

**BEFORE THE COMMISSIONERS ON BEHALF OF
THE OTAGO REGIONAL COUNCIL**

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER Proposed Otago Regional Policy Statement 2021

**STATEMENT OF EVIDENCE OF BRENDAN FLACK
ON BEHALF OF
TE RŪNANGA O MOERAKI
KĀTI HUIRAPA RŪNAKA KI PUKETERAKI
TE RŪNANGA O ŌTĀKOU
HOKONUI RŪNANGA**

23 November 2022

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INTRODUCTION

MIHIMIHI

Tēna koutou katoa
Ko Hikaroroa te mauka
Ko Waikōuaiti te awa
Ko Puketeraki te marae
Ko Kāi Te Ruahikihiki te hapū
Ko Kāi Tahu, Kāti Mamoe, me Waitaha kā iwi
Nō Puketeraki ahau.

QUALIFICATIONS AND EXPERIENCE

1. My name is Brendan Flack. I reside at Puketeraki, Karitāne and am a Takata Tiaki for Puketeraki Marae. As set out in my mihimihi, my whānau descend from some of the very first people that set foot on Te Waipounamu. As a whānau, we are actively involved in habitat restoration and fisheries recovery along Te Tai o Ārai-te-uru (the Otago coastline) and in its catchments. We lead many projects that deliver on the principles of kaitiakitaka and ki uta ki tai ecosystems-based management.
2. I give my evidence on behalf of Te Rūnanga o Moeraki, Kāti Huirapa Rūnaka ki Puketeraki, Te Rūnanga o Ōtākou and Hokonui Rūnanga (collectively mana whenua).
3. I am chair of the East Otago Taiāpure Management Committee. I am also chair of the Hauteruruku ki Puketeraki Ngā Waka Club. I also sit on the Komiti Kaupapa Taiao and Puketeraki Komiti Rapu Ara Hau. Alongside this, I am a contractor for the Ngāi Tahu Undaria Control Programme, a researcher on the He Pātaka Waiora Project, and Pou Tuarā for the Coastal People: Southern Skies CoRE research project.

SCOPE OF EVIDENCE

4. My evidence addresses the following matters:
 - Mana whenua relationships with the coastal environment and the work that Kāti Huirapa Rūnaka ki Puketeraki, as kaitiaki, are doing to manage and restore mahika kai in our coastal areas;
 - The importance of managing the taiao in an interconnected way, instead of the current siloed way councils seem to act;
 - Our observations of the damage being done to the coastal environment through not managing it in an interconnected way;
 - The impact the degradation of the coast is having on our ability as mana whenua to connect to the environment and our culture through mahika kai practices; and
 - The history and features of the Waikōuaiti Mātaitai and East Otago Taiāpure, and the mahi being done in those areas.

MANA WHENUA RELATIONSHIPS WITH THE COASTAL ENVIRONMENT

5. Kāi Tahu culture is anchored in seasonal mahika kai. Historically, Kāi Tahu whānau travelled all over Te Waipounamu gathering different kai at different times of the year. Our whakapapa links reflect this aspect of our culture and means that we have kaitiakitaka responsibilities throughout the island.

6. My whānau have a strong connection to the coastal areas where Kāti Huirapa Rūnaka ki Puketeraki is now based. Those Kāi Tahu that are the haukāika in a specific area have a particular responsibility on behalf of the rest of the iwi to look after those areas they have a special relationship with. For us, that is the coastal and estuarine areas around Puketeraki, and the wider catchments that they are part of.
7. This kaitiaki role is an inherited one passed down through our whakapapa and grounded in our rakatirataka rights as mana whenua. Kaitiakitaka is something that is inherent, particularly at Kāti Huirapa where we are heavily involved in the restoration of riparian areas, including those along our awa and around the wetlands and saltmarshes that end up filtering some of the effects of land uses before they reach the ocean.
8. A lot of our contemporary mahika kai activities are grounded in kaitiakitaka. Due to the connection between the health of the environment and the health of our culture, we actually have the most to lose if the taiao continues to be degraded.
9. Because of these heightened stakes, we kaitiaki are actually out there doing some of the mahi that councils should be doing but seem to have decided is too hard or not a priority. Projects in the coastal environment are not as easily seen as the 'glamour projects' that make a good press release, like Jobs for Nature or big planting projects, since they are underwater. In the last ten years our kaitiaki role has changed quite dramatically too, in terms of our understanding of climate change and its effects on the coastal environment.
10. We have a programme now that is training our Kāi Tahu people as divers for undaria control. This programme is getting our people back into traditional areas using modern equipment and connecting them back into the environment so that they can develop those skills. These types of projects also create opportunities for mana whenua to wānaka and build their understandings of the taiao and our Kāi Tahu cultural practices. In 2022, it is a different world to 1822, with new environmental pressures to consider, and technology at our disposal, so we have to adjust ourselves to that too.
11. We are also investigating the concept of Kāi Tahu Rangers who will be out on the rivers, in the ocean, or on the coast. We are developing this programme to support whānau that are still engaged in mahika kai activities and have never stopped throughout the generations. We also want to use the programme to encourage those that might have had a gap in their relationship with the taiao because they were excluded as a result of colonisation. Our people were disconnected from some of

those activities in the taiao over the last couple of generations simply because they were excluded: fences went up and people were not able to access some of our mahika kai areas.

12. On the coast, access was also denied through the way the Quota Management System was introduced. That came in in 1986 and excluded a lot of whānau from commercially fishing to support their whānau because the ability to fish became a property right. Recreational fishing is now shared with anyone who wants to access their “right”, which is actually a privilege, to access our mahika kai.
13. Mahika kai is more than just food gathering for Kāi Tahu. It about that intergenerational knowledge and the transfer of mātauraka, which is all about doing. If you read it in a book, it just does not cut it, so being able to actually go back and engage in those activities is really important. We see it with the revival of voyaging and waka, and in the language, so it is all interconnected. It is about having an opportunity to get in there with a purpose.

THE IMPORTANCE OF RECOGNISING THE INTERCONNECTIVITY OF THE TAI AO

14. We, as Kāi Tahu, understand that everything is interconnected. It is very difficult to put a silo around an aspect of the taiao, whether it is on a map, or under the responsibility of different councils or departments, when we see that everything is connected through whakapapa.
15. The concept of ki uta ki tai is used to describe holistic natural resource management from the inland mountains to the coast, recognising all environmental elements are interconnected and must be managed as a whole. It is a way of understanding the natural environment, including how it functions, how people relate to it and how it can be looked after appropriately.
16. That interconnectivity goes back to the atua, Rakinui, Papatūānuku, and Takaroa. It is important to understand that relationship, its deep interconnectedness, and dynamics, particularly that Papatūānuku was first married to Takaroa, atua of the moana and coastal environment. This connection between the atua of the land and sea and the primacy of Takaroa in our creation traditions requires us to manage these interconnections between land and moana appropriately.
17. It works both ways too, land-based activities are affecting the moana but also the moana is affecting the land in terms of sea level rise and increased erosion. Some of the work that mana whenua are doing includes looking at and understanding those dynamics. There are some areas that are actually accreting. Some of the beaches at

Kāti Huirapa are actually growing, so understanding that and what that might mean for our kaimoana is really important.

18. Local authorities are used to seeing things in silos, though. They have jurisdictional and departmental boundaries and have rigidly mapped catchment areas. These types of boundaries do not exist in nature. Our river does not abide by them; its catchment is more complex and interconnected. We, as kaitiaki, do not have a problem with understanding the interconnectedness of the whole river catchment, but councils and other agencies do because they are funded and mandated to do specific tasks. They are not looking at things in a holistic, three-dimensional kind of a way. We also see things in terms of whakapapa: the past, the present, and the future. Councils, it seems, only look at things in terms of how long their funding is available for.
19. This siloed approach also makes it really difficult for Takata Tiaki to work with the various local authorities because each council has its own rules and processes that apply across our interconnected landscape, for example the Puketeraki takiwā extends across both the Waitaki District Council and Dunedin City Council areas. Even within the Otago Regional Council, different teams focus on different parts of the environment, which makes it hard to work together with Council in the interconnected way that we and the taiao operate.
20. The entire coast, whether or not it is within a mātaihai or taiāpure, is a customary fishery area. Environmental standards need to be achieved that support the ability for Kāi Tahu to access safe and abundant kai everywhere.

OBSERVATIONS OF THE IMPACTS OF SILOED ENVIRONMENTAL MANAGEMENT ON THE COASTAL ENVIRONMENT

21. My concern is that coastal areas often get forgotten about because they are hidden under the water. This means that often the effects of those land-based activities on our food basket, the coast, get missed or ignored. Different organisations also argue over who is responsible for regulating what is happening in the coastal environment. The reality is that what happens on the land impacts what happens in the coast, so whoever is responsible for managing the land is also responsible for what is happening in the coastal environment.
22. The fact that we, as kaitiaki, are in that coastal environment daily means that we can see changes happening over time. This constant presence is really important for our

people because it means that we are not able to turn our backs on what is happening out there.

23. We are seeing an increase in sedimentation, the impacts of climate change, and a reduction of freshwater inputs into our saltmarshes. We have also seen an increased frequency of marine heatwaves, and invasive species like gorse, lupins, and undaria doing better than our native species.
24. In my opinion, all of these observations can be linked to activities happening on land, including forestry, the use of synthetic fertilisers, and mining. When we started seeing things changing at the coast, we started looking at what was happening in the wider catchment. When we travelled up the rivers, it was the effects from those types of activities that we saw. Even though these are happening on the land, we are having to deal with their consequences to restore fisheries and coastal habitat for mahika kai.
25. The impacts of these land-based activities are changing our relationship with the environment. Mining, for example, is causing a whole range of consequences for our rivers and coastal areas. We are seeing an increase in heavy metals within our catchment that are likely leaching from mining tailings. This increased contamination is then being exacerbated by reduced water flows, which concentrates these pollutants. Dewatering operations and rerouting of water sources related to mining activity is a contributor to flow reduction and an overall reduction in the amount of water within our catchment. This all results in more contaminants entering, and then remaining in, our rivers and coastal areas.
26. Mining operations are also being allowed to pipe our sacred waterbodies, such as the headwaters of the Waikōuaiti river. Not only does this have adverse effects on the water column, but it has a devastating effect on the mauri of our awa. Our awa used to start its life as a wetland and run naturally out to Te Tai o Ārai-te-uru where its mauri then contributes to the mauri of our coastal environment and all the other ecosystems it connects with on the way to the coast. Now, our awa starts its life as a plastic pipe. This has an immediate degrading impact on its mauri, which then has flow-on effects to the mauri of all of the other environments it is connected to on its way to the moana.
27. Our reef systems are also degrading due to other land-based activities – particularly those that introduce sediment to our waterways and coastal areas. We now have areas where sediment and sand are getting pushed up into our reef systems. Over the years it has created flat surfaces where there were previously reefs, so where

there once were crayfish, grouper/hāpuku and other reef fish, now it is sandy and those mahika kai species can't survive there.

28. Some mahika kai species are also moving out of the subtidal zone into the intertidal zone because of sediment and sand smothering habitat. Port Otago Limited has a consent to dredge the Otago Harbour. They are dumping the dredge spoil off the coast within our takiwā, and it is being entrained in the water column, resuspended with the waves, and ending up in the places our mahika kai species live. It is a natural process for coastlines to get filled up but dredging material and dumping it in our special areas is speeding this process up significantly in our takiwā. This relocation is making species like pāua more exposed and more vulnerable to freshwater events like floods, predation, and overharvesting by people.
29. In addition to changes in habitat, invasive seaweeds are coming in and changing the dynamics of coastal ecosystems, so our kaimoana are struggling. The coast has always been a dynamic environment, but not one that changes this rapidly and dramatically. Combine this with marine heatwaves, sea level rise, ocean acidification and over-fishing and you have a six-pronged attack that is really making our fisheries vulnerable.
30. All of this means that our traditional mahika kai areas are disappearing. If our mahika kai species disappear, we cannot pass our mātauraka down to the next generation or use mahika kai to reconnect our whānau that have become disconnected from their own cultural practices because of that loss of access their whānau have experienced.

CLIMATE CHANGE, FLOODING, INFRASTRUCTURE DAMAGE, AND MAHIKA KAI

31. The impacts of climate change, particularly flooding and sea level rise, and the vulnerable location of infrastructure, is also adversely affecting our mahika kai practices and our ability as mana whenua to connect to the environment.
32. We are seeing more frequent and extreme flood events now; we have had three in the last five or six years. The Waikōuaiti river is only a small river; it only runs at an annual average of a little over one cumec. However, we now see the river flooding during heavy rainfall and peaking at four-to-five hundred cumecs in just a few hours. This massive flow increase is made even more dramatic by the tidal nature of the Waikōuaiti river. The tide reaches about eight kilometres inland, so when you combine an incoming tide with a flood event the water coming through our small river is even more extreme.

33. We have invested in riparian planting along our river, amounting to tens of thousands of plants, and they just get smashed. During these flood events we also get big hay bales coming down the river, and trees too. Willows get washed down and take out the bridge or take out the road and rip up the tarseal. We also had two boats that slipped their moorings in the latest flood and washed out to sea.
34. These extreme weather events also exacerbate water quality issues in our coastal takiwā because there are two wastewater treatment plants that get flooded in these events. These wastewater plants are located on sand, adjacent to our kaimoana areas, and adjacent to the ocean. It isn't sensible. The floods result in untreated sewerage pouring right into our pātaka – our food gathering areas - for several days. The Dunedin City Council website effectively warns that “your food is safe to eat, but if it rains, don't eat it for five days”. That does not work for us, as it impacts on our cultural relationship with mahika kai, and our kaitiakitaka responsibilities.
35. We are really concerned about councils wanting thirty-year consents for wastewater plants because the environmental context will be completely different in thirty years' time. The plants are due for consent renewals in the next three years, and they cannot continue to be located in these low-lying coastal areas. Not only are they at risk from more regular damage from the effects of climate change, but they are also putting our kaimoana at risk. The wastewater plants are only about a metre above the mean high tide line now, and as climate change causes the sea level to continue to rise, the mean high tide line will rise as well, making these wastewater plants even more vulnerable.
36. A more holistic approach is required to the location and design of infrastructure to reduce its vulnerability to the effects of climate change and extreme weather events, to safeguard freshwater and coastal mahika kai habitat, and to enable us to give effect to kaitiakitaka.

THE WAIKŌUAITI MĀTAITAI AND EAST OTAGO TAIĀPURE

37. Taiāpure and mātaimai are customary fisheries management tools. We have one of each in the Puketeraki takiwā: the East Otago Taiāpure, established in 1999; and the Waikōuaiti Mātaimai Reserve, which was established much later in 2016. The goal of these tools is to restore and maintain a healthy and abundant fishery for us and our children after us. We as Takata Tiaki have the ability to manage these areas in ways that reflect kaitiakitaka concepts and tools such as utu (reciprocity), and rāhui (periodic restrictions).

38. Our elders at Puketeraki spent nine years trying to establish the East Otago Taiāpure. Its original purpose was to protect and restore our pāua population. Over time though, that purpose has broadened because we needed to focus on more than just pāua to make a change to their health. We also need to focus on areas outside of the mātaimai and taiāpure to see change within them, which reflects our concept of ki uta ki tai. For example, a lot of the work we do on the rivers has an impact on our mātaimai and taiāpure.
39. It took so long to establish the taiāpure because there was a lot of opposition from Pākehā in the community who did not understand the concept or purpose of a taiāpure. To get it across the line, our taiāpure was set up as a compromise. We invited the wider community within its governance. We also had to compromise around the boundaries, some of the reef systems are actually bisected by the taiāpure boundary, simply because in the 1990s the perception around Māori fisheries and “Māori only” was so heavily opposed. The compromise was to move the boundary so that it made it easier for the then Ministry of Fisheries to ‘police’ it, despite it weakening the ability of the taiāpure to function as it needed to across an entire ecosystem.
40. The application for the Waikouaiti Mātaimai Reserve was lodged in 2014. The Mātaimai included the waters of the Merton Tidal Arm and surrounding wetland areas, the Kirikiriwhakahoro (Merton Stream) and the main Waikouaiti River west to the Waikouaiti Fishing Easement.
41. The Mātaimai area was identified as an area that needed to be closed to commercial eel fishing such was the significance of the lagoon for customary fishing. Waterbodies in the Mātaimai area featured significantly in interviews with kaumātua, takata tiaki and fishing experts during the Ngāi Tahu Customary Fisheries Protected Areas Project.
42. The number of important pā, kāika and nohoaka sites based around the Mātaimai area, as shown by Figure 1 below, are testament to the abundance and availability of kai from the lower reaches of the Waikouaiti River. Mahika kai species gathered from the lower reaches of the Waikouaiti River included tuna (*Anguilla dieffenbachii*), whitebait (various species of Galaxiidae), pipi (*Paphies australis*), mohoao (*Rhombosolea plebeia*), tuatua (*Paphies subtriangulata*), pātiki (*Rhombosolea retiaria*), aua (*Aldrichetta forsteri*), waikōura (*Paranephrops planifrons*) and kākahi (*Hyridella menziesi*).



Figure 1: Waikouaiti River mātaihai (green) and coastal taiāpure (purple) (Source: *Kāti Huirapa Rūnaka ki Puketeraki, Application for the Waikouaiti River mātaihai*)

43. I think the key feature of our taiāpure and mātaihai is the amount of research that we are doing within them. One of our main focuses is to support research, so we actively support a lot of research within our mātaihai and taiāpure boundaries including the CoRE climate change project Coastal People: Southern Skies. There is a lot of mahi going on relating to pāua including land-based habitat restoration, reseedling of kelp and pāua, and translocation. There is also a lot of work on ocean acidification, sea level rise, and many other things in partnership with universities and other researchers. This is one of the reasons that we are so aware of the different impacts of land uses on our waterways and coastal environments at Puketeraki.
44. We at Puketeraki realise the importance of corroborating our mātauraka and anecdotal evidence with someone with a clipboard writing down a whole lot of numbers and saying, “yep, you guys were right”. That supports us to create regulations and other management tools that help us protect and restore our mahika kai in ways that align with our mātauraka and tikaka.
45. The mātaihai and taiāpure are important because they are a tool for re-establishing our rakatirataka and kaitiaki responsibilities in our takiwā. After generations of being excluded from decision-making on our own whenua and moana, these management

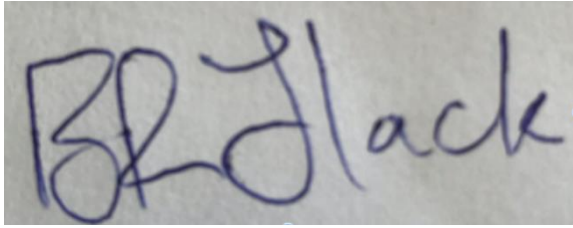
tools allow us to be the active kaitiaki we have always wanted to be. They also create opportunities for us to engage in mahika kai activities more freely than we can in other areas, as we have more flexibility to control what is harvested, and when restrictions to that harvesting are imposed.

46. As discussed above though, our work within the mātaimai and taiāpure is being hindered by what is being allowed to happen on the land. The combination of reef sedimentation, low water flows, water contamination, and storm damage is all impacting on the effectiveness of our restoration and research efforts. Takata Tiaki have the ability to make decisions inside our mātaimai and taiāpure, but we cannot influence what is happening outside of these management areas in the same way. That is why we need the relevant local authorities to take more responsibility for the activities they are allowing on the land, and the impacts they are having on us in the coastal environment.

CONCLUSION

47. Mana whenua are not constrained by the siloed thinking of other agencies, although we are still constrained by budgets and the reluctance of other decision-makers and organisations to actually understand our values and practices. We, mana whenua, are the constant when it comes to looking after the taiao.
48. This evidence has told you what we are seeing within our takiwā, and what impact it is having on all of the mahi we are trying to do to protect our coasts and reconnect whānau back to their culture. Because these impacts are not easily visible and because it is a difficult environment to work in, councils aren't standing up and taking responsibility for the damage that is being done in the coastal areas.
49. Integrated management is the only way to protect these areas, and help us, as kaitiaki, continue to work towards maintaining a healthy environment and abundant fishery for us and our children after us.
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Brendan Flack

A handwritten signature in blue ink on a light-colored background. The signature is written in a cursive style, with the first part being a stylized 'B' and 'F' combined, followed by the word 'lack'.

23 NOVEMBER 2022

Appendix 1: Glossary of Māori words and phrases

Atua	Deity / deities
Awa	River
Hapū	Sub-tribe
Haukāika	Mana whenua who live in a locality permanently
Iwi	Tribe
Kai	Food
Kaimoana	Seafood
Kāi Tahu / Kāi Tahu	
whānui	the collective of the individuals who descend from one or more of the five primary hapū of Hāwea, Rapuwai, Waitaha, Kāti Mamoe and Kāi Tahu. Kāi Tahu hold mana whenua status across large tracts of Te Waipounamu.
Kaitiaki / Kaitiakitaka	The exercise of guardianship over natural and physical resources, as an expression of rakatirataka and mana; a person undertaking roles as an expression of kaitiakitaka.
Mahi	Work, tasks
Mahika kai	A term that literally mean “food workings” and refers to the customary gathering of food and natural materials, and the places where those resources are gathered or produced. The term also embodies the traditions, customs and collection methods, and the gathering of natural resources for cultural use, including raraka (weaving) and rokoā (traditional medicines).
Mana whenua /	
mana moana	Customary authority or rakatirataka exercised by an iwi or hapū in an identified area, iwi that hold this customary authority in a specific location.
Mātauraka	Kāi Tahu customary knowledge passed down from one generation to the next, used in the present, and developing, for the future. It involves observing, experiencing, participating, studying, and understanding the world from an indigenous cultural perspective. It is a tool for thinking, organising information, considering the ethics of knowledge, and informing us about our world and our place in it. Incorporation of

mātauraka in resource management decision-making is important to ensure that cultural interests are appropriately recognised and provided for.

Mauri	Essential life force or principle, a metaphysical quality inherent in all things both animate and inanimate.
Mihimihi	Formal introduction
Moana	Ocean
Pākeha	New Zealanders of European descent
Papatūānuku	Kāi Tahu deity represented by the earth
Pātaka	Place where food is stored
Rakatirataka	The exercise of mana or authority to give effect to mana whenua culture and traditions across all spheres of their takiwā, including the management of te taiao.
Rakinui	Kāi Tahu deity represented by the sky
Taiao	Natural environment / nature
Takiwā	Area, region, district
Takaroa	Kāi Tahu deity represented by the ocean
Takata Tiaki	Customary fisheries officers
Te Waipounamu	The south island of New Zealand
Tikaka	The beliefs, values, practices, protocols, and procedures that guide appropriate codes of conduct.
Waka	Seafaring vessel(s), boat(s)
Wānanga / wānaka	To discuss, a workshop or meeting for discussions
Whakapapa	Genealogy
Whānau	Family / families
Whenua	Land