Speaking notes: The Otago Fish and Game Council

Introduction

My name is Nigel Paragreen. I am the Environmental Officer for the Otago Fish and Game Council. I have been asked to speak to Fish and Game's submission on behalf of Ian Hadland.

Fish and Game's submission was intended not to oppose the application but to ensure that the management of the Green Island Landfill would be appropriate. It highlighted the stressed nature of the catchment; it's recreational use; and the uncertainty associated with the application. I'd like to build onto those points today and suggest changes to the proposed consent conditions that would satisfy Fish and Game's outstanding relief.

Key policy direction

I want to begin with the NPS-FM section 1.3(1) because I think this describes te Mana o te Wai well in relation to this catchment. It reads:

> *"Te Mana o te Wai is a concept that refers to the fundamental importance of water and recognises that protecting the health of freshwater protects the health and well-being of the wider environment. It protects the mauri of the wai. Te Mana o te Wai is about restoring and preserving the balance between the water, the wider environment, and the community."*

It's this last sentence that's most important. The evidence for this hearing is clear the Kaikorai stream and estuary are negatively affected by human activity. This affects the ecosystem and, through the interim Human Health and Environmental Risk Assessment (HHERA), we see that there may be adverse effects on human health as well.

That balance between water, the wider environment and the community is out of whack in this catchment.

Despite this, recreation does occur in the estuary. Paragraph 11 of Fish and Game's submission discusses the records that Fish and Game has on file for angling in the estuary. I can confirm also that hunting is an established activity in the estuary and there are a number of maimais present.

The stressed nature of the catchment affects recreation, both ecologically and experientially, and Fish and Game's expectation is that alleviating pollution pressure on the estuary will enable greater levels of recreation by the public.

The aspiration for improving the health of these water bodies is also written into Otago's planning documents. The long-term freshwater visions outlined in the Otago Regional Policy Statement 2021 require freshwater and estuarine ecosystems to be healthy and

support the health of people and their connections with water bodies by 2040.[1] What this means is that during the term of the discharge consents related this application we should expect the cumulative effects in this catchment to be resolved to the extent needed achieve those goals.

Keeping these outcomes in mind is important because while the adverse effects on surface water may not be discernible from the background contamination now this may not always be the case.

Adverse effects in context

Thinking about the adverse effects of the application in the context of a stressed, but soon to be improved, water body invites us to take a different approach. This was explored by Dr Wilson who stated that:

> *"A key principle of Te Mana o Te Wai in the National Policy Statement for freshwater Management (2020) (NPS-FM) is that the wellbeing and health of water are prioritised. So, if there is evidence of upper catchment stress to downstream receiving environments, the state of water quality (in downstream receiving environments) should not be further degraded and, instead, should be improved where possible. As such, there are limitations to how the effects of the current and proposed activities on the Kaikorai Stream and Estuary have been assessed as they are based on the ability to detect changes in water quality from discharges in a degraded environment."*[2]
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> ...
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> *"In general, the effects of the proposed stormwater discharges have been assessed based on the ability to detect change in the receiving environment. As noted, the Kaikorai Stream and Estuary are degraded environments, with a range of catchment-derived pressures. As such, it is appropriate to consider how the stormwater discharges from the landfill contribute to contaminant loads in these environments rather than just focus on whether they further degrade water quality."*[3]

Fish and Game submits that we should actually go a step further than not causing more degradation. It is helpful to consider how this application will support the achievement of the long-term vision for these water bodies over its term.

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[1] Otago RPS 2021 LF-FW-O1A (1) and (6); LF-VM-05. These provisions are no longer subject to appeal
[2] Evidence of Dr Wilson, paragraph 50
[3] Evidence of Dr Wilson, paragraph 62. While this comment relates to the stormwater discharge, Fish and Game submits that it is equally relevant to the discharge of leachate, if that is occurring. The s42A author draws a similar conclusion at section 6.1.2.6, page 30 of their report.

The second important point from these passages is that the focus of experts on measurable surface water quality changes misses the potential for the landfill's discharges to be masked by already poor water quality. Discharges that may not be enough to register in water quality reporting could still be contributing to contaminant loads in the estuary, contributing to cumulative adverse effects.

In the context of the long-term vision direction, this presents an interesting problem. The adverse effects may be masked by poor water quality now but in future as cumulative effects are addressed by the Regional Council, they may become apparent. Because of the long-term nature of the proposed discharge consents, if conditions are not suitable to keep up with these changes then the activity may end up hampering the achievement of the long-term vision, not supporting it.

Fish and Game's outstanding relief

Fish and Game's submission seeks relief that it submits is consistent with te Mana o te Wai and achieving the long-term visions. Some of this relief has been addressed already in consent conditions and evidence and the remaining relief can be broken down into the following categories:

1. Ensuring consent conditions create a meaningful adaptive management regime.
2. Supporting adaptive management with robust monitoring.
3. Managing leachate head.

Adaptive Management

Fish and Game sought consent conditions around adaptive management that would address risks to people and the environment and create certainty. Too often, Fish and Game has seen adaptive management being improperly used to kick the can down the road. Clarity needs to be provided up front for the community to have confidence that the adaptive management approach will be effective.

In condition 54 of his Appendix 1, Mr Dale provides a great deal of this information. This goes a long way to resolving Fish and Game's concerns when combined with robust monitoring.

However, Mr Dale's wording could be improved by:

1. Specifying that action must be taken to mitigate or remedy adverse effects identified in limbs (a) – (f).
2. To ensure that the activity supports the achievement of the long-term visions, inserting an additional limb or condition stating that the adaptive management plan should be prepared and implemented if monitoring demonstrates that the activity is contributing to cumulative adverse effects, which are being addressed at the catchment scale by the Otago Regional Council. In order to be relevant to the long-term visions, the adaptive management plan triggered in this way should

also have considerations of stormwater discharges to water, ecosystem health and impacts on recreation.

Robust monitoring

Fish and Game is interested in surface water quality monitoring and further refinement of the HHERA.

With regards to the former, Fish and Game submits that it is preferable to use the indicators and approach recommended by Dr Wilson, as it has a basis in the qualities of the receiving environment. Given that assessing impacts on the receiving environment and those who use it will be the ultimate goal, it makes sense to base the trigger values there.

Similarly, Fish and Game supports the further refinement of the HHERA, which was clearly identified as 'interim' and identifies potential risks for further investigation. Ms Dodd provides recommendations at her paragraph 34 on how to ensure the HHERA provides a robust understanding of

> *"... the following at both a site-specific and catchment-scale:*
>
> *a) Nutrient impacts, toxicity, and eutrophication*
>
> *(b) Metal impacts, bioavailability, and toxicity*
>
> *(c) PFAS impacts and bioaccumulation in the aquatic food chain"*

Condition 58 (of Mr Dale's Appendix 1) which deals with the HHERA could be improved by specifically incorporating this recommendation.

Managing leachate head

I was concerned to learn that the leachate head levels as of August 2022 are up to 22m in some parts of the landfill,[4] more than twice the height that which Mr Elliot considered 'significant'.[5] This is also just a few meters below the full waste depth of 25m.[6]

Given the degraded nature of the receiving waters which leachate may be migrating into, and the uncertainty surrounding its movement, Fish and Game seeks that the leachate pumping trial be undertaken as a consent condition as recommended by Mr Elliot.

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[4] Waste Futures – Green Island Landfill Closure: Design Report – September 2023 update, March 2023, pg 38

[5] Evidence of Mr Elliot, paragraph 47

[6] Green Island Landfill Closure: Design Report – September 2023 update, March 2023