

## Before Hawkes Bay Regional Council and Hastings District Council

In the matter of            the Resource Management Act 1991

And

In the matter of            Applications by Hastings District Council and Napier City Council  
(**Applicants**) for approvals relating to Area B at Ōmarunui Landfill  
(**Landfill**)

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### Summary of evidence by Dean Craig Miller (Freshwater Ecology)

Dated 28 October 2021

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1. I prepared evidence dated 2 September 2021 on the topic of Freshwater Ecology.
2. My evidence assesses the potential effects of the proposed stormwater discharges from the Project, and specifically discharges of sediment to the Upokohino Stream. This includes sediment discharges during construction and operation and water quality effects associated with the placement and operation of the proposed stormwater treatment pond and wetland. Other contaminants are briefly assessed.
3. My assessment of ecological effects follows the framework set out in the Ecological Impact Assessment Guidelines (EclAG) produced by the Environment Institute of Australia and New Zealand. This includes assigning ecological values to the receiving environment and determining the magnitude and level of potential ecological effects.
4. My assessment is that Upokohino Stream is of 'low' ecological value in its current condition, which is due to extensive modification, poor macroinvertebrate community health and poor water quality. The Upokohino Stream is also intermittently flowing in its lower reaches.
5. Stormwater from the Project will be treated through appropriately designed sediment treatment ponds, including a polishing wetland for the Area B stormwater discharge. Discharges would then flow to Upokohino Stream via a farm drain, a subsoil drainage system and overland flow. Upokohino Stream subsequently enters the Tutaekuri River approximately 5.5 km downstream from the site.

6. In my opinion, with erosion and sediment controls during earthworks, and with an appropriate and a well-maintained stormwater treatment pond, the level of effects of treated stormwater discharges on the Upokohino Stream will be 'very low'.
7. All water falling on exposed refuse at the working face of the landfill will be discharged to the leachate system, and no water that has been exposed to waste will be discharged to the stormwater system. Therefore, in my view the overall level of effect of other contaminants from the landfill entering the Upokohino Stream will also be 'very low'.
8. As mentioned above the Upokohino Stream is a tributary of the Tutaekuri River. Additionally, T+T was advised by Hawkes Bay Regional Council staff that the Upokohino Stream may occasionally flow into Lake Te Rotokare via the lake's outflow drain. The frequency that this actually occurs is unclear. In my opinion there is a low probability that any measurable adverse effect on the water quality or ecology of Tūtaekurī River or Lake Te Rotokare will occur due to the project.
9. I have recommended baseline and ongoing monitoring is undertaken to assist in protecting the health of the Upokohino Stream. I have had input into the proposed conditions of consent attached to the evidence of Ms Brabant. The proposed conditions appropriately adopt the monitoring measures I have recommended. Specifically draft Condition 59 a - g that set out the requirements for a Stormwater Receiving Environment Monitoring Plan (SREMP).
10. I note that I have recommended that inspection based monitoring and response to cyanobacteria blooms in the proposed stormwater ponds and wetland is captured in draft Condition 6 relating to the Operations and Maintenance Manual as opposed to draft Condition 59.
11. In conclusion, I consider that the level of effects of treated stormwater discharges on the Upokohino Stream will be 'very low' given the proposed stormwater management measures. The proposed monitoring is appropriate to detect any unanticipated effects and to inform ongoing erosion and sediment control and stormwater management measures.

**Dean Craig Miller**  
**28 October 2021**