

# Restoring Mauri to the Pourewa Creek Reserve, 2016

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## DISCLAIMER

This Draft Report was submitted as fulfillment of the requirements of the Final Report for GEOG333: Field-focused Research Methods in Earth Systems Science at the University of Auckland. It is not a peer-reviewed piece of research.

It is provided in this format for Ngāti Whātua Ōrākei to assist with decision-making regarding Pourewa. It is the intent of the advisor Dr Dan Hikuroa to work with Ngāti Whātua Ōrākei to produce a peer-reviewed report.

# Restoring Mauri to the Pourewa Creek Reserve

## Abstract

A small piece of land in Auckland has recently been given back to the tangata whenua, Ngāti Whātua Ōrākei, and in the coming years it is their goal to transform this land into a space of cultural education, community recreation and engagement, and environmental wellness. The goals that the community are looking to realise can be summed up in one word: mauri - the vital life essence. The Reserves Board, which consists of half Auckland City Council members and half Maori members, has control of the Reserve. As the Board moves forward with this restoration, it is important for them to be able to quantify the changes being made, track progress, and know when the restoration is complete. A technique that has proven effective at achieving this is the mauri model: a decision-making framework that assesses the amount of mauri a place has based on four fundamental factors: cultural, social, environmental, and economic.

## Key words

mauri

environmental restoration

mauri model

impact assessment

Pourewa Creek Reserve

## Introduction

In 1840 the Treaty of Waitangi was signed. This served somewhat as a “peace treaty” between the crown and Maori, saying that the crown would respect Maori ownership of Aotearoa land (Human Rights Commission). However, in the years since the Treaty was signed it has not been respected, and Maori have lost approximately 95% of their land. Originally owning 66 million acres, the crown unjustly took 63 million of those acres, leaving iwi with approximately three million acres of land throughout the whole country (Te Rūnanga o Te Whānau ). As part of reparations for this, the NZ government passed the Ngāti Whātua Ōrākei Claims Settlement Act in 2012 (Parliamentary Counsel Office, 2012). One outcome of this was the return of some small parcels of government owned land managed by the Auckland Council back to Ngāti Whātua Ōrākei. One of these pieces of land is called the Pourewa Creek Reserve, and it consists of 83 acres of grassy land near Okahu Bay (Figure 1). The reserve currently houses about forty horses that are part of St. Helier’s Bay Pony Club, and it is used sporadically for teaching geology and undertaking geological research by University of Auckland staff and students. This land is in a beautiful location- overlooking Auckland City, however due to the precarious nature of the land (prone to landslips), it is unsafe to build houses on, and therefore must be used in alternative ways (Figure 2).



Figure 2: *Pourewa Creek Recreation Reserve Draft Reserve Management Plan, 2015*

Ngāti Whātua Ōrākei are hoping restore the mauri, to transform this land so that it becomes a site of community education and activity, cultural significance, and environmental harmony in the coming years (*Pourewa Creek Recreation Reserve Draft Reserve Management Plan, 2015*). The land is now technically owned by the Ngāti Whātua Ōrākei Reserves Board, which consists partially of Maori members and partially of members from Auckland City Council. While it is not ideal that Maori members currently have only 50% control over their land, it is a step in the right direction, and a compromise for the time being. However, it is a hope of Maori to one day fully have control over this land. In December 2015, the members of this board created the Pourewa Creek Recreation Reserve Draft Management Plan. This discusses goals and potential policies that the Reserves Board has for the transformation of the reserve. It is the goal of this paper to suggest a system that will allow this transformation to be analytically measured and tracked, ensuring success.



Figure 1: *Pourewa Creek Recreation Reserve Draft Reserve Management Plan, 2015*

### ***Mauri and the mauri model***

The dreams and aspirations for the Pourewa Creek Reserve are best captured in one word: mauri. Mauri is simply put as the connection between the physical and the spiritual (Morgan, 2014). More extensively however, Maori Dictionary online defines mauri as:

“1. (noun) life principle, vital essence, special nature, a material symbol of a life principle, source of emotions - the essential quality and vitality of a being or entity. Also used for a physical object, individual, ecosystem or social group in which this essence is located. ”

Morgan used this concept to create a system of assessment to track impacts and improvements to mauri, which can be applied to the transformation of the Pourewa Creek Reserve. This system is called the mauri model, and it uses four key well-beings to judge something's overall mauri: environmental, social (or recreational), cultural, and economic. Within each well-being, specific indicators are determined. The mauri of a location can be assessed before and after the restoration, then this can be the metric that defines how successful the transformation process was. One example of the mauri model in use was during the 2012 MV Rena crash. Dubbed New Zealand's “worst ever maritime environmental disaster” by the Minister of the Environment (Morgan, 2011), the recovery goal was to

“restore the mauri of the affected environment to its pre-Rena state” (Ministry for the Environment, 2011). To do this, a mauri model assessment was retrospectively undertaken before the crash, and then at subsequent times after the crash to measure progress of the recovery actions. The mauri model proved to be a helpful tool during this restoration process to understand what they were restoring to, and how close they were to their goals. The mauri model has since been used on numerous occasions to successfully transform areas. Figure 3 shows just a few of the many places where the mauri model has been successfully used in the past few years. The mauri model would provide a useful assessment for transforming the Pourewa Creek Reserve as well.

Figure 3:

Place	Date
Te Kete Poutama	2011
Ötäiti	2014
Anamata Creek	2015
Central North Island	2008

### Methods

To do this, an initial mauri assessment must be taken of the Reserve. This can be done by using a mauri-o-meter, as shown below in Figure 4.

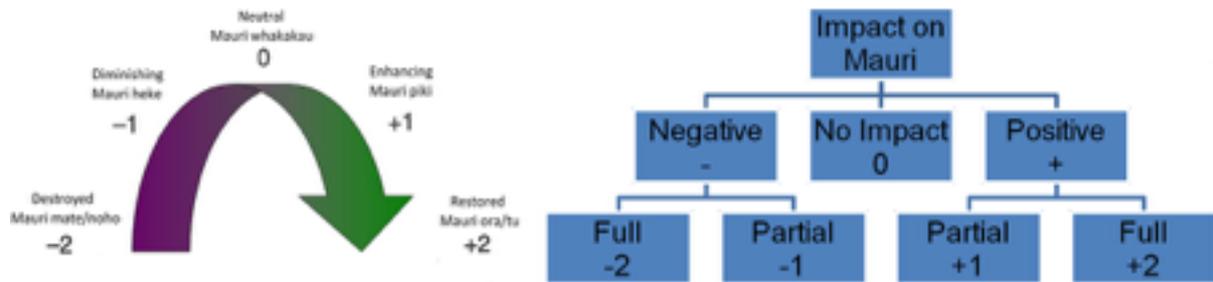


Figure 4: (mauriometer, 2013)

Each of the four factors will have indicators, and the mauri is ranked for each of them. This ranking is a qualitative assessment made by knowledgeable members of the community. After all of the indicators are ranked, the total mauri of the area can be found. The final number that the mauri model produces acts as a general representation of which direction the mauri of the land is trending. Figure 5 (below) shows an example of the mauri model as it was used to assess Te Kete Poutama.

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Figure 5: (Hikuroa, 2011)

	INDICATOR	Pre-dumping	Today
ENVIRONMENTAL	Anthropogenic contaminants	2	-2
	Natural contaminants	2	2
	Waste dumped on land	2	-2
	Waste infilled lake	2	-2
	Waste infilled hot springs	2	-2
	Toxins in waste	2	-2
	Indigenous biodiversity on land	2	-2
	Indigenous biodiversity in lake	2	-2
	Indigenous biodiversity in hot springs	2	-2
CULTURAL	Mahinga kai	2	-2
	Waahi tapu (sacred areas)	2	-1
	Healing – soak in pools	2	-2
	Healing – drink mineral waters	2	-2
	Healing – geothermal mud	2	-2
	Rongoa	2	-2
	Kokowai	2	-2
	Te Wai U o Tūwharetoa	2	-2
	Kaitiaki displaced Flora collection	2 2	-2 -2
SOCIAL	Swimming	2	-2
	Hygiene	2	-2
	Fishing camps	2	-2
	Hunting – pigs and deer	2	-2
	Single pigs, plucking ducks	2	-2
	Loss of respect	2	-1
	Flooding neighbouring land	2	-2
ECONOMIC	Cost of restoration	2	-2
	Food costs	2	-1
	Loss of discretion	2	-1
	De-value Te Kete Poutama	2	-1
	De-value adjacent land	2	-1
	Legal costs	2	-2
	Loss of earnings	2	-1
	Mauri Assessment	2	-1.7

Key indicators outlined by the Reserve Board in the Draft Management Plan can be translated for use with the mauri model. This will allow the Board to easily use this as a decision making framework if they choose to do so.

### ***Goals from the Draft Management Plan***

#### Environmental

- Water quality
- Biodiversity of native flora and fauna

- Opportunity for environmental enhancements which support cultural and social values
- Protection of Reserve from potential negative effects of storm water runoff from adjacent properties

#### Social/Recreational

- Welcoming, positive, and memorable first impressions
- Recreational Access
- Recreational activities which are accessible to people of all ages, skill level, and abilities
- Recreational infrastructure that does not undermine the cultural, environmental, or archaeological integrity of Pourewa
- Environment that fosters the development of informal sports and active recreation

#### Cultural

- Kaitiakitanga (safeguarding and enhancing people, the environment, and its resources, Ngāti Whatuatnaga and our taonga and heritage places)/guardianship- highlighting the ethos of Ngāti Whātua Ōrākei
- Management of cultural heritage values of the site
- Local and visitor understanding of the cultural heritage of the site. Establish a learning environment which encourages all visitors to explore and learn about the cultural heritage values of the site and surrounds

#### Economic

- Eco-cultural tourism
- Education and employment opportunities through re-planting and maintenance of Pourewa
- Foster the development of events and activities which generate local economic benefits

By slightly translating and rearranging these goals that the Board outlined, a list of indicators is created that can be used for the mauri model. It is imperative to mention that this list is just a starting point to catalyse discussion between community members and the Reserves Board about how to optimize this list. As long as indicators are evenly spread out between the four wellbeing categories, they may be changed, added, or edited as seen fit before being used with the mauri model.

### ***Indicators for mauri model assessment:***

#### Environmental:

- Biodiversity of native flora and fauna
- Water toxicity/pollution
- Ground instability
- Presence of weeds
- Algal growth in water

#### Social/Recreational:

- Ability to swim in water (toxicity levels)
- Community involvement (planting days, etc)
- Improved recreational access (biking and hiking trails, etc)
- Area to foster informal sports and activities
- Create a welcoming and positive first impression (signs, etc)

#### Cultural:

- Area to promote cultural education
- Archaeological sites
- Medicinal plants on grounds
- Kai on land: edible plants (resource gathering)
- Pa harakeke (flax bundles)

#### Economic:

- Cost of restoration
- Money saved on food from harvesting edible plants on land
- Ability to host events and activities to generate local economic benefits
- Increased eco-tourism

### **Future Research/Uses**

The Reserves Board can use the mauri model as a tool to transform the Pourewa Creek Reserve, and restore the mauri to it. All of the resources to do this have been outlined above, and to move forward two things need to happen. First of all, the community members involved in this task must rank the indicators, so that it can be made clear what the current state of the reserve is. To successfully use the mauri model, there will need to be some tests taken, for example of water toxicity, ground stability, etc. The second step that must be taken is to clarify the goal of this restoration process. Of course the general goal is to improve the mauri of the reserve, however now that there is a way to quantify this, it is important to decide what this process is restoring to. Once there is a final goal and an initial assessment, the restoration process can begin in full. At each successive step in the restoration process, care should be taken to retest and re-rank the indicators in the mauri model and ensure that the transformation is trending towards the final goal. By following these steps, the restoration process of the Pourewa Reserve will be successful.

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