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Te Rohe Pōtae Harbours and Coast, Inland Waterways, Indigenous Flora and Fauna, Sites of Significance and Environmental Management and Environmental Impacts Scoping Report

A Report Commissioned by the Crown Forestry Rentals Trust
for the Waitangi Tribunal's Rohe Pōtae District Inquiry

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1. THE ROHE PŌTAE ENVIRONMENTAL SCOPING REPORT

1. This report was prepared as a scoping report and to undertake a preliminary overview of environmental issues relating to the Rōhe Pōtae Inquiry District. The report is a multi-disciplinary report which provides in the first part a largely historical overview of the change of the physical environment since the beginning of colonisation and especially since the 1880s. The district has undertaken a very substantial transformation due to the introduction of pastoral agriculture, and in particular the introduction of dairy and sheep farming. Large areas of the district's indigenous forests have been felled or burnt and replaced with exotic forests. This transformation has had a very significant impact on the biodiversity of the district, with a significant impact on fauna which were a key part of the pre European Māori economy and which remain highly valued by tangata whenua.

2. The report examines the frameworks which have been used to manage environmental resources from when control was held exclusively by tangata whenua, to the growing encroachment of the Crown on resource management. In a regime of environmental management governed by Māori lore, environmental and resource management were fundamental to the legal systems. However, resource management in a 19th century capitalist economy was subject to almost no legal regulation. Only since about the 1970s, has there been a sustained attempt to reintroduce the priorities of sustainability to New Zealand law and policy.

3. This historical review relies on contemporary sources and illustrates the rising importance of environmental issues by the 1970s. From this time on the research has acquired a substantial amount of historical environmental impact reports and other documents created by agencies such as Environment Waikato, which were increasingly charged with aspects of environmental management, and in particular the management of water quality. This initial section is primarily historical, and the scientific evidence has not been reassessed according to today's understandings.

4. The report attempts to provide a balance between national regimes of management and legislation and the specific evidence that has been collected by government or is available from contemporary scientific reports on the district itself. In many areas, the existing material from the district is scattered and thin, and some of this is reflected in this scoping

report. This lack of local detail on Māori approaches to environmental management and Māori grievances with the Crown's environmental, resource management and wāhi tapū regimes in the written record is particularly significant.

5. Unlike standard scoping reports, this report attempts to provide advice on further research as is usually the case, but on issues where it was possible to complete research on particular topics, this was done. As a result a number of aspects in this report were dealt with here and not the subject of further research in the main report which followed. These topics were:

- The impact of dairying on inland waterways
- Soil contamination as a result of agricultural and industrial development
- The general impact of the destruction of indigenous forest
- Coal mining
- Flax mills
- Limestone mining
- Sand mining and shingle extraction
- The Bennydale meatworks
- Geothermal resources, and
- Gas pipeline construction

2. THE CLAIMS

6. Several broad environmental concerns are evident from the claims. These can be generally described as covering the following areas:

Degradation of the environment:

- Degradation of the physical and spiritual qualities of water, groundwater, lakes and waterways
- Introduction of heavy metals, dioxins, and other poisons
- Degradation of the foreshore, seabed, and marine environment
- Gravel extraction
- Drainage of wetlands

Loss of traditional resources:

- Destruction and loss of access to kai, medicine and other resource collection sites
- Loss of tuna (eels), birds, and insects
- Introduction of exotic species
- Loss of indigenous forestry
- Impact of commercial fishing and loss of customary fisheries

- Loss of marine life
- Taking of minerals through mining and other extraction

Loss of wāhi tapu:

- Loss of land with wāhi tapu
- Failure of planning regimes to protect wāhi tapu
- Desecration of urupa

Loss of Māori control over resource management:

- Loss of tino rangatiratanga over resources
- Riparian rights and Crown taking of navigable riverbeds
- Crown breach of the Rohe Pōtae pact
- Imposition of planning/environmental legislation which negatively affected Māori
- Failure of resource management systems to protect Māori resources and interests
- Failure of the Crown to consult Māori on environmental issues

3. HISTORY OF ENVIRONMENTAL LAW AND PLANNING

7. Dramatic environmental change was made possible by changes to the legal regimes for the management of natural resources. New Zealand has long had legal systems to regulate environmental management and allocate resources. In pre-contact times, Māori customary law regulated water supplies, resource collection and managed waste. As Māori customary law was replaced by English common law, the onus shifted away from preserving water and other resources to individualising and protecting collection rights. English common law was slowly replaced by statutes that attempted to solve issues of resource management and environmental protection. The aim was to protect environments for economic, public health and scenic purposes. While these aims continue today, the legal frameworks for environmental management have become more nuanced and demanding. This occurred in response to a change from seeing the environment as a source of scenery and an input of production, to seeing the environment as complex system that needs to be maintained regardless of its economic capacity. The Resource Management Act 1991 (RMA) tries to strike a balance between the needs of economic development, while mitigating its effect on the environment, and recognises the need to make decisions that 'take into account' the principles of the Treaty of Waitangi. But 'taking into account' Māori the principles of the Treaty of Waitangi must be *balanced* against other environmental considerations.

4. PERCEPTIONS OF THE ENVIRONMENT AND THEIR EFFECT ON POLICY

8. Over the course of New Zealand settlement there have been significant changes in the way in which the environment has been perceived. The environment experienced significant transformation by the arrival of Māori. Soon increasing scarcity of resources forced Māori to adapt their recourse management practices. Conservation was institutionalised through cultural practices such as tapu and rāhui which were actively engaged in preserving what was recognised as a limited resource base. Rapid change would occur again with the arrival of Europeans. Early writing in New Zealand noted the rapid changes being made to the environment for the purposes of sheep farming. Those changes have made New Zealand unrecognisable from the country at the time of European contact.

9. The indigenous system of ecological balancing was confronted and severely contested by the opposing ideology brought by settlers from Europe that would heavily outnumber Māori and dominate the physical and cultural landscape of the land by the end of the nineteenth century. With the industrial revolution and associated technological advances, Europeans increasingly saw nature as something that could be more readily manipulated and made subservient to human needs. Nature's bounty was also by then a financial commodity whose value could be measured for purposes of trade and monetary exchange in Britain's increasingly far-flung global empire.

10. The turn of the 20th century saw the emergence of Crown policy to conserve scenery and soil as well as the introduction of national parks. Export controls were introduced in the 1920s to prevent further depletion of native forests and, supported by the state, the industry switch slowly to exotic timbers. Only with the introduction and subsequent implementation of the Resource Management Act has this utilitarian relationship with the environment been challenged with the focus transferring to on-going resource sustainability.

5. TRANSFORMATION OF TE ROHE PŌTAE.

11. Swamplands, at the time of initial human habitation, comprised several ecologically linked resource zones. The most popular places for Māori settlement were small lakes or fortified hilltops with riverbank sites probably used for temporary eel netting sites or seasonally

occupied cultivations. Foods collected from or near river sites included shellfish, whitebait, freshwater crayfish, mullet, flounder and wild vegetables. Practices of agriculture, forestry, industry, drainage, roading, hydro-electric dam construction and foreign fish introductions have impoverished or destroyed previous Māori fresh water fisheries. Extensive swamp drainage schemes were employed from the nineteenth century to convert wetlands into fertile pastures. Legislation was passed (River Boards Act 1884; Land Drainage Act 1893, Swamp Drainage Act 1915) to enable the transfer of land into Crown ownership for large-scale drainage operations. Serious erosion occurred with the over draining of wetland soils. Other soil related difficulties such as 'bush sickness', due to mineral deficiencies related to absence of cobalt, were later rectified by the application of soil dressings. Aerial topdressing of superphosphate and other fertilisers were used in large quantities to enhance soil fertility. Deterioration of local water quality with contamination of rivers and streams with residual chemicals of fertiliser treatments entering watercourses. Noxious weeds, particularly ragwort, were introduced and went on to proliferate. Māori economies were drastically transformed and were undermined through conflict over land use values. The holistic utilisation of wetland ecosystems by Māori was marginalised by Western classification of land and water resources as separate categories, and by wetlands being designated as wastelands needing to be transformed into productive 'dry' pasture. Legislation was enacted to forcefully implement this transformative process.

12. The growth and expansion of the dairy industry in the southern Waikato was directly linked to technological advances such as refrigeration and the mechanisation of the 'factory' system of cheese and butter making (North Island's first dairy factory opened in Te Awamutu in 1882). The Waikato Co-operative Company and New Zealand Dairy Association amalgamated in 1919 to become New Zealand Co-operative Dairy Company, then the country's largest dairy co-operative. In the 1930s there was discussion over improving the disposal of dairy effluent into waterways but this was driven by economic interests rather than environmental concerns. By 1950s, dairy factories throughout southern Waikato and Northern Rōhe Pōtae were being identified as notable polluters of local watercourses.

The Mangapiko Stream, near Te Awamutu, raised particular concerns with two dairy factories and the town sewage supply discharging effluent into the stream at highly

unsustainable levels. In 1960s, local acclimatisation societies drew attention to damage caused to freshwater fish stocks by increasing dairy effluent discharges. Changes were made to methods for disposing of animal wastes and effluent. This was away from direct disposal into waterways and towards spray irrigation onto pastures, although issues concerning groundwater infiltration and surface runoff remain. The loss of contaminants through leaching and runoff is more than twice as high from dairying as from any other form of farming. From the late 1980s specific programmes were devised and implemented by local government authorities to significantly reduce effluent discharges into waterways. Co-operation was sought between central government, local government and major industry participants to enact agreed goals and objectives which culminated in the Dairying and Clean Streams Accord. Consultation with local Māori has been apparently absent in discussions between central government, regional authorities and local councils together with industry participants (i.e. dairy companies and individual farmers). Not until after the passage of the Resource Management Act 1991 did consideration of Māori cultural values appear to be specifically stated in law. Environment Waikato's Transitional Regional Plan (TRP) Review of 1993, for instance, specifies: 'Irrigation of effluents onto land, where appropriate, meets the goal as well as meeting cultural and spiritual objections concerning effluent disposal to water'.

6. FISHERIES

Eels

13. The decline in the tuna (eel) fishery is of particular importance to the claimants of Te Rōhe Pōtae. The historical importance of freshwater fisheries to Māori cannot be exaggerated. Tuna are among the largest indigenous food sources in New Zealand fresh waterways. Claimants have noticed a considerable decline in the quality and quantity of tuna stocks, as well as a destruction of eel stocks and a limitation of access to remaining resource.

14. Recent studies indicate that the decline in the number of glass eels returning to New Zealand is similar to declines felt elsewhere in the world. The decline comes from a range of factors including the loss of wetland habitat through drainage and development, changes in ocean currents, exploitation of adult stocks, and downstream migration disruption and mortality due to hydroelectric dams.

15. For much of the 19th and 20th centuries acclimatisation societies attempted to control species they classed as vermin. Species favoured or missed by European settlers were introduced to New Zealand to in order to recreate their home environments. Animals were desirable based on their value as for production, game, for their decretive appearance or to control undesirable species. Indigenous animals were admired if they fit within those categories or were otherwise charismatic to Europeans. Any animal that appeared to pose a threat to the animals the societies had introduced was considered vermin and attempts were made to limit its numbers. Large numbers of eels were destroyed until the late 1970s when acclimatisation societies had generally accepted that eel destruction was not in their interest and had abandoned the practice.

16. A successful commercial fishery began in the 1960s. The industry experienced strong growth between 1965 and 1980, followed by a period of consolidation until the end of the century and has experienced rationalisation since then. Initially there were few constraints on management as there was no catch limits or caps on the number of licences issued. Part time commercial fishers were excluded from the fishery in 1982 and a moratorium on new licences was imposed in 1988. By the early 1990s there were 23 processing factories operating in New Zealand. By the end of the 1990s the commercial fishers were being encouraged to co-manage the industry with Māori. While controls have become increasingly strict the decline in the fishery continues despite limited scientific knowledge of the causes of this decline.

7. DEGREDATION OF SOIL IN THE TE ROHE PŌTAE

17. Soil contamination in Te Rohe Pōtae may come from: historic pesticide treatment of pasture soil, historic sheep dip sites, industrial activities (for example timber treatment facilities, and mineral exploitation and exploration), and intensive agriculture. The current level of reporting on contamination in the District is very poor, and thus for this report the type of *likely contamination* has been presented. Poor environmental reporting for Te Rohe Pōtae is typical of reporting throughout New Zealand.

18. Pesticides have been applied to the land of Te Rohe Pōtae, to control grass grub and other insect pests in the soil, and to manage weedy species. As the pesticides historically used have long half lives in soil, residual concentrations of the pesticide and any associated

breakdown products may still be present. For example, DDT continues to influence land use change proposals due to set maximum levels for DDT that are permitted in dairy farm soil.

19. The issue of stockpiled pesticides and agricultural chemicals is an issue for further consideration. Environment Waikato data shows that significant amounts of agrichemicals still exist on farms throughout the District.

20. Sheep dip sites represent a serious environmental risk in the study area. The soil associated with these sites will likely contain several metal and organic contaminants at levels that are above safe (guideline) values for contaminants in soil. Some of this contaminant loading may be leaching into waterways.

21. Consideration of relevant data has shown that while contamination is likely to be present in the Te Rohe Pōtae, timber treatment contamination is unlikely to represent a significant risk for human and animal health in the area given the fixed land use at the contaminated sites and the small scale of operations. Furthermore, the history of forestry in Te Rohe Pōtae is dominated by the milling of native timbers that did not require toxic chemicals for preservation. Despite the low perceived risk, it is recommended that sites in the District be investigated to confirm the level of contamination, and remediation or management strategies be reviewed, and designed and implemented where lacking.

22. There are a number of other hazardous (HAIL) activities that have been or are conducted in the area. Given the low level of industrialisation in the District, environmental risk from these activities is judged to be limited to isolated point source hot spots.

23. Soil contamination and degradation due to intensive agriculture, and to the intensification of agriculture, are of concern in Te Rohe Pōtae. Soil contamination and degradation is inevitable under conditions of land use change and agriculture. The challenge is to manage the observed contamination and degradation.

24. Ongoing contamination of soil with cadmium and fluoride due to the presence of these elements in superphosphate fertiliser is an issue that must be considered. Copper and zinc levels are increasing in soils under variable land use due to the use of these metals as a

fungicide or remedy for facial eczema. There is potential for the leaching of coper, chromium and arsenic from treated fenceposts in the farm environment. In each of these cases the annual loading of contaminant is small, but the effects in soil are cumulative. Eventually critical levels will be reached and exceeded if current practices are continued indefinitely.

25. Intensification of dairying is having a detrimental effect on the biological, chemical and physical properties of soil and the environment. Soil compaction and excess fertility due to high stocking rates of cows on dairy farms are regarded as key sustainability issues. The destruction of remnant pockets of indigenous vegetation leads to a decline in biodiversity. These variables can lead to a decrease in soil quality and promote leaching of nutrients into waterways. Sound management practices have been developed and are promoted by various stakeholders such as Environment Waikato, FertResearch and Federated Farmers. The challenge is to promote these practices, and to ensure compliance by all farmers. Nutrient management can be used to turn effluent into a resource that promotes better pasture growth throughout the year.

26. Compliance in Te Rohe Pōtae has not been considered in this Report. Only figures for the Waikato region have been used. But if guidelines are followed, compliance will promote soil quality preservation for both production and environmental protection. Dairy farm effluent can be safely and beneficially disposed of through land irrigation if effluent is irrigated at appropriate times (in time of soil water deficit). In practice the simple action of increased holding capacity to store effluent over the winter months can mitigate much (if not all) of the environment risk associated with nitrogen and phosphorous leaching.

27. Ongoing soil monitoring and comparison of collected data to the 500 Soils database will allow for the monitoring of soil quality trends with time as they are affected by the intensification of dairying. Appropriate systems and expertise exist to manage soil contamination and degradation where it becomes appropriate. Environment Waikato monitors some 150 sampling spots for soil quality on a five-year cycle. Additional sampling sites in Te Rohe Pōtae would allow for better monitoring of changes of soil quality with respect to land use and time. However, additional sampling would need to be supported by a new source of funding. This is recommended as an area for future and ongoing research and environmental management.

28. The Ministry for the Environment defines the current focus for environmental management in New Zealand as:

- Protection of riparian stream margins
- Exclusion of stock from waterways
- Nutrient budgeting and nitrification inhibitors (not discussed in this Report) to minimise the nutrient enrichment of waterways
- Protection of the land-based primary sector from international pests and disease

29. Areas for future focus are:

- Management of the impact of intensified land use on soils and waterways
- The identification and management of land contaminated by historic agricultural and industrial activities
- Management of biosecurity risks
- Systems to meet the growing demand for sustainable agricultural, horticultural and forestry products

30. Current focus areas appear to be well covered in Te Rohe Pōtae. Concern must shift to future focus areas.

31. The Resource Management Act (1991) will have a significant role in directing how New Zealand sets and meets sustainability targets according to these focus areas. One danger with the Act is public backlash against unpopular decisions. Recently an Environment Court decision was reached that requires all Taupo farmers to seek a permit to farm. In response, federated farmers released a press release which included the following statement:

> This decision means all farmers in the Taupo area will need planning permission just to farm. This turns on its head the fundamental human right to grow food.

32. Use of the Act in the context of soil contamination and land degradation must be balanced between the fundamental properties that it seeks to define, namely to promote social and economic well-being and environmental sustainability. Agriculture and industrial activity will always place stress on soil. The challenge is to manage this stress and the resulting soil degradation.

8. WĀHI TAPU AND PORTABLE TAONGA

Andreas Reischek

33. The protection of wāhi tapū, sacred sites, taonga and urupā in the Rohe Pōtae is an issue that has been dominated by the early experience of local Māori with Pakeha in the 1880s, at a time when negotiations were underway for the opening up of the Rohe Pōtae. The concerns about these issues today remain influenced by the activities of Andreas Reischek, an Austrian taxidermist and collector who enabled his way into the confidence of the Kingitanga local rangatira in the early 1880s. Reischek betrayed that trust by a spectacular and cynical exercise in grave robbery, which appears to have always been his primary objective in the entering the region.

34. Reischek was able to amass a huge collection of local birds, often endangered as well as a wide variety of taonga which were "gifted to him" at the time of his visit. The massive collection was taken back to his Austrian homeland and much of it became part of the collection of the Museum Für Völkekunde in Vienna. The controversy over the return of the remains of two bodies taken by Reischek continued through the twentieth century. This debate over Reischek's activities provide a good indicator of changing values and procedures for dealing with taonga and for both morally and legally recognising Māori rights to protect human remains. This was especially so for portable taonga which can be removed from their location and transferred to museums or to the private market often for a profit.

Legislative Management of Historic Places, portable taonga and Wāhi Tapu

35. The Māori Antiquities Act 1901 was the first attempt by government to control the export of taonga. However, the Act was not aimed in any way to protect the Māori ownership of valued possessions, but to prevent their export on the one hand and to ensure that the Dominion Museum's collection could be developed from indigenous material. The 1904 amendment expanded the Act, but there was no intention to provide blanket export prohibition for every Māori artefact. The politicians were primarily concerned to ensure that large items, in particular whare, were not sold and exported and thereafter not available for the Dominion Museum. By the 1920s, the legislation was being used to prevent the export of every sort of Māori artefact including small portable artefacts.

36. Protecting taonga for museums meant ensuring objects of rare artistic quality or simple rarity were retained, while those objects which were seen to be numerous or not representative of a high degree of skill were less protected, irrespective of the significance that may have been given them by the people who made them and their descendants. The Historical Articles Act 1962 broadened the scope of the legislation to include non-Māori material. Under this Act New Zealand assumed ownership of any artefacts whose owners were unknown.

37. The deficiencies of the Act where highlighted in the 1970s when it failed to see the return of carved panels hidden during the Musket Wars then dug up and smuggled to the UK. The result of this case meant that items smuggled from New Zealand, or elsewhere, could only be protected if there were agreements between the states involved. There are two international treaties dealing with these issues provide countries with some assurance that the domestic law of other signatories can be used to ensure the return of illegally exported items. Yet it was not until 2006 that New Zealand belatedly ratified two UN conventions on culturally significant property.

Historic Place Legislation

38. The Historical Places Act 1954 provided for some degree of protection of historical places as did the reserves and Domains Act 1953 and the Town and Country Planning Act 1953. The 1954 Act aimed to identify and keep a permanent record of a wide range of places, including those associated with Māori and the country's early history. There were few powers or resources to achieve this. A 12 member board was created for the trust, which included the provision one member be Māori. By the 1970s this regime was considered out of date. The Historical Places Act 1980 allowed for a greater degree of consultation between Māori tribal authorities and archaeologists, at the discretion of the trust. It also gave the trust the power to classify buildings in historic areas and create a register of archeologically sites.

39. The Historical Places Trust legislation was significantly revamped in 1993, partly because of on-going criticisms of the ability of the trust to protect heritage generally and Māori heritage specifically. Statutory reform was also required to bring the legislation into conformity with the Resource Management Act 1991. By 1989 there was considerable criticism again of the legislation, reflecting the greater emphasis being placed on things

Māori and the Treaty of Waitangi in the late 1980s. The Historic Places Legislation Review Working Group reported in 1989 and became known as the Coad Report. The report recommended that the trust's activities be made to give effect to the principles of the Treaty of Waitangi. The report also acknowledged the importance of the 1980 legislation's recognition of traditional sites. The Historic Places Act 1993, was substantial influenced by the Coad report.

40. The Resource Management Act 1991 also provided for greater environmental recognition of tikanga Māori, culture and traditions. It identified the principle of kaitiakitanga and proposed to take into account the principles of the Treaty of Waitangi. While the legislation did give much greater recognition of Māori interests in the environment than had been the case in any previous legislation, these interests were not given the degree of supremacy which had applied in section 9 of the State Owned Enterprises Act. The Environment Court and those acting under the legislation were required to take into account a variety of Māori interests, but to do so in a way that balanced these interests with environmental, historical and other considerations.

41. One important consideration of both pieces of legislation was the lack of specific definition of wāhi tapu. A statutory definition, or even one developed through precedent in the courts, would pose a major risk of imposing a national standard on local communities, with their own historical and cultural associations with wāhi tapu.

42. Despite the attempts in the RMA and the Resource Management Act 1991 and the Historical Places Act 1993 to take greater notice of the needs of Māori in an environmental management and in the protection of wāhi tapu and taonga, the criticisms of both regimes continued through the 1990s. It can be argued that the Historic Places Act was less protective than the Resource Management Act as the HPA incorporates the Treaty of Waitangi. The 1993 Act allows for the registration of wāhi tapu but this creates a tension as registration involves a degree of public declaration which may not be in the interest of iwi and hapū. This tension has been experienced by Rohe Pōtae claimants in legal disputes with local government.

43. In 1996 the Parliamentary Commissioner for the environment made a number of recommendations about improving the relationship between Māori heritage and statute.

She argued that there needed to be a much stronger national strategy, which was well supported, to "link all aspects of the management of Māori heritage, and its implementation needs". Existing mechanisms were not being used as effectively or completely as possible. Her recommendations were sufficient to require a very substantial overhaul of the Historic Places Act after considerable national consultation with Māori. As a direct response a review of heritage management was undertaken.

44. The review identified a series of options, based largely on the recommendations of the Parliamentary Commissioner. All of the discussion around Māori involvement with heritage stressed the need, under article 2 of the treaty, for Māori to manage their own heritage and have control over wāhi tapu. Over a decade after this review was undertaken, there is little evidence of statutory change. Minor amendments have been made to the Historic Places Act, but none have addressed the substance of the concerns which had emerged in the mid-1990s.

9. CONCLUSION

45. Because of the lack of specificity in many of the filed claims involving environmental and wāhi tapu clams, the paucity of central government resources on Māori experience of environmental changes and the impact of Crown policies on the environment and wāhi tapu, and the ability for a variety of reasons to consult with claimants themselves, the scoping report recommended a case study approach to the more substantive report. Case studies would ensure that Māori perspectives were foremost in extending our understanding of such claims within Te Rohe Pōtae.