Appendix D – Ngati Ruanui Environmental Management Plan – Coastal and Marine and Oil and Minerals Sections

5. Te Moana Uriuri Tangaroa Takapou Whariki i Papatuanuku e Takoto Nei – Coastal and Marine Environment

Te Moana uriuri	*The depths of the water including all the sealife*
Tangaroa Takapou Whariki	*The mat of the ocean and everything on the seabed*
I Papatuanuku E takoto nei	*to the mother that embraces everything else*

Ngāti Ruanui believe you only take from the sea what you need to live off.

The coastal and marine environment is a vital component of the plan as it encompasses a diverse and changeable range of ecosystems. For the purposes of this plan, the coastal and marine environment includes coastal wetlands, estuaries and sand dunes, encompassing the foreshore and seabed extending to the 200 nautical mile Exclusive Economic Zone (EEZ) and Extended Continental Shelf (ECS).

Ngāti Ruanui has a longstanding association with the coastal and marine environment and the life forms found within it. The protection of fisheries, marine birds and marine mammals is important to Ngāti Ruanui in its role as kaitiaki. The coastal and marine area continues to provide a multitude of food resources to Ngāti Ruanui.

The impact of the human habitation is longstanding and in recent times, the sceptre of mining of the oil and mineral industry in the coastal and marine areas has become more and more visible with potential long-term implications as a result of offshore iron sand mining. Furthermore, whilst not an issue for this iteration of the plan is the potential for tidal power generation to occur in the coastal and marine area.

Ngāti Ruanui notes the intention of the Regional Coastal Plan for Taranaki of the Taranaki Regional Council to protect the coastal environment. Ngāti Ruanui notes that the jurisdiction of the Council only extends to the 12 nm territorial limit. Ngāti Ruanui supports the Environmental Protection Authority (EPA) having a role in protecting the marine and coastal environment to the 200nm EEZ and ECS.

Ngāti Ruanui recognises the relatively small number of coastal structures and occupations with the coastal, immediate foreshore and seabed area. However, where such structures and occupations do exist, the inclusion of Ngāti Ruanui in any consenting and on-going monitoring is critical. Any new structures, occupations and developments within the foreshore and seabed areas will be carefully evaluated.

5.1 Issues

Human Habitation has resulted in the clearing of the indigenous vegetation. Pollutants and contaminants enter the coastal and marine environments from the awa and streams that flow into it. Therefore the following seven issues are of importance to Ngāti Ruanui within the coastal and marine environment.

5.1.1 Coastal Protection Area and Coastal Structures

Although it has been heavily modified, the Coastal Protection Area is an important part of the regional ecology and must be protected. To that end, coastal subdivisions and other projects such as construction of windfarms and industrial sites must be controlled. In the short to medium term, Ngāti Ruanui advocates for no new coastal settlements within the coastal protection area defined by the South Taranaki District Plan.

The Fonterra Whareroa Outfall extends 1875 metres into the Tasman Sea and is the only outfall of its type in the Ngāti Ruanui takiwa. The effects of the outfall must be monitored to ensure the immediate environment surrounding it is not negatively impacted upon.

Ngāti Ruanui also endorses that all activity within the defined coastal protection area shall require a resource consent.

Any new coastal structure or occupation must require consent/approval either through the RMA or other legislation. The involvement of Ngāti Ruanui will be required with the possibility of joint decision making roles with local authorities and/or the EPA.

5.1.2 Iron Sand Mining

From an environmental perspective, the concern held by Ngāti Ruanui is that the impact of offshore iron sand mining is unknown. This issue is also addressed in the Oil and Minerals section. Ngāti Ruanui advocates that mining be considered a non-complying activity as opposed to a discretionary activity at both a district land-use consent level and regional consent level.

5.1.3 Fisheries

Te Kupe o Moananui is a traditional food source for Ngāti Ruanui and has been since the descendants of Ruanui first settled along the coastline. Numerous villages supported the fishing industry that grew following settlement. Ngāti Ruanui has a role as kaitiaki to protect the fishing resource whilst at the same time protecting its enshrined customary rights. The tupuna of Ngāti Ruanui were skilled in fishing and paid special attention to te maramataka o Ngāti Ruanui.

Ngāti Ruanui and the Ministry of Fisheries have a Protocol that sets out how the Ministry will interact with Te Runanga o Ngāti Ruanui in relation to specific matters including:

- Recognition of Ngāti Ruanui interests in all species of fish and aquatic life;
- Development of sustainability measures; and
- Customary non-commercial fisheries management.

In terms of the coastal area, the Fisheries Protocol area is bounded by the Waingongoro Awa to the North and the Whenuakura Awa to the South and includes the adjacent waters. The taonga species of Ngāti Ruanui as given in the protocol are contained in Appendix Six.

Given the significance of fisheries to the iwi and the multi-layered facets that are interwoven throughout the fisheries landscape, it is envisaged that in due course fisheries will be expanded to a standalone section of this plan. The Pan will therefore be treated as a planning document for purposes of the RMA and must also be taken into account by the Minister of Fisheries for the purposes of section 10(b) of the Treaty (Fisheries Claims) Settlement Act (1992).

5.1.4 Protection of marine birds and mammals

Ngāti Ruanui advocates the use of fishing techniques that reduces the occurrence of by-catch. By-catch is a term that is usually used for fish (and other marine life such as birds and mammals) unintentionally caught while intending to catch other fish.

Whilst stranded whales are not common place on the coastline of Ngāti Ruanui, they have occurred in the past and are likely to occur again. Traditionally, stranded whales were a food source and their bones and teeth were highly prized for making implements, weapons and ornaments.

Ngāti Ruanui and the Department of Conservation (DoC) shall work together when a stranding does occur to determine the appropriate response. In the event that the mammals cannot be returned to the sea, Ngāti Ruanui and DoC will determine the most appropriate means of disposing of the carcass, extraction and distribution of material for scientific use and appropriation of materials for cultural use.

5.1.5 Mahinga Kai

The ability of uri of Ngāti Ruanui to access its mahinga kai sites must be protected both formally and informally. The customary rights of Ngāti Ruanui are enshrined in legislation. The rights to access those sites will be severely diminished if they are not protected from pollution and poaching. Clear acknowledgement of these rights through local planning documents provides a practical outcome to the intent of the Crown.

5.1.6 Aquaculture

The Plan does not fully consider the implication of any possible aquaculture developments that may occur along its coastline. This is due to the fact that in the short-medium term it is unlikely that any commercial aquaculture projects shall

occur. Te Runanga o Ngāti Ruanui Trust reserves the right to review this position if circumstances change.

5.2 Means of Protection

The table below outlines three legislative approaches that can be implemented by Ngāti Ruanui to protect its fisheries.

Mataitai Reserve
Mataitai reserves are one of a suite of management tools created under Part IX of the Fisheries Act 1996. These are designed to give effect to the obligations stated in the Treaty of Waitangi Fisheries Claims Settlement Act 1992 to develop policies to help recognise the use and management practices of Maori in the exercise of non-commercial fishing rights. The Part IX tools provide practical recognition of the rights guaranteed to tangata whenua under the Treaty of Waitangi.

Under the Customary Fishing Regulations (Kaimoana Customary Fishing Regulations 1998), tangata whenua may apply to the Minister of Fisheries to establish a mataitai reserve on a traditional fishing ground for the purpose of recognising and providing for customary management practices and food gathering. A mataitai reserve will have the following effect:

Excludes commercial fishing (can be permitted through regulations);

- Does not exclude recreational fishing;
- Does not require recreational fishers to obtain permits or prevent non-Maori from fishing;
- Does not prevent access to beaches or rivers not on private land;
- Allows for bylaws for fishing to be made.

Rahui
A rahui is a temporary closure. Section 186B of the Fisheries Act 1996 allows for the closure or restriction of fishing methods in an area. The purpose of a rahui is to improve the size and / or availability of fish stocks, or to recognise the use of tangata whenua management practices.

Taiapure
A taiapure identifies an area (being estuarine or littoral coastal waters) that has customarily been of special significance to an iwi or hapu as a source of food or for spiritual or cultural reasons.
The provisions for taiapure are contained with Part IX of the Fisheries Act 1996.

Taiapure make provision for a management committee to be established to give advice and recommendations to the Minister responsible for Fisheries and for regulations to provide integrated management of the fisheries in that area. Members of the management committee are nominated by tangata whenua and may include representatives from all fisheries stakeholders (including commercial), as well as other interest groups.

Table 3: Legislative means of protection

5.3 Objectives

- Minimise negative impacts on the coastal and marine environments.
- Minimise negative impacts on aquatic life forms, marine birds and mammals.
- Traditional knowledge systems are acknowledged and protected.
- Protection of customary fisheries.
- Acknowledgement of mahinga kai through local planning documents.

5.4 Broad Plan Policies

- That no new settlements are developed within the coastal protection area.
- That those activities that impact significantly on the coastal and marine environment are monitored and assessed.
- That the use of a coastal protection area within the South Taranaki District Plan is retained and all activities within this area require resource consent, including Ngāti Ruanui taking a joint decision making role in the consenting /approval process.
- The defined coastal area within the South Taranaki District Plan is reviewed in conjunction with Ngāti Ruanui.
- That any renewal of a resource consent and/or variation shall demonstrate an improvement on the existing conditions.
- That all new coastal, foreshore and seabed structures or exclusive occupations require consent/approval either through the resource management Act 1991 or other legislation, including Ngāti Ruanui taking a joint decision making role in the consenting /approval process.
- That Ngāti Ruanui endorses the use of fishing techniques that reduce the occurrence of by-catch.
- That Ngāti Ruanui endorses the development of protocol agreements with DOC for the protection of marine birds and mammals.
- That Ngāti Ruanui endorses the Exclusive Economic Zone and Extended Continental Shelf (Environmental Effects) legislation including greater environmental control by the Environmental Protection Agency.

5.5 Methods and Procedures

- Seek and obtain feedback from hapu and uri in relation to the health the coastal and marine environment and assist hapu to respond to resource consent applications.
- Preparation of cultural impact assessments prior to providing written approval to a significant resource consent application.
- Meet with hapu representatives on site to discuss resource consent applications where possible.
- Consider the use of maitaitai reserves, rahui and taiapure to protect ecosystems.
- Arrange karakia and blessings when necessary and required.
- Engage with policy makers and regulators on all significant issues relating to the coastal and marine area including fisheries including provision of input into the formulation of Regional and District Plans.
- Promote and enhance partnerships between Te Runanga o Ngāti Ruanui and central government, regional and district councils.
- Receive weekly updates on all resource consents applications lodged and respond accordingly.
- Prepare and make submissions to central government, regional and district councils.

The Plan Policy Direction for Local Authorities

Local Authorities should note that Ngāti Ruanui:

- Does not support the development of new coastal settlements. Requires strict control on subdivision development.
- Expects that any renewal of a resource and/or variation to consents shall demonstrate an improvement on the existing conditions.
- Expects the continuation of the South Taranaki Coastal Protection Area through the District Plan and all activities within this area to require resource consent.
- That Ngāti Ruanui is actively engaged in any re-definition of the Coastal Protection Area in the South Taranaki District Plan.
- That all new coastal structures and or occupations within the foreshore and seabed area require consent.
- That options around joint decision making powers between Ngāti Ruanui and local authorities be considered for all activities within the coastal protection area, foreshore and seabed areas.

9. He Whenua Momona (A Fertile Land) – Oil and Minerals

Te Manawa o te Whenua – Te Awatea Hou (the new economy)

Whaia,
Whaia,
Whaia ki te uru tapu nui o tane
Ngāti Ruanui were always in pursuit of goals involving indepth analysis, co-operation requiring focus on attention to achieve fulfilment of our goals.

Ngāti Ruanui naturally were active traders and knowledge about the momona (productivity) of the land. We had flour mills, mara, were trading flax, spuds, pigs, tobacco, maize, gold, pounamu. Ngāti Ruanui rapidly linked onto technology and used them to our own advantage. All our goods we traded on were 'capital' goods not consumer items.

Maori exploration existed prior to nationalisation of oil, in 1927 Sir Apirana Ngata was granted a permit and oil was nationalised in 1937. Well known Ngāti Ruanui tupuna pursued minerals, such as gold.

Since the 1960's there has been ever increasing exploration and development of oil and gas resources in the Taranaki region. The south and central Taranaki region has seen widespread exploitation of oil and gas fields with names given to these developments that are synonymous to both Ngāti Ruanui and the oil and gas industry. These names include Te Maari and Kupe.

Ngāti Ruanui is located in an area where intensive mineral exploitation has occurred and has longstanding knowledge and understanding of minerals and their value. However Ngāti Ruanui has for many years been side-lined from fully participating in this industry because of impediments put in place by both the historic and contemporary legislative framework. The vexed issue of nationalised minerals means that Ngāti Ruanui are alienated from meaningful participation in the control and exploitation of the petroleum based minerals that reside in its takiwa.

Exploration and exploitation continue with the latest development opportunity being iron sands which are known to be in abundance off the Taranaki Coast. These occur onshore and in both the 12 nm territorial limit and beyond to the Exclusive Economic Zone (EEZ) thereby adding another exploitable resource to that of petroleum.

The Resource Management Act (RMA) covers extraction and production to the 12nm territorial limit, but environmental protection beyond that limit to the 200nm EEZ is less clear. Therefore, Ngāti Ruanui supports the Exclusive Economic Zone and Extended Continental Shelf (Environmental Effects) legislation that will allow the for the newly formed Environmental Protection Authority to be responsible for consenting, monitoring and enforcement of activities such as petroleum exploration and mining beyond the 12 nm territorial limit to the edge of the EEZ.

Ngāti Ruanui encourages the development and implementation of sustainable means of energy generation. Included in this is sustainable wave, solar and wind power generation.

Through the plan, Ngāti Ruanui seeks to achieve a balance between environmental sustainability and economic development. This can be achieved by an improved legislative framework and ensuring that the implementation of new technologies and processes are environmentally sound and through greater participation in allocation of permits and licences.

Ngāti Ruanui and the Ministry of Economic Development through the Ngaati Ruanui Deed of Settlement have a Protocol that sets out how the Ministry will interact with Te Runanga o Ngāti Ruanui Trust in relation to consultation on specific issues such as:

- New minerals programme for petroleum; and
- Petroleum exploration permits.

Further, new allocation methods allocating petroleum exploration rights (Block Offer) supported as this provides for Iwi input prior to decisions being made.

9.1 Issues

The issues section is separated into the following:

- 9.1.1 Improved environmental sustainability
- 9.1.2 Waahi Tapu must be acknowledged and protected
- 9.1.3 Improved Legislative Framework
- 9.1.4 New Technologies and processes
- 9.1.5 Exploitation of iron sands
- 9.1.6 Decommissioning of offshore structures
- 9.1.7 Relationship with policy makers, regulators and companies

9.1.1 Improved environmental sustainability

Ngāti Ruanui seeks to have input into the permit allocation process so that it can have a part in managing the finite mineral resources for future generations. In doing so it seeks to balance the sustainable management and exploitation of the resource with environmental protection.

Ngāti Ruanui advocates a zero tolerance threshold for oil spills and other similar failures.

9.1.2 Waahi Tapu must be acknowledged and protected

Following the enactment of the Resource Management Act in 1991 and changes in corporate culture, there has been a significant improvement in the way that mining and oil companies interact with iwi. Through that legislation and development of meaningful company relationships, Ngāti Ruanui is in a better position to protect its waahi tapu.

9.1.3 Improved Legislative Framework

Ngāti Ruanui is seriously disadvantaged through the Crown Minerals Act (CMA) at both policy and permit levels, with little recognition of its rights. The iwi is afforded little protection under the CMA. Equally there are disadvantages of engagement for iwi through the RMA. To date there has been little meaningful recognition and participation of Ngāti Ruanui in the decision making process. All decisions are made by the Minister or Secretary of Energy. There is no public submission process and no final appeal rights.

An obvious gap is the inability to ensure environmental protection beyond the 12 nautical mile territorial limit. Currently, the Taranaki Regional Council has regulatory authority over permit applications to the 12 nm limit. The environmental over watch beyond the 12 nm limit to the 200 nm Exclusive Economic Zone is provided by Maritime New Zealand. Ngāti Ruanui supports greater environmental control by the Environmental Protection Authority (EPA) beyond the 12 nm territorial limit.

Ngāti Ruanui argues for a more seamless regime through an integrated legislative framework. At the time of writing the plan, the review of the CMA was on-going. Legislative changes past the 12 nm limit were also proposed. The legislative changes are generally endorsed as a starting point for improvement.

9.1.4 New Technologies and processes

Oil and gas companies seek to maximise production from existing oil and gas fields and they do this through the use of new technologies and processes. These processes are often brought to New Zealand having been tested and used overseas. They have the ultimate goal of fully exploiting the petroleum resource. In Taranaki, the following processes are either in use or are to be brought into use:

- Underground gas storage;
- Hydraulic Fracturing (Fracking); and

- Hot water injection.

Ngāti Ruanui acknowledges these new technologies and processes. However Ngāti Ruanui also recognises that the degree of environmental protection must keep pace, with stricter standards and accountabilities, to match industry advancements.

The use of better than industry practice in protecting marine mammals by companies conducting seismic exploration in the off-shore takiwa is to be acknowledged.

Where relevant Ngāti Ruanui will negotiate direct environmental monitoring agreements to ensure environmental standards are maintained and consent conditions fulfilled.

9.1.5 Exploitation of iron sands and other Minerals

The extraction process or mining of iron sands is highly invasive. Environmentally little is known about the long-term effects and impact that such an invasive process may involve, especially from the perspective of the South Taranaki coastline. It is known that the removal of sand from too close to shore can cause serious beach erosion.

The widespread dredging or mining of the sea floor has potentially dire environmental consequences. There is some knowledge about deepwater species and ecosystems, potential impacts, and steps to recovery, but that understanding is far from comprehensive. Therefore, such an extraction process may give rise to the permanent destruction of sensitive marine environments which will in turn impact on marine life and traditional food sources of iwi.

Ngāti Ruanui also recognises the prospect of other mineral exploitation.

Ngāti Ruanui will seek high environmental thresholds to any permit or consent granted to a mining company. Ngāti Ruanui advocates that ironsand and other mineral mining be considered a non-complying activity as opposed to a discretionary activity in the 12 nm limit, and a discretionary activity in the EEZ. Under both regimes Ngāti Ruanui shall be considered as an affected party to all consent applications.

9.1.6 Decommissioning of offshore and onshore structures

The increasing prevalence of off shore oil and gas production stations within the takaiwa is an issue that will require close consideration as permit areas are brought online for production. The increasing use of floating production stations and modular construction for 'permanent' structures means that the footprint of a production station is less than that of the older platforms such as Maui A. Ngāti Ruanui will advocate for the use of these contemporary approaches to production stations.

Ngāti Ruanui is of the strong view that marine disposal should be considered as a last resort only. Ngāti Ruanui prefers the reuse of the structure (where possible) and failing that, removal to land for recycling. The final seafloor footprint should be as small as possible.

Apart from pipelines Ngāti Ruanui requires the full decommissioning of all onshore oil and gas production stations and associated structures. Sites should be returned to a suitable use and standard equal if not better to the standard when they were first developed.

9.1.7 Relationship with policy makers, regulators and companies

In its role as kaitiaki, Ngāti Ruanui seeks greater involvement in the allocation of all minerals permits. Through better engagement with policy makers and regulators Ngāti Ruanui will be in a position to encourage the use of sustainable exploration and exploitation techniques and methods. Ngāti Ruanui will engage with policy makers and regulators on all issues relating to minerals through submissions and direct engagement.

Ngāti Ruanui will also seek to enter into meaningful engagement with oil and mineral companies using management agreements.

9.2 Objectives

- That the concept of kaitiakitanga as defined by Ngāti Ruanui is applied to the management of oil, gas and mineral exploration, testing and production.
- Permit allocation must be managed in an equitable and sustainable manner through the Crown Minerals Act and EEZ legislation.
- Oil, gas and mineral exploration activities are managed through long term planning strategies, nationally, regionally and local, using tools such as zoning and performance standards founded upon an effects based philosophy.
- Waahi tapu sites and areas are recognised and protected from inappropriate oil, gas and mineral exploration.
- That te whenua and nga wai are protected at all stages of oil, gas and mineral exploration and production, and are returned to an acceptable standard when no longer required for exploration and production activities.

9.3 Broad Plan Policies (see Table 5 below for more specific policies)

- Meaningful engagement of Ngāti Ruanui in the permit allocation for petroleum and mineral resources both at a national and local level.
- Working together with local government and other policy and consenting agencies to establish objectives, policy, methods and performance standards which reflects the status of Ngāti Ruanui as a partner in planning across all environments.
- Inclusion of Ngāti Ruanui in all oil spill response plans.

- Any significant new technology or process must demonstrate that there is no risk to the environment prior to the implementation.
- Advocate for best practice approaches and seek to have them included in permit and resource consents, including the reinstatement and removal of structures once mining activities have been completed.
- Establish clear and transparent monitoring regimes with both local government and mining companies.
- Where relevant advocate for off-setting measures to compensate for adverse effects of mining activities.
- Supports the intention of the Exclusive Economic Zone and Extended Continental Shelf (Environmental Effects) legislation including greater environmental control by the Environmental Protection Agency.

9.4 Methods and Procedures

- Prepare and make submissions to central government, regional and district councils on behalf of Te Runanga o Ngāti Ruanui Trust.
- Receive weekly updates on all resource consents applications lodged and respond accordingly.
- Preparation of cultural impact assessments where appropriate.
- Meet with hapu representatives on site to discuss resource consent/permit applications where possible.
- Arrange karakia and blessings when necessary and required.
- Development of a hapu response guide in the event of an oil spill.
- Work to engage meaningfully with key stakeholders including central and local government and oil and mineral companies to ensure that the Ngāti Ruanui environmental position is acknowledged and understood.
- Discuss mining activities directly with mining companies and where relevant enter in direct agreements and monitoring regimes; including changes to environmental protection regimes through the development of joint Assessment of Environmental Effects.

9.5 Specific Oil and Mineral Plan Policies

Table 5 below provides further policy detail including some of the process and techniques that Ngāti Ruanui is aware of. This list is not exhaustive and as new process/techniques are disclosed by regulators and companies in the extractive industries, they will be evaluated and a position formed.

Crown Minerals Act Permit Class Activities
The Crown Minerals Act provided for the issuing of three types of permit: Prospecting Permit – the primary purpose of the prospecting permit is to define those areas that are likely to contain exploitable deposits. This is often very low impact and may involve a literature search, geological mapping, hand sampling or aerial surveys – Ngāti Ruanui will not typically oppose a prospecting permit. *Exploration Permit* – this permit type seeks to identify deposits and evaluate the feasibility of mining activities to delineate the extent of the mineral and determine its economic use. This may include literature review, seismic survey, exploratory well drilling, bulk sampling and mine feasibility studies – Ngāti Ruanui will not oppose an exploration permit as long as conditions such as proximity limits to waahi tapu, water courses, reefs, aquatic species including mammal management are considered. Best practice guides by other agencies such as the Department of Conservation will also be a relevant consideration. *Mining Permit* – this permit type is the most invasive of the three permits. It allows for the recovery of the identified resource through extraction and production – Ngāti Ruanui will assess each permit application on a case by case basis.

Underground Gas Storage
This is a new technique that recently commenced at the Ahuroa site, Stratford. The process is used worldwide, but is in use for the first time in New Zealand. The process involves reinjection of gas (from another field) to a depleted reservoir for storage under pressure for use at a later date. As this is a relatively new process in New Zealand, Ngāti Ruanui will consider each resource consent application for this type of process on a case by case basis. The Taranaki Regional Council considers this process under its Fresh Water Plan as a discharge of a contaminant to ground and is a non-notified process. Ngāti Ruanui is an affected party to this type of resource consent application in its takiwa. Ngāti Ruanui has advocated that New Zealand Petroleum and Minerals (formerly Crown Minerals) consider this a new permit class.

Underground Gas Storage

Policies

- Ngāti Ruanui is an affected party to any resource consent in its takiwa for Underground Gas Storage.
- Ngāti Ruanui will consider each resource consent application for Underground Gas Storage on a case by case basis.
- Ngāti Ruanui advocates that underground gas storage be a new permit class under the Crown Minerals Act.
- Ngāti Ruanui advocates that underground gas storage be a new activity under the regional planning regime.
- Ngāti Ruanui reserves the right to seek specialist independent advice.

Hydraulic Fracturing (Fracking)

Hydraulic fracturing is a process that results in the creation of fractures in rocks. The fracturing is done from a wellbore drilled into reservoir rock formations to increase the rate and recovery of oil. Depending on the rock formation, different chemicals are used in the process to extract the oil.

Environmental concerns associated with hydraulic fracturing include the contamination of ground water, risks to air quality, the migration of gases and hydraulic fracturing chemicals to the surface, and the potential mishandling of waste. There are concerns relating to the extent to which fracturing fluid used far below the earth's surface might pollute aquifers and contaminate surface or near-surface water supplies.

A number of chemicals identified in fracturing fluid are hazardous chemicals that may cause health and environmental risks. Some chemicals are identified as carcinogens whilst other chemicals found injected into the earth identify as endocrine disruptors, which interrupts hormones and glands in the body that control development, growth, reproduction and behaviour in animals and humans. Ngāti Ruanui will request a list of the chemicals intended for use in any fracking project.

Policies

- Ngāti Ruanui is an affected party to any resource consent in its takiwa that will use the Hydraulic Fracturing technique.
- Ngāti Ruanui advocates that Hydraulic Fracking be an identified resource

Hydraulic Fracturing (Fracking)

consent activity under the regional planning regime.

- Ngāti Ruanui will consider each resource consent application for Hydraulic Fracturing on a case by case basis.
- Ngāti Ruanui will request that companies provide a full list of chemicals to be used in the fracking process.
- Ngāti Ruanui reserves the right to seek specialist independent advice.
- Work over fluids (also known as fracking fluids) must be not be landfarmed in the takiwa of Ngāti Ruanui.

Hot Water Injection

Hot Water Injection is the process of injecting hot water (130°) into a depleted reservoir. This has the effect of decreasing the viscosity of the remaining oil allowing it to be extracted and thereby has the effect of increasing the volume of the reservoir.

As this is a relatively new process in New Zealand, Ngāti Ruanui will consider each resource consent application on a case by case basis.

Policies

- Ngāti Ruanui is an affected party to any resource consent in its takiwa that will use the Hot Water Injection process.
- Ngāti Ruanui advocates that Hot water Injection be an identified resource consent activity under the regional planning regime.
- Ngāti Ruanui will consider each resource consent application for Hot Water Injection on a case by case basis.
- Ngāti Ruanui reserves the right to seek specialist independent advice.

Decommissioning of Off shore and On shore structures

As oil and gas fields are depleted, off and on shore production stations will require decommissioning. These will be considered on a case by case. Marine disposal should be considered as last resort only and other means of disposal must be considered prior to this occurring.

Offshore iron sand mining
The environmental risks attached to iron sand mining due the disturbance and destruction of coastal habitats as a result of the extraction techniques is potentially high. The risk of smothering of benthic (seabed) communities by sedimentation and coastal erosion is also apparent. It is also apparent that significant research on the environmental risks associated with iron sands must be undertaken before large scale mining occurs of the South Taranaki coast. **Policies** • Ngāti Ruanui advocates for iron sand mining to be considered as a non-complying activity within the 12 nm territorial limit area and a discretionary activity in the EEZ area. • Ngāti Ruanui will consider each resource consent application for iron sand mining on a case by case basis. • Ngāti Ruanui reserves the right to seek specialist independent advice.

Table 5: Ngāti Ruanui oil and mineral policy position

The Plan Policy Direction for Local Authorities and Government Departments

Local Authorities and Government Departments should note that in respect of the Ngāti Ruanui takiwa that:

- That Ngāti Ruanui is actively engaged in the Crown Minerals permitting process with early involvement and consultation.
- That Ngāti Ruanui is actively engaged in the development of district and regional policy documents in respect of oil, gas and mineral exploration/production; including the identification of specific activities that require consent including, but not limited to: fracking, hot-water injection and gas storage.
- Those options around joint decision making powers between Ngāti Ruanui and local authorities be considered for all oil, gas and mineral activities.
- That Ngāti Ruanui is considered an affected party to all oil, gas and mineral consent applications.
- Does not support the use and application of fracking fluids on land-farm activities. District and Regional Councils to consider this activity as a prohibited activity.
- That regional and district planning documents set clear and transparent performance standards of environmental protection including the use of environmental offsetting standards where adverse effects cannot be avoided.
- That clear and transparent regulations are developed for application in the EEZ area ensuring a cautionary approach for environmental standards and permitted activity status.
- That off shore iron sand mining, all phases of development, be considered a non-complying activity within the 12 nm limit and a discretionary activity in the EEZ area.
- That the Environmental Protection Agency, Regional and District Councils require the decommissioning of all structures and associated equipment, not including pipelines, both off and shore in respect of oil, gas and mineral development.

Appendix E - Hawera Coastal Sampling Results

Graham Young

From: Jesu Valdes [redacted]
Sent: Tuesday, 4 June 2024 10:37 am
To: Nicola Coogan; Graham Young
Cc: Kate Giles; Angela Collins
Subject: Fonterra Whareroa mussel run June 5

You don't often get email from [redacted] Learn why this is important

Kia ora Nicola and Graham,

I hope you are well and had a nice long weekend.

I am writing to let you know that we are hoping to carry out a coastal monitoring survey (mussel run) on the following upcoming tide below. As always, the tides can be massively affected by the wind and the swell, so we'll be keeping a close eye on the weather in the lead up.

Wednesday 5 June (LT @ 15:04 - 0.48 m) depart Eltham approx. 1:20pm

During the survey we will be collecting mussels and seawater samples from the three routinely monitored sites. There are two seats available on the helicopter for volunteers who are keen to assist.

Survey overview:
The helicopter will depart from Becks in Eltham. Two samplers will be dropped off onto the reef near the outfall access track, where they will collect mussels and water samples and begin walking south. The helicopter will drop the remaining two at Koutu Reef, where they will collect mussels and water samples and begin walking north. The team will rendezvous at the southern end of Pukeroa Reef, where they will collect the final lot of samples and wait for helicopter pick up. Based on previous experience, the team should require approximately 2 hours between first drop off and final pick up.

When to meet:
We'd need to be at Beck Helicopters no later than 1:15pm.

What to bring:
Anyone joining us will need to bring hiking boots, gumboots or sneakers that can get wet (note: there will be a reasonable amount of walking over uneven terrain – approx. 2km or so). Warm layers and wet weather gear may also be necessary depending on the weather.

If you, or anyone you know is interested in joining us, please RSVP to this email ASAP with the person's name and contact number, and an emergency contact name and number.

Ngā mihi,

PS: Apologies for the short notice, but the weather has not been the best lately and it has taken lots of rescheduling to find suitable conditions.

Jesu Valdes *(she/her)*
Scientist - Coastal & Marine

Taranaki Regional Council
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Supporting livelihoods

Graham Young

From: Kate Giles [redacted]
Sent: Friday, 8 December 2023 3:33 pm
To: Michelle Dwyer; Thomas McElroy; Graham Young; Nicola Coogan; [redacted] naomi
Cc: Peter Cook; Vikki Kuyl
Subject: RE: Hawera coastal sampling results November 2023
Attachments: FRODO-#3154529-v1-Fonterra_STDC_Hawera_WWTP_norovirus_in_mussels_results_February_2023.PDF

Hi Michelle,

I have attached the results from the previous round of sampling, undertaken on 20 February 2023.
No norovirus was detected at site SEA906049 (350m NW), while the other two sites had positive results for GI only (the lab did not provide any information on numbers).

<80 gc/g is a low level.
We sample mussels in relation to both Hāwera WWTP and New Plymouth WWTP and very rarely does a positive result exceed this level.
The NZ Food Safety Risk report (ref below) states a norovirus prevalence of 50% for recreational sites, but like our sampling, this sampling is based on risk rather than any comprehensive monitoring programmes. It seems that commercially harvested oysters account for most cases (85%) of norovirus from shellfish in NZ. And shellfish accounted for only 9% of norovirus cases during the period 2009-2015 ie. risk is low. But keep in mind most cases of norovirus are mild and likely under-reported.
There are currently no guideline limits for norovirus in shellfish for NZ (and I couldn't find any anywhere else).

Current evidence does not support zoonotic transmission of norovirus and Norovirus GI is a human strain.
GI and GII etc just refer to the different genotypes, looks like there are currently 10 identified. Most illnesses affecting humans come from GI, GII and GIV, with GII variants being the most prevalent and most severe.

Nothing for Fonterra to do in response to these results.

https://www.mpi.govt.nz/dmsdocument/39572/direct

Thanks,
Kate.

Kate Giles
Scientist - Land and Water

From: Michelle Dwyer [redacted]
Sent: Friday, 8 December 2023 12:05 PM
To: Kate Giles [redacted] Thomas McElroy [redacted] Graham Young [redacted] Nicola Coogan [redacted] naomi [redacted]
Cc: Peter Cook [redacted] Vikki Kuyl [redacted]
Subject: RE: Hawera coastal sampling results November 2023

Thanks for sending these results through Kate.

Just to put the results in context and help my understanding, a few of questions...

Was norovirus detected in the previous sampling suite?
Is <80 genome copies/gram a low or high level (i.e. in relation to what levels you might find elsewhere in coastal waters), or is any detection of norovirus an issue?
Can you confirm is norovirus GI from human or animals?
What is the difference between GI and GII norovirus?

Is there anything you need Fonterra to do in response to these results?

Thanks,
Michelle

p.s. I have copied in Naomi Puketapu-Waite who has replaced Dion Luke at Ngāruahine

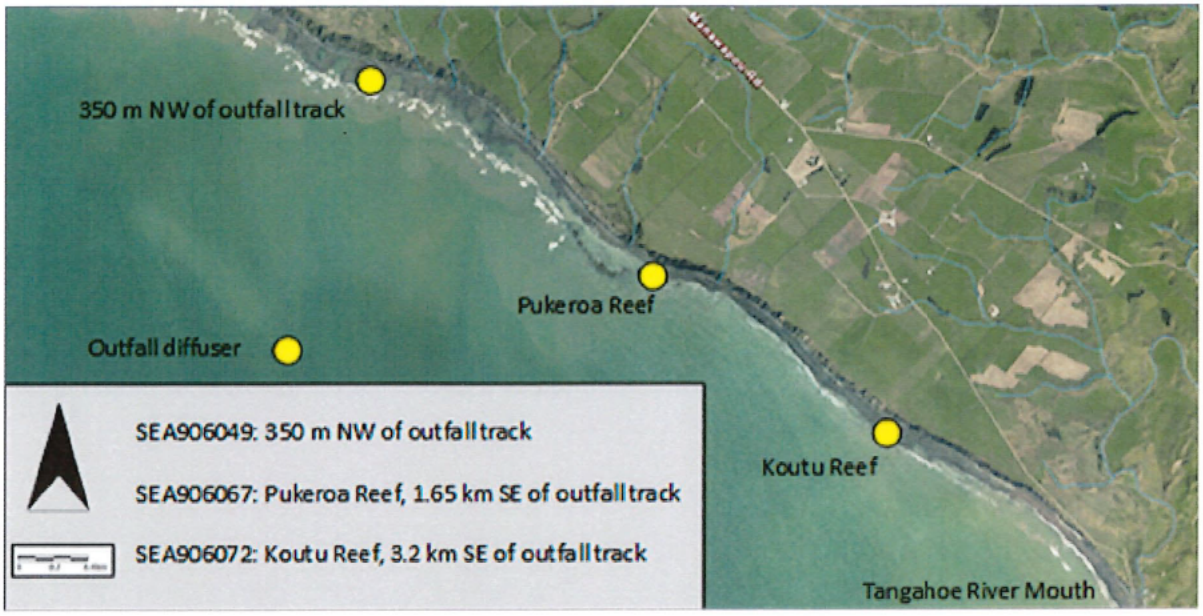
Michelle Dwyer
Senior Environmental Manager – Whareroa

Fonterra Co-operative Group Limited
[redacted]

From: Kate Giles [redacted]
Sent: Friday, 8 December 2023 10:12 am
To: Thomas McElroy [redacted] Graham Young [redacted] Nicola Coogan Dion Luke
Cc: Peter Cook [redacted] Vikki Kuyl [redacted] Michelle Dwyer [redacted]
Subject: Hawera coastal sampling results November 2023

Good morning everyone,

Seawater and mussel samples were collected from the coast on 27 November 2023 (sample sites are presented in the map below).



Please find the complete sample reports attached to this email. To summarise:

- Norovirus GI **was detected** in the mussel samples from all three sites. These were in low levels of <80 genome copies/gram.
- Norovirus GII **was not detected** in any of the samples at any of the sites.
- *E. coli* levels were 45, 78 and 110 MPN, all of which fell well below the *Australia New Zealand Food Standards Code* (2016) lower acceptable limit of 230 MPN/100 g that can be exceeded in one in five samples of food. Note: Due to the nature of this sampling programme, these food standards are not directly applicable, but still provide a useful point of reference.
- *E. coli* and enterococci numbers in the seawater samples were lower than the guideline values at all three sites at the time of sampling. The *Microbiological Guidelines for Shellfish-Gathering Waters* (MfE/MoH, 2003) have a median guideline value of 14 MPN/100 ml and an upper limit of 43 MPN/100 ml (which no more than 10% of samples should exceed). Note: These guidelines are also not directly applicable in this setting due to the low sample size, nonetheless, they provide a useful point of reference.

Let me know if you have any further questions.

Thanks ☺

Kate Giles
Scientist - Land and Water

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Taking Taranaki forward

CAWTHRON INSTITUTE

Additional monitoring protocols to capture cultural values during the Hawera outfall marine ecological surveys

Background

The Taranaki Regional Council (TRC) carries out bi-annual intertidal marine ecological surveys in the vicinity of the Hawera outfall to record and analyse the effects of the combined Fonterra and Hawera wastewater treatment plant wastewater on the intertidal area adjacent to the discharge.

During consultations with Ngati Ruanui it was agreed that the scope of these surveys would be expanded to capture cultural values of concern to iwi. Specifically, iwi were worried about the apparent decline in the health of Pukeroa Reef and wanted changes in the abundance of taonga species monitored. Taonga species were identified from Ngati Ruanui's 'Deed of Settlement: cultural redress schedule' and those that might be found at Pukeroa reef are listed below.

- Kutae/Kuku - blue mussels (*Mytilus edulis*)
- Kutae/Kuku - green-lipped mussels (*Perna canaliculus*)
- Pupu - cat's eye (*Lunella smaragda*)
- Waikaka – topshells (*Diloma* sp.)
- Kotore/humenga – sea anemone (Actiniaria sp.)
- Kaunga – hermit crab (*Pagurus novizelandiae*)
- Paua - black-foot paua (*Haliotis iris*)
- Paua - yellow-foot paua (*Haliotis australis*)
- Kina – sea urchin (*Evechinus chloroticus*)
- Rori – duck's bill limpet (*Scutus breviculus*)
- Patangatanga/ patangaroa/pekapeka - starfish (Asteroidea sp.)
- Rore/rori - sea cucumber (Holothuroidea sp.)

Many of the species listed above have not been previously recorded at Pukeroa during the TRC marine ecological surveys or Cawthron's intertidal survey in 2013. Some of the taonga species identified in the Deed of Settlement document are predominantly subtidal (black and yellow-foot paua, kina, duck's bill limpet, starfish, sea cucumbers, green-lipped mussels), therefore, it is not possible to comprehensively assess population changes for these species during an intertidal survey. However, an examination of the shallow subtidal may give some indication as to the occurrence of these species within harvestable waters.

Current monitoring protocol

The TRC carries out marine ecological surveys during November (peak milk processing season) and February (post milk processing season). Three 'impact' sites are surveyed (350 m north-west of the outfall, 200 m south-east of the outfall and Pukeroa Reef) along with a control site at Waihi Reef (~4.5 km north-west of the outfall).

At each site, a permanently marked 50 m along-shore transect (low-mid shore) is used to establish five 5 x 3 m blocks. Within each block, five random 0.25m^2 quadrats are laid giving a total of 25 random quadrats across the each site. For each quadrat, the percentage cover of algae and

encrusting animals is estimated using a grid. For all other animal species, individuals larger than 3 mm are counted. Under boulder biota is counted where rocks and cobbles are easily overturned.

Proposed additional monitoring protocols to capture cultural values

Cawthron suggests that the current monitoring continues as usual with some additional targeted monitoring at Pukeroa Reef to assess possible changes in taonga species identified by iwi. The current sampling approach only measures one level of the shore (low-mid), therefore, we propose a semi-quantitative survey of three transects running perpendicular to the permanent along-shore transect in order to capture species that inhabit different zones of the shore.

Three 50 m transects should be run from the low water to the high shore, intersecting the along-shore transect at 0 m, 25 m and 50 m. Longer transects may be required if the intertidal zone of the reef is greater than 50 m. A photograph looking down the transect should be taken at the high shore end of each transect to provide an indication of the state of the reef (e.g. large scale sand inundation or substrate changes). The distance at which each transect intersects the permanent along-shore transect should also be recorded to provide a reference point for shore height.

Within a 2 m band either side of each transect, the relative abundance (absent, rare, occasional, common, abundant) of the taonga species listed above should be recorded along with their approximate location on the shore (shallow subtidal, low, mid, high shore). If a distinct band of species occurs (*e.g.* green-lipped mussels), the distance above or below the along-shore transect can be recorded. Photos can be taken to provide a record of abundance.

Once the three transects are complete the rest of the 50 x 50 m area can be quickly surveyed to record the presence of any of the taonga species. Particular effort should be made to survey the tidepools and the shallow subtidal for species such as paua and kina as long as it is safe to do so.

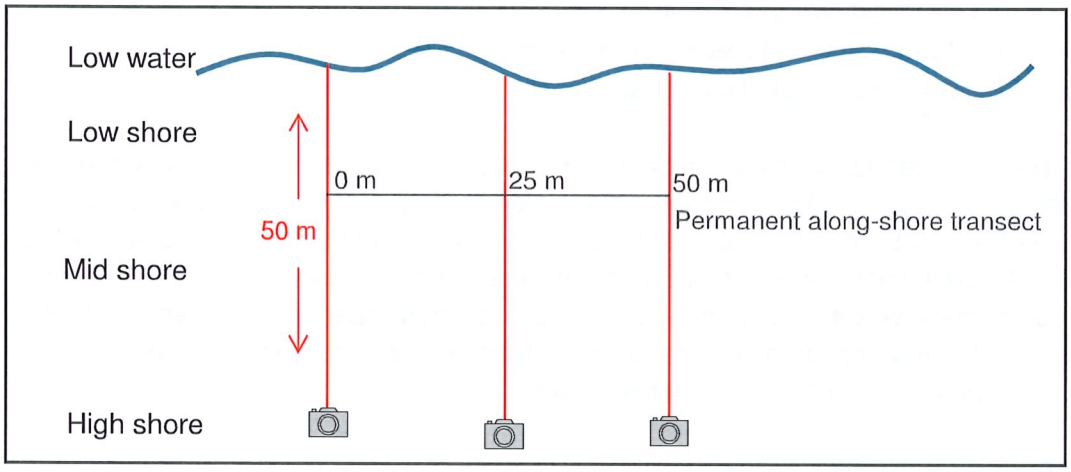
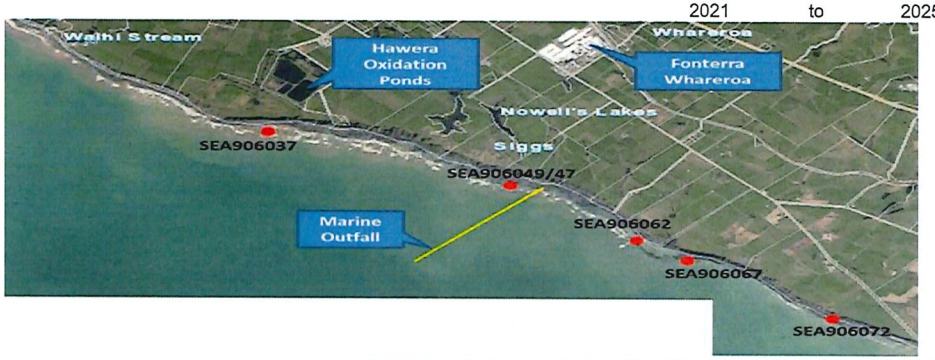


Figure 1. Sampling design for the area to be surveyed for taonga species. The grey line indicates the location of the permanent 50 m along-shore transect that is currently used for monitoring. Red lines indicate the location of the three new transects. Grey cameras indicate the location of photos.

South Taranaki District Council

Compliance_ 5 Yearly Norovirus Review
2021 to 2025



			Mussel Flesh													Receiving Water	
Date	Site Code	Site Description	Norovirus GI	Norovirus GII	faecal coliforms (MPN/100ml)	E. Coli (MPN/100ml)	Arsenic (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Iron (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Nickel (mg/kg)	Zinc (mg/kg)	faecal coliforms (MPN/100ml)	E. coli (MPN/100ml)
1 March 2021	SEA906049/47	NW of Outfall	Negative	Negative		68											3
1 March 2021	SEA906067	Pukeroa Reef	Negative	Negative		45											7
1 March 2021	SEA906072	Koutu Reef	Negative	Negative		790											7
26 May 2021	SEA906049/47	NW of Outfall	Negative	Negative		18											4
26 May 2021	SEA906067	Pukeroa Reef	Low	Low		18											25
26 May 2021	SEA906072	Koutu Reef	Negative	Low		20											4
31 January 2022	SEA906067	Pukeroa Reef	Negative	Negative													3
31 January 2022	SEA906049/47	NW of Outfall	Negative	Negative		45											<1
31 January 2022	SEA906072	Koutu Reef	Negative	Negative		5400											8
20 March 2022	SEA906049/47	NW of Outfall	Negative	Negative		78											7
20 March 2022	SEA906067	Pukeroa Reef	Negative	Low		45											6
20 March 2022	SEA906072	Koutu Reef	Negative	Low		40											3
27 November 2023	SEA906049/47	NW of Outfall	Low	Negative													
27 November 2023	SEA906067	Pukeroa Reef	Low	Negative													
27 November 2023	SEA906072	Koutu Reef	Low	Negative													
15 February 2024	SEA906049/47	NW of Outfall	Negative	Negative													
15 February 2024	SEA906067	Pukeroa Reef	Negative	Negative													
15 February 2024	SEA906072	Koutu Reef	Negative	Negative													
5 June 2024	SEA906049/47	NW of Outfall	Negative	Negative													
5 June 2024	SEA906067	Pukeroa Reef	Negative	Negative													
5 June 2024	SEA906072	Koutu Reef	Negative	Negative													
3 March 2025	SEA906049/47	NW of Outfall	Negative	Negative													
3 March 2025	SEA906067	Pukeroa Reef	Negative	Negative													
3 March 2025	SEA906072	Koutu Reef	Negative	Negative													