural significance of the area and the nature of current land use (i.e. Rakaia Huts settlement, campground and rural area) means that there is a risk to archaeological and cultural values. Coastal erosion, the changing dynamics of the hāpua and pressure from development are all threats to this important area.

The Rakaia River possesses a range of characteristics that are considered to be outstanding for spiritual, cultural and environmental reasons and fundamental to the relationship of Ngāi Tahu to the Rakaia River. Mahinga kai is one of the most important of these, as the catchment once provided an abundant source of mahinga kai resources. The river was also an important trail to Te Tai Poutini (The West Coast). Tū Te Rakihaunoa, the atua tiaki who resides at Whakamātakiuru (Fisherman's Point) also protects the Rakaia River and is said to move between the two using underground streams. A Taumutu legend speaks of a battle between Tū Te Rakihaunoa and Te Maru (the North West Wind) which resulting in the creation of the Rakaia Gorge. Ngāi Tahu is actively seeking to restore mahinga kai values in the Rakaia catchment, and the traditions associated with those values.



3.3 Other sites

There a number of other places that have Ngāi Tahu names recorded for wider Ellesmere area, including:

Whakamatakiuru to Waikirikiri

There are numerous significant sites along the edge of Te Waihora from Whakamatakiuru (Fishermens Point) to the Waikirikiri (Selwyn River) including:

- Pākoau, Kererū and Kūaowhiti (near Lakeside);
- Makahoe, Makaparuparu and Te Kaihanga o te piro o Kapo (islands off Timberyard Point);
- Pūraka and Tohutonu (associated with Boggy Creek);
- Taumata Kurī (a kāinga near the mouth of the Waiwhio/Irwell Stream); and
- Tūtakahikura (a kāinga between Te Raki/Woods Creek and the Waikirikiri).

Te Whata

Te Whata is a name recorded for the Southbridge area and associated with a mahinga kai site known for gathering of kāuru (cabbage tree root).

Karumata

Karumata is a name recorded for the Leeston area and associated with a mahinga kai site located there.

Tohutonu

Tohutonu is a name recorded with the Killinchy area and associated with a mahinga kai site located there.

Mātao

Mātao is a name recorded for the Brookside area and associated with a mahinga kai site located on the Waiwhio (Irwell River) known for the gathering of tuna (eels).

Te Matatiki o Te Whakaaro

Te Matatiki o Te Whakaaro is a name recorded for the Dunsandel District and associated with a mahinga kai site for tuna (eels) and aruhe (fernroot) as well as a place of potato cultivations. It is also recorded that a spring was present at this site.

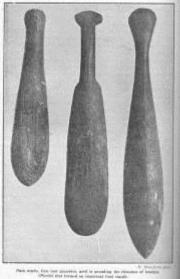
Matanui

Matanui is a name recorded for the Bankside area.



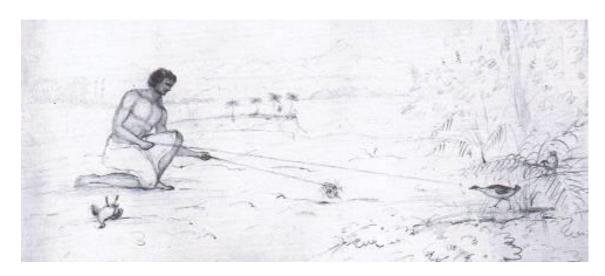






Whakaahua 8. Rauaruhe and Aruhe (source:www.teara.govt.nz).

Whakaahua 9. Patu-aruhe or fern root beater (source: Eldon Best)



Whakaahua 10. Catching a weka using the whakaki method (source: Heaphy, 1846)



Whakaahua 11. Hinaki or eel trap (source: Te Papa Tongarewa).



Whakaahua 12. Drying tuna on whata at Wairewa (source: Bigwood, 1948).



4. Whakaaro Toi – Design in the educational institution environment

This section provides an overview of some of the key ways cultural values can be encorporated into the design of educational institutions within the hub.

4.1 Mana – Relationship with Manawhenua

One of the most important aspects of incorporating cultural values into educational institution design is through maintaining a functional relationship with Te Taumutu Rūnanga, and in particular the mandated Mātauranga (Education) Portfolio of the rūnanga. The rūnanga also employ a part time Education Coordinator who can be contacted in the first instance about any issues relating to advice on working with the rūnanga around incorporating cultural values into educational institutions.

Considering the funding of any projects, events or meetings to ensure adequate resourcing is available to cover peoples time and expertise to be involved is critical. Setting up formal cultural advisory groups or regular resourced engagement is one consideration along with developing joint work programmes/project plans to acheive particular agreed outcomes. Initiating and/or maintaining annual or regular noho marae (marae stays/visits) of students at Ngāti Moki marae is also important. Working with the rūnanga on environmental restoration projects around Te Waihora is another opportunity to foster relationships.

4.2 Whakapapa – Identity, Names and Naming

The integration of cultural values, including a reflection of the whakapapa (genealogy) and history of the educational institutions and the surrounding landscape into the educational institutions's identity is something that Te Taumutu Rūnanga encourages and supports. Doing this creates an authentic sense of heritage and builds an understanding of both Māori and European history and values. Some suggested ways of doing this include:

- Adoption/use of an appropriate Māori name and whakataukī (proverb) for the educational institution. Educational institutions are encouraged to approach Te Taumutu Rūnanga regarding the gifting of a name. If Te Taumutu Rūnanga gifts a name to an educational insitution it is expected that this name in honoured by having the same status as the english name of the educational insitution, meaning it will be displayed on signage, logos,letterheads, website, newsletters and other material. Te Taumutu Rūnanga also request that staff and students are able to pronounce the name correctly.
- Considering the naming and branding of the educational institutions, buildings and elements of the
 educational institutions through the use of Te Reo Māori (Māori Language), and the use of bilingual
 signage throughout the educational institutions;
- Developing a educational institution's waiata and/or haka to be used at appropriate events;
- Adoption of elements such as traditional mahinga kai species, plants, birds, fish and traditional stories as symbols or logos for the educational institution, houses, years, blocks and/or other parts of the educational institution.
- Developing a kaupapa (policy) as well as projects/work programmes which articulates and recognises the committment of the educational institution to manawhenua and incorporating cultural values into the educational institution; and
- Integrating tikanga practices into the educational institution and educational institution environment





4.3 Tikanga – Protocol including mihi whakatau

The integration of cultural practice within educational institutions is something that has been regularly used in educational institution communities for a number of years. In relation to the built design and arrangement of an educational institution, allowance for a space which will comfortably and appropriately host mihi whakatau for a large range of participant numbers is important. Some aspects to consider for this include:

- Providing a suitable space for manuhiri (visitors) to gather before being welcomed on;
- Having a space for the manuhiri to be called through. This may be a waharoa or a space within the building layout;
- Having suitable areas for both the manawhenua (home side) and manuhiri to be seated during whaikorero (speeches) and waiata/haka. Consideration should be given to the arrangement so that the whare/ educational institution building(s) is/are always open to manuhiri.
- Having suitable access to kai and wai following the formalities.

4.4 Whare - Cultural Buildings

Educational institutions are encouraged to provide a whare space, as well as whanau rooms. A whare space could be incorporated into the design of an educational institution hall or other central building and should be positioned where it will be visible to the community. This space does not need to be set aside for solely tikanga practice, but can facilitate a number of uses including wānanga (discussion/learning), hui (meetings) and performance. Although capable of facilitating a wide range of uses it is important that the observation of appropriate protocol is considered and that the space is designed to foster tikanga. Within the layout of the educational institution a space that can act as whānau rooms/space which provide privacy and seating should also be considered. Specific factors for the design of whare and whanau space include:

- Access to kitchen, either within the building in a space that is partitioned off from the main room or with the cafe or food tech room adjacent.
- Positioning of the wharepaku away from food preparation areas.
- Allowance for indoor-outdoor flow, preferably with a verandah space leading off from the whare.
- Narrative of the Educational institution's whakapapa within the whare. This is traditionally done with tukutuku and carvings.

4.5 Te Reo Māori – Use of Māori language

The integration of Te Reo Māori through bilingual naming, signage and wayfinding across the educational institution is a valuable symbol of the educational institution's identity. It also supports the integration of cultural values and fosters recognition and use of an important element of New Zealand culture and identity. Educational institutions are encouraged to consult Te Taumutu Rūnanga about the gifting and use of names and Te Reo. Generally, tūpuna or ancestor names are not used but the use of concepts, species and values associated with culturally significant sites in the vinicity of educational institutions are favoured. A list of general names and terms that can be used around the educational institution are shown in table 1 below.





Table 1. Te Reo Names for Educational institution Elements

English	Te Reo Māori
Welcome to	Nau mai, haere mai ki
Hall	Whare-hui (and/or specific name)
Library	Whare-pukapuka (and/or specific name)
Office	Tari (and/or specific name)
Staff room	Ruma-kaiako / Kāuta-kaiako /
Learning centre	Akomanga (generic) or Give each a specific name
Carpark	Tauranga-waka
 Visitor (park) 	- Manuhiri
- Courier (park)	- Karere
- Special needs (park)	- Pararūtiki
 Principal / Deputy Principal 	- Tumuaki / Tumuaki tuarua
- Staff/Teacher	- Kaimahi/Kaiako
- Family	- Whānau
Playground	Papa-tākaro
Field/oval	Ātea-purei or papa-purei
Court (basketball/netball)	Papa-utoka or papatau-pōro
Courtyard	Tahua / Ātea
Toilet	Wharepaku or Heketua
- Male/Boys	- Tāne / Tama
 Female/Girls 	- Wāhine / Kōtiro
Drinking fountains / taps	Puna-wai
Entrance/Gateway/Fence	Waharoa (for main gate/entrance) / Kūwaha (for other gates/entrances) /
	Taiapa (fence)
Path/Pathway	Ara / huarahi
Garden (vege)	Māra-kai
Raingarden	Riu-uaua
Stormwater basin	Hāpua-āwhā
Directions	
- North / East / South / West	- Raki / Rāwhiti / Toka / Uru

4.6 Mahi Toi - Artwork and Graphic Integration / Representation

Embracing and utilising design details and ideas drawn from Māori artwork and traditional stories and histories can allow a educational institution to appropriately represent and celebrate Māori identity. Again, utlising themes, concepts, species and values associated with culturally significant sites in the vinicity of educational institutions is favoured and working with the rūnanga is important. Suggestions for ways to these are:

- Selection of educational institution colours which relate to specific stories, kaupapa, history of the area and Te Ao Māori;
- Use of traditional mahi toi (art/craft) such as kōwhaiwhai/ tukutuku either in its literal form or as design inspiration such as paving patterns, frosting patterns on glass;
- Integration of built forms such as waharoa, pou whenua which can also tie in with the narrative/ identity
 of the educational institution;
- Inclusion of appropriate symbology in educational institution logos and symbols which represent the whakapapa of the educational institution.

4.7 Taiao – Landscaping and Cultural Planting

Landscape design and planting around the educational institution provides an opportunity to enhance the educational institution's identity and foster an understanding of cultural values, particularly associated with mahinga kai. There are number of ways in which this can be done, including:

- Using species which traditionally grew in the area (such as those listed in Appendix 1).
- Using mahinga kai related species which provide an opportunity for learning outside the classroom and about the lives and traditional ecological knowledge of manawhenua (such as those in Table 2.)





- Using rongoā (medicinal) plant species which provide opportunities for learning about traditional medicine (including some of those in Table 2.)
- Using and arranging plants that allow students to engage in manaaki whenua (care of the land) through projects such as revegetation, riparian planting, stormwater filtering, erosion control and carbon sequestration.

Table 2. Suggested Cultural Plants

SCIENTIFIC NAME	COMMON NAME	USE	SUGGESTION FOR INCORPORATION
Phormium tenax	Harakeke/ flax	The leaves of harakeke and muka, the fibre from the leaves, were used extensively for the weaving, the creation of ropes, fishing nets,	A pā Harakeke which is a collection of harakeke varieties which are chosen for their muka (fibre) or raranga (weaving) qualities would encourage the
		clothing, kete and more. It was also used in rongoā (the medicinal use of plants) such as the sap being used to	incorporation of raranga into the curriculum. Consultation with the Rūnanga and/or landcare research will hold in coloration of cuitable plants.
Ficinia spiralis	Pikao/ Pingao	treat wounds and burns. Used in weaving and for the creation of tukutuku panels. Young shoots were also a food source. Note: Pikao grows along Kaitōrete Spits near the pā at Taumutu, it is highly valued by the Rūnanga	help in selection of suitable plants. Plantings in any suitable, sandy areas would allow the leaves of pikao to be used alongside harakeke leaves in raranga projects
Cordyline australis	Ti Kōuka/ cabbage tree	Parts of the Ti Kōuka trees were an important food source while the leaves also provided another weaving material. They were also common marker tree.	
Leptospermum scoparium	Mānuka/ Tea tree	The bark, timber and leaves of Mānuka were all valuable resources, used in various forms for rongoā, as a fuel source and for building and implements.	
Corynocarpaceae laevigatus	Karaka	Groves of karaka were often planted at the establishment of a pā. Their orange berries were an important food source although they were not eaten fresh as the kernels of the fruit are highly poisonous. The fruit was steeped in water and baked allowing the fruit to be eaten. Leaves were also used in Rongoā	The establishment of karaka groves has been successfully used in modern urban design, however careful consideration of the implementation given the poisonous nature of the fruit must be used.
Sophora microphylla	Kōwhai	Flowering signalled for the planting of kūmara- a relevant narrative as Taumutu was the furthest south that Kūmara was able to be cultivated.	
Podocarpus totara	Tōtara	Timber valuable for building waka and whare. Berries also eaten and bark used in rongoā.	
Coprosma propinqua Coprosma juniperina	Mikimiki/ Mingimingi	Kai- white, pink and blue berries can be eaten (Marlene, 2015)	Create a mahika/ mahinga kai garden where students can forage and learn what plants are edible.
Asplenium bulbiferum	Mauku / hen and chicken fern.	Kai- Young fronds can be eaten	As above.
Pseudopanax crassifolius	Horoeka / Lancewood	Tree stems were used as spears for hunting.	Incorporation in planting palette.

(Landcare Research/ Manaaki Whenua, 2015)

4.8 Mauri Tū – Sustainable Design

Kaitiakitanga and the protection and enhancement of the natural environment, particularly indigenous species, habitats and natural resources such as lakes and rivers is of fundamental importance to manawhenua. The

Mahaanui Iwi Management Plan 2013 includes numerous policies and objectives to support sustainable design aimed at achieving kaitiakitanga. This includes considering the following aspects through educational institution design:

- Water supply and use
- Waste treatment and disposal
- Stormwater treatment and disposal
- Earthworks, landscaping and open space
- Cultural Landscapes including wāhi tapu/taonga (culturall significant sites)

In general the rūnanga supports the use of technology and systems that reduce impacts on natural resources as well as those that can lead to the enhancement of natural resources. This includes:

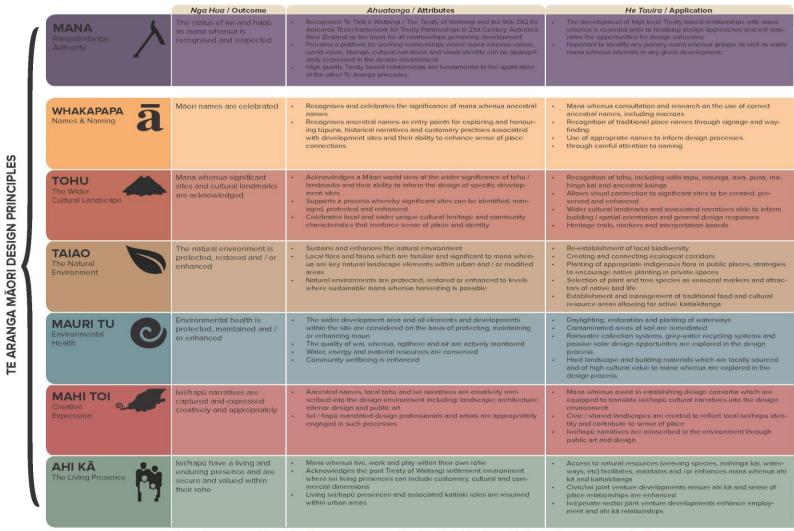
- Low energy and water use appliances and fittings (including lighting, toilets, showers etc);
- Grey water recycling and rainwater collection (particularly for watering grass/gardens and re-use in toilets) as well as accredited wastewater treatment systems and land based disposal;
- Land based vegetated stormwater swales, raingardens, wetlands and retention basin devices that result on zero stormwater discharge off site and into local streams and that provide for multiple benefits, includind educational opportunities;
- Solar passive design, insulation, double glazing as well as solar and wind energy generation;
- Recycling and composting facilities and low impact washing and cleaning products;
- Sediment and erosion contral plans and accidential discovery protocols during construction; and
- The use of locally sourced and/or recycled materials that provide a connection to the landscape.





4.9 Te Aranga Māori Design Principles

The Te Aranga Māori Design principles developed by Ngā Aho (the national network of Māori design professionals) provides a useful framework for considering design ideas for educational institutions. The principles are shown below and are also used in the following section to structure recommendations for educational institutions to consider.



http://www.aucklanddesignmanual.co.nz/design-thinking/maori-design/te_aranga_principles

5. Whakamutunga / Conclusion

Ngā Matapuna o Te Waihora area is rich in cultural narrative and history which can be drawn upon as inspiration in creating an educational institution which is multicultural and in tune with its whakapapa. The area is also of great significance to Ngāi Te Ruahikiki/Te Taumutu Rūnanga, as well as Ngāi Tūāhuriri, with a range of culturally significant sites and landscape features being present.

Te Taumutu Rūnanga strongly encourage the encorporation of Te Ao Māori and tikanga into the educational institutions in their Takiwā. There are number of ways this can be done and the Rūnanga are willing to engage in specific consultation where necessary.

This following section provides recommendations for educational institutions to consider that will assist with the incorporation and integration of manawhenua cultural values within their educational institutions and communities.

5.1 Ngā Marohi / Recommendations

Mana - Engagement and Relationship with Manawhenua

 Te Taumutu Rūnanga have processes in place to allow for educational institutions to contact them where required. This can be done by contacting the Rūnanga office who will organise consultation with the Education Committee and/or coordinator.

Whakapapa - Identity, Names and Naming

- The use of Te Reo around the educational institution is strongly encouraged. As well as the use of general names given in table 1. The giving of specific names is a valuable tool for building educational institution identity and pride.
- For this Te Taumutu Rūnanga should be consulted to arrange gifting of names.
- It is important that names of tīpuna (ancestors) are not used in any naming.
- The incorporation of the whakapapa both of the area and of the educational institution/ learning environment is important to the educational institution identity and should be incorporated into all aspects of the educational institution wherever possible.
- Reference should be made to the legends and history of both the local tribe and hapū but also the whakapapa of the educational sector, the history of wānaka/wānanga and the pursuit of knowledge in the Māori culture.

Taiao - Environment

 Manaaki for the environment is highly valued by Ngāi Te Ruahikihiki. As kaitiaki for Te Waihora and its catchment, Te Taumutu Rūnanga greatly encourage maanaki whenua (care for the land).

A number of suggestion for this are made in 4.7 for site specific interactions. The Rūnanga also strongly encourage the educational institutions integration with projects such as Te Ara Kakariki to help install the concept of maanaki whenua in the students.

Mauri Tū - Sustainable Design (Facilities/Buildings/Landscaping/Energy/Water)

 The following Ngāi Tahu whakataukī encapsulates the tribe's view of the importance of sustainability and resource management:

Mō tātou, ā, mō kā uri ā muri ake nei For us and our children after us



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- In Te Ao Māori (the Māori world) all elements of the natural world contain mauri (life force). In the development of the educational institution it is important that suitable steps are made to help retain and where possible increase the mauri of the surroundings.
- This can be done through practical measures such as storm water treatment, restoration of planted areas, improvement of biodiversity, using locally sourced material etc.
- The Rūnanga encourages the educational institution to pursue sustainable and ecological design standards such as Greenstar.

Mahi Toi - Creative Expression (via landscape and building/space design and artwork)

- The Rūnanga views the representation of narrative of the educational institution's whakapapa as key part of the educational institutions identity.
- The educational institution is encouraged to both incorporate forms of mahi toi into the built form of the educational institution and provide space and time for the students to continually engage in mahi toi practices.
- Suggestions for ways this could be done are listed in 4.6.

Tohu - Cultural Landscape

- To foster the creation of a multicultural learning environment it is important that the
 educational institution proudly display and integrate their different cultures into all
 aspects of the educational institution community.
- Having clear acknowledgment and integration of the educational institutions culture, whakapapa, and kaupapa helps to clearly direct the students through their learning experience and engagement with Te Ao Māori.

Ahi Kaa - Living Presence

- Ngāi Te Ruahikihiki take pride in the growth and learning of the tamariki in their rohe.
- They encourage an ongoing relationship between them and the educational institution and look forward to helping guide the educational institution's embracement of Te Ao Māori.





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7. Appendices

Appendix 1: Indigenous Plants for the Southwest Area

Species likely to have occured in Ngā Matapuna o Te Waihora area in the past.

SCIENTIFIC NAME	COMMON NAME (Māori and English)
TREES & TALL SHRUBS	
Alectryon excelsus	titoki
Aristotelia serrata	makomako, wineberry
Carpodetus serratus	Putaputaweta/ marbleleaf
Coprosma areolata	net-leaved coprosma
Coprosma linariifolia	Linear-leaved coprosma/ yellow-wood
Coprosma lucida	shining karamu
Coprosma robusta	Karamu
Coprosma rotundifolia	round-leaved coprosma
Cordyline australis	Tī Kōuka/ Cabbage tree
Dacrycarpus dacrydioides	kahikatea, white pine
Dodonea viscosa	Akeake
Elaeocarpus dentatus	hinau
Elaeocarpus hookerianus	pokaka
Fuchsia excorticata	kotukutuku, tree fuchsia
Griselinia littoralis	Kapuka, broadleaf
Hedycarya arborea	porokaiwhiri, pigeonwood
Hoheria angustifolia	Houhere/ Narrow-leaved Lacebark
Kunzea ericoides	Kanuka
Leptospermum scoparium	Manuka/ tea tree
Lophomyrtus obcordata	Rohutu/NZ Myrtle
Melicytus micranthus	Manakura/ Shrubby mahoe
Melicytus ramiflorus	Mahoe/whiteywood
Myoporum laetum	Ngāio
Myrsine australis	Mapau/ Red Mapau
Neomyrtus pedunculata	rohutu, NZ myrtle
Olearia paniculata	Akiraho/ Golden akeake
Pennantia corymbosa	Kaikomako/ Ducksfeet
Pittosporum eugenioides	Tarata/ Lemonwood
Pittosporum tenuifolium	Kohuhu/ Black matipo/Mapau/Tawhari
Plagianthus regius	Manatu/ Lowland ribbonwood
Podocarpus totara	Totara
Prumnopitys ferruginea	Miro
Prumnopitys taxifolia	Matai/ Black pine
Pseudopanax arboreus	Whauwhaupaku/ Five finger
Pseudopanax crassifolius	Horoeka/Lancewood
Pseudowintera colorata	horopito, peppertree





Schefflera digitata	patete, seven-finger
Streblus heterophyllus	turepo, small-leaved milk tree
Sophora microphylla	South Island Kowhai
CLIMBERS & VINES	
Clematis forsteri	Yellow clemantis
Clematis paniculata	puawananga, bush/white clematis
Clematis quadribracteolata/marata	Clematis
Parsonsia capsularis	Kaiwhiria/ NZ Jasmine
Parsonsia heterophylla	Kaiwhiria/ NZ Jasmine
Passiflora tetrandra	kohia, NZ passionvine
Ripogonum scandens	kareao, supplejack
Rubus australis	taramoa, bush lawyer
Rubus cissoides	
Rubus schmidelioides	Taramoa, narrow-leaved lawyer
SCHRUBS & SCRAMBLERS	
Calystegia tuguriorum	Powhiwhi
Carmichaelia australis	NZ shrub broom
Clematis afoliata	leafless clematis
Coprosma acerosa	sand coprosma
Coprosma crassifolia	Thick leaved mikimiki
Coprosma intertexta	open mikimiki
Coprosma propinqua	Mikimiki/ Mingimingi
Coprosma rhamnoides	red-fruited mikimiki
Coprosma rubra	Red-stemmed coprosma
Coprosma virescens	Green coprosma
Coriaria sarmentosa	shrub tutu
Corokia cotoneaster	korokio
Discaria toumatou	matagouri
Dracophyllum longifolium (complex)	totorowhiti, inaka, grass tree
Fuchsia perscandens	climbing fuchsia
Halocarpus bidwillii	bog pine
Hebe salicifolia	Koromiko
Helichrysum lanceolatum	Niniao
Leptecophylla juniperina	Prickly mingimingi
Leucopogon fasciculatus	Mingimingi
Melicope simplex	Poataniwha
Melicytus alpinus	porcupine shrub
Metrosideros diffusa	white/climbing rata
Muehlenbeckia astonii	Shrub pohuehue
Muehlenbeckia complexa	Scrambling pohuehue
Myrsine divaricata	Weeping mapou
Olearia adenocarpa	Canterbury shrub daisy
Olearia bullata	crinkly shrub daisy
Ozothamnus leptophyllus	tauhinu, cottonwood





Plagianthus divaricatus	marsh ribbonwood
Pomaderris ericifolia	tauhinu
Pseudopanax anomalus	shrub pseudopanax
Rubus squarrosus	Leafless lawyer
Sophora prostrata	prostrate kowhai
Teucridium parvifolium	NZ shrub verbena
Urtica ferox	ongaonga, tree nettle
GROUNDCOVER HERBS, GRASSES, TUSSOCKS & REEDS	ongaonga, aree nettie
Acaena anserinifolia	piripiri, bidibidi
Acaena novae-zelandiae	Piripiri/Bidibidi
Anemanthele lessoniana	hunangamoho, bamboo/wind grass
Apodasmia similis	oioi, jointed wire rush
Astelia fragrans	kakaha, bush flax
Astelia grandis	kakaha, swamp flax
Baumea rubiginosa	baumea, twig rush
Bulbinella angustifolia	maori onion, bog lily
Carex cockayneana	forest sedge
Carex forsteri	forest sedge
Carex geminata	cutty grass, rautahi
Carex lambertiana	forest sedge
Carex maorica	sedge, purei
Carex secta	pukio
Carex solandri	forest sedge
Carex virgata	swamp sedge
Cortaderia richardii	toetoe
Cyperus ustulatus	upoko-tangata, umbrella sedge
Deschampsia caespitosa	tufted hair grass
Dianella nigra	Turutu/ blue berry
Dichondra repens	Dichondra
Drosera binata	sundew
Echinodium hispidum	moss
Eleocharis acuta	spike sedge
Eleocharis gracilis	spike sedge
Epilobium spp. pallidiflorium	willow-herbs
Gahnia xanthocarpa	giant gahnia
Hypnum cupressiforme	Moss
Juncus distegus	Wiwi/ Tussock rush
Juncus edgareae	wiwi, tussock rush
Juncus sarophorus	wiwi, tussock rush
Leucopogon fraseri	Patototara/ a dwarf heath
Libertia ixiodies	Mikoikoi/ NZ iris
Microlaena avenacea	bush rice grass
Microlaena polynoda	a rice grass
	Meadow rice grass





Nertera depressa nertera Parietaria debilis NZ pellitory Parietaria debilis NZ pellitory Pratia angulata panakeneke, creeping pratia Ranunculus reflexus NZ buttercup Schoenus pauciflorus bog sedge Sphagnum ross Sphagnum ross Sphagnum ross Sphagnum ross Sphagnum ross Spiranthes orientalis ladies tresses orchid (pink) Stellaria parriflora NZ stitchwort Thuidium sparsum Moss Thuidium sparsum Moss Thuidium sparsum Moss Uncinia leptostachya matau, hooked sedge Uncinia uncinata watau/kamu, hooked sedge Uncinia uncinata watau/kamu, hooked sedge Uncita linearifolia narrow-leaved onga-onga Urtica linearifolia Necklace fern Salpeinum flabellifolium Necklace fern Salpeinum flabellifolium Necklace fern Skiokio, a hard fern Blechnum chambersii kiokio, a hard fern Blechnum procerum kiokio Urtica linearifolia narwaya kiokio Blechnum procerum kiokio Urtica linearifolia narwaya kiokio Blechnum procerum kiokio Urtica linearifolia narwaya kiokio narwaya kiokio Urtica linearifolia narwaya k	Markeya daggasas	
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Blechnum chambersii kiokio, a hard fern Blechnum discolor piupiu, crown fern Blechnum fluviatile kiwakiwa, creek fern Blechnum novae-zelandia/minus swamp kiokio Blechnum penna-marina Kiokio, little hard fern Blechnum procerum kiokio Cyathea dealbata ponga, silver (tree) fern Cyathea smithii katote, soft tree fern Dicksonia fibrosa kuripaka, wheki ponga - tree fern Dicksonia lanata tuokura, woolly tree fern Dicksonia squarrosa wheki, rough tree fern Histiopteris incisa mata, water fern Hypolepis ambigua Rough pig fern Hypolepis rufobarbata sticky pig fern Lastreopsis glabella Leptopteris hymenophylloides heruheru, crape fern Microsorum pustulatus Marataa, hounds tongue fern Polystichum vestitum puniu, prickly shield fern Polystichum zelandica/richardii Pikopiko/Tutoke/ Shield fern Pneumatopteris pennigera pakau-roharoha, gully fern	Asplenium gracillimum	makau, graceful spleenwort
Blechnum discolor Blechnum fluviatile Blechnum fluviatile Blechnum novae-zelandia/minus Blechnum penna-marina Kiokio, little hard fern Blechnum procerum Kiokio Cyathea dealbata ponga, silver (tree) fern Cyathea smithii katote, soft tree fern Dicksonia fibrosa kuripaka, wheki ponga - tree fern Dicksonia squarrosa tuokura, woolly tree fern Histiopteris incisa mata, water fern Hypolepis ambigua Rough pig fern Lastreopsis glabella Leptopteris hymenophylloides heruheru, crape fern Microsorum pustulatus Maratata, hounds tongue fern Polystichum vestitum Polystichum zelandica/richardii Pikopiko/Tutoke/ Shield fern Pneumatopteris pennigera pakau-roharoha, gully fern	Asplenium terrestre	Ground spleenwort
Blechnum fluviatile kiwakiwa, creek fern Blechnum novae-zelandia/minus swamp kiokio Blechnum penna-marina Kiokio, little hard fern Blechnum procerum kiokio Cyathea dealbata ponga, silver (tree) fern Cyathea smithii katote, soft tree fern Dicksonia fibrosa kuripaka, wheki ponga - tree fern Dicksonia lanata tuokura, woolly tree fern Dicksonia squarrosa wheki, rough tree fern Histiopteris incisa mata, water fern Hypolepis ambigua Rough pig fern Hypolepis rufobarbata sticky pig fern Lastreopsis glabella Leptopteris hymenophylloides heruheru, crape fern Microsorum pustulatus Maratata, hounds tongue fern Polystichum vestitum puniu, prickly shield fern Polystichum zelandica/richardii Pikopiko/Tutoke/ Shield fern Pneumatopteris pennigera pakau-roharoha, gully fern	Blechnum chambersii	kiokio, a hard fern
Blechnum novae-zelandia/minus Blechnum penna-marina Kiokio, little hard fern kiokio Cyathea dealbata ponga, silver (tree) fern katote, soft tree fern Dicksonia fibrosa kuripaka, wheki ponga - tree fern Dicksonia lanata tuokura, woolly tree fern Dicksonia squarrosa Wheki, rough tree fern Histiopteris incisa mata, water fern Hypolepis ambigua Rough pig fern Lastreopsis glabella Leptopteris hymenophylloides heruheru, crape fern Microsorum pustulatus Maratata, hounds tongue fern Polystichum vestitum Polystichum zelandica/richardii Pikopiko/Tutoke/ Shield fern Pneumatopteris pennigera kiokio kiokio Kiokio, little hard fern kiokio Rough giern Latoe, soft tree fern Microsorum pustulatus Maratata, hounds tongue fern Pikopiko/Tutoke/ Shield fern Polystichum zelandica/richardii Pikopiko/Tutoke/ Shield fern Pneumatopteris pennigera	Blechnum discolor	piupiu, crown fern
Blechnum penna-marina Kiokio, little hard fern Blechnum procerum kiokio Cyathea dealbata ponga, silver (tree) fern Cyathea smithii katote, soft tree fern Dicksonia fibrosa kuripaka, wheki ponga - tree fern Dicksonia lanata tuokura, woolly tree fern Dicksonia squarrosa wheki, rough tree fern Histiopteris incisa mata, water fern Hypolepis ambigua Rough pig fern Hypolepis rufobarbata sticky pig fern Lastreopsis glabella Leptopteris hymenophylloides heruheru, crape fern Microsorum pustulatus Maratata, hounds tongue fern Polystichum vestitum puniu, prickly shield fern Polystichum zelandica/richardii Pikopiko/Tutoke/ Shield fern Pneumatopteris pennigera pakau-roharoha, gully fern	Blechnum fluviatile	kiwakiwa, creek fern
Blechnum procerum Cyathea dealbata ponga, silver (tree) fern katote, soft tree fern bicksonia fibrosa bicksonia lanata bicksonia squarrosa Histiopteris incisa Hypolepis ambigua Hypolepis rufobarbata Lastreopsis glabella Leptopteris hymenophylloides Pellaea rotundifolia Microsorum pustulatus Polystichum vestitum Polystichum zelandica/richardii Pneumatopteris pennigera katote, soft tree fern kuripaka, wheki ponga - tree fern kuripaka, wheki ponga - tree fern wheki, rough tree fern mata, water fern Regugh pig fern sticky pig fern Franwera/ Button fern Microsorum pustulatus Maratata, hounds tongue fern Pikopiko/Tutoke/ Shield fern Pikopiko/Tutoke/ Shield fern Pakau-roharoha, gully fern	Blechnum novae-zelandia/minus	swamp kiokio
Cyathea dealbata ponga, silver (tree) fern Cyathea smithii katote, soft tree fern Dicksonia fibrosa kuripaka, wheki ponga - tree fern Dicksonia lanata tuokura, woolly tree fern Dicksonia squarrosa wheki, rough tree fern Histiopteris incisa mata, water fern Hypolepis ambigua Rough pig fern Hypolepis rufobarbata sticky pig fern Lastreopsis glabella Leptopteris hymenophylloides heruheru, crape fern Pellaea rotundifolia Tarawera/ Button fern Microsorum pustulatus Maratata, hounds tongue fern Polystichum vestitum puniu, prickly shield fern Polystichum zelandica/richardii Pikopiko/Tutoke/ Shield fern Pneumatopteris pennigera pakau-roharoha, gully fern	Blechnum penna-marina	Kiokio, little hard fern
Cyathea smithii katote, soft tree fern Dicksonia fibrosa kuripaka, wheki ponga - tree fern Dicksonia lanata tuokura, woolly tree fern Dicksonia squarrosa wheki, rough tree fern Histiopteris incisa mata, water fern Hypolepis ambigua Rough pig fern Hypolepis rufobarbata sticky pig fern Lastreopsis glabella Leptopteris hymenophylloides heruheru, crape fern Pellaea rotundifolia Tarawera/ Button fern Microsorum pustulatus Maratata, hounds tongue fern Polystichum vestitum puniu, prickly shield fern Polystichum zelandica/richardii Pikopiko/Tutoke/ Shield fern Pneumatopteris pennigera pakau-roharoha, gully fern	Blechnum procerum	kiokio
Dicksonia fibrosa kuripaka, wheki ponga - tree fern Dicksonia lanata tuokura, woolly tree fern Dicksonia squarrosa wheki, rough tree fern Histiopteris incisa mata, water fern Hypolepis ambigua Rough pig fern Hypolepis rufobarbata sticky pig fern Lastreopsis glabella Leptopteris hymenophylloides heruheru, crape fern Pellaea rotundifolia Tarawera/ Button fern Microsorum pustulatus Maratata, hounds tongue fern Polystichum vestitum puniu, prickly shield fern Polystichum zelandica/richardii Pikopiko/Tutoke/ Shield fern Pneumatopteris pennigera pakau-roharoha, gully fern	Cyathea dealbata	ponga, silver (tree) fern
Dicksonia lanata tuokura, woolly tree fern Dicksonia squarrosa wheki, rough tree fern Histiopteris incisa mata, water fern Hypolepis ambigua Rough pig fern Hypolepis rufobarbata sticky pig fern Lastreopsis glabella Leptopteris hymenophylloides heruheru, crape fern Pellaea rotundifolia Tarawera/ Button fern Microsorum pustulatus Maratata, hounds tongue fern Polystichum vestitum puniu, prickly shield fern Polystichum zelandica/richardii Pikopiko/Tutoke/ Shield fern Pneumatopteris pennigera pakau-roharoha, gully fern	Cyathea smithii	katote, soft tree fern
Dicksonia squarrosa wheki, rough tree fern Histiopteris incisa mata, water fern Hypolepis ambigua Rough pig fern Hypolepis rufobarbata sticky pig fern Lastreopsis glabella Leptopteris hymenophylloides heruheru, crape fern Pellaea rotundifolia Tarawera/ Button fern Microsorum pustulatus Maratata, hounds tongue fern Polystichum vestitum puniu, prickly shield fern Polystichum zelandica/richardii Pikopiko/Tutoke/ Shield fern Pneumatopteris pennigera pakau-roharoha, gully fern	Dicksonia fibrosa	kuripaka, wheki ponga - tree fern
Histiopteris incisa mata, water fern Hypolepis ambigua Rough pig fern Hypolepis rufobarbata sticky pig fern Lastreopsis glabella Leptopteris hymenophylloides heruheru, crape fern Pellaea rotundifolia Tarawera/ Button fern Microsorum pustulatus Maratata, hounds tongue fern Polystichum vestitum puniu, prickly shield fern Polystichum zelandica/richardii Pikopiko/Tutoke/ Shield fern Pneumatopteris pennigera pakau-roharoha, gully fern	Dicksonia lanata	tuokura, woolly tree fern
Hypolepis ambigua Rough pig fern Hypolepis rufobarbata sticky pig fern Lastreopsis glabella Leptopteris hymenophylloides heruheru, crape fern Pellaea rotundifolia Tarawera/ Button fern Microsorum pustulatus Maratata, hounds tongue fern Polystichum vestitum puniu, prickly shield fern Polystichum zelandica/richardii Pikopiko/Tutoke/ Shield fern Pneumatopteris pennigera pakau-roharoha, gully fern	Dicksonia squarrosa	wheki, rough tree fern
Hypolepis rufobarbata sticky pig fern Lastreopsis glabella Leptopteris hymenophylloides heruheru, crape fern Pellaea rotundifolia Tarawera/ Button fern Microsorum pustulatus Maratata, hounds tongue fern Polystichum vestitum puniu, prickly shield fern Polystichum zelandica/richardii Pikopiko/Tutoke/ Shield fern Pneumatopteris pennigera pakau-roharoha, gully fern	Histiopteris incisa	mata, water fern
Lastreopsis glabella Leptopteris hymenophylloides heruheru, crape fern Pellaea rotundifolia Tarawera/ Button fern Microsorum pustulatus Maratata, hounds tongue fern Polystichum vestitum puniu, prickly shield fern Polystichum zelandica/richardii Pikopiko/Tutoke/ Shield fern Pneumatopteris pennigera pakau-roharoha, gully fern	Hypolepis ambigua	Rough pig fern
Leptopteris hymenophylloides heruheru, crape fern Pellaea rotundifolia Tarawera/ Button fern Microsorum pustulatus Maratata, hounds tongue fern Polystichum vestitum puniu, prickly shield fern Polystichum zelandica/richardii Pikopiko/Tutoke/ Shield fern Pneumatopteris pennigera pakau-roharoha, gully fern	Hypolepis rufobarbata	sticky pig fern
Pellaea rotundifolia Tarawera/ Button fern Microsorum pustulatus Maratata, hounds tongue fern Polystichum vestitum puniu, prickly shield fern Polystichum zelandica/richardii Pikopiko/Tutoke/ Shield fern Pneumatopteris pennigera pakau-roharoha, gully fern	Lastreopsis glabella	
Microsorum pustulatus Polystichum vestitum Polystichum zelandica/richardii Pikopiko/Tutoke/ Shield fern Pneumatopteris pennigera Pakau-roharoha, gully fern	Leptopteris hymenophylloides	heruheru, crape fern
Polystichum vestitum puniu, prickly shield fern Polystichum zelandica/richardii Pikopiko/Tutoke/ Shield fern Pneumatopteris pennigera pakau-roharoha, gully fern	Pellaea rotundifolia	Tarawera/ Button fern
Polystichum zelandica/richardii Pikopiko/Tutoke/ Shield fern Pneumatopteris pennigera pakau-roharoha, gully fern	Microsorum pustulatus	Maratata, hounds tongue fern
Pneumatopteris pennigera pakau-roharoha, gully fern	Polystichum vestitum	puniu, prickly shield fern
	Polystichum zelandica/richardii	Pikopiko/Tutoke/ Shield fern
Pteridium esculentum Rahurahu/ bracken fern	Pneumatopteris pennigera	pakau-roharoha, gully fern
	Pteridium esculentum	Rahurahu/ bracken fern

(Lucas Associates, 2011)





Appendix 2: Mahinga kai and taonga species associated with the Taumutu takiwā

Ika (fish)	
Māori name	English name
Tuna	Eel
Kanakana	Lamprey
Aua	Yellow eyed mullet
Īnaka	Adult whitebait
Mako	Shark, rig
Upokororo	Grayling
Kōkopu	Native trout
Mata	Juvenile whitebait
Pātiki totara	Yellow-belly flounder
Mohoao	Black flounder
Pātiki	Sand flounder
Nihomakā	Barracoutta
Pāraki	Smelt
Kākahi	Freshwater mussels
Waikōura	Freshwater crayfish
Manu(Birds)	
Māori name	English name
Pūtakitaki	Paradise duck
Pārere/ māunu	Grey duck
Pāpango	New Zealand Scaup
Pārera	Grey duck
Kā hua	Eggs
Karoro	Black backed gull
Kotuku	White heron
Ruru koukou	Morepork
Tarāpuka	Red billed gull
Toroa	Albatross
Pūkeko	Swamp hen
Whio	Blue duck
Kuruwhengi	Shoveller
Kaki anau	Swan
Kōau	Shag
Kereru	Wood pigeon
Matuku	Brown bittern
Kūaka	Bar-tailed godwit
Tarawhatu	Brown duck
Kā rakau (plants)	
Māori name	English name
Whiwhi/wewe	Reeds and sedges
Ti kouka	Cabbage tree
Rāupo	Bullrush
Rongoā	Medicinal plants
Harakeke	Flax
Aruhe/tauhinu	Fern root (bracken)
Tikumu	Mountain daisy
Pīngao	Sand sedge
Wārakirihi	Watercress
Kōkaho	Reeds
Toe toe	Sedge grass
Kumara	Sweet potatoe
Katote	Tree fern
Wi	Tussock grass
	3





Marine mammals	
Māori name	English name
Kekeno/pakake	Fur seal
Parāoa	Sperm whale
Toharā	Right whale
Aihe	dolphin

(Te Taumutu Rūnanga , 2003)

