

**WATER
WE'RE ON IT.**

Napier Wastewater Treatment Plant Performance 2021

The Napier City Council operates two Biological Trickling Filters (BTFs) to treat our wastewater at the Awatoto Wastewater Treatment Plant (WWTP). Alongside a spiritually cleansing Papatūānuku channel, these BTFs were constructed to address tangata whenua concerns about the quality of water being discharged into Hawke Bay.

A consent issued by Hawke's Bay Regional Council allows Napier City Council to discharge treated wastewater into the ocean through a 1.8km pipe. The consent places strict monitoring and compliance requirements on us to minimise the environmental impacts of the City's wastewater on the marine ecosystem. Under the consent, we are required to produce a performance report every three years to assess how well the BTFs are doing their job.

This report has been prepared by independent wastewater experts and assesses compliance with consent conditions over the last three years.

How well are the BTFs performing?

Overall, the treatment processes at our BTFs continue to perform well and regular testing and monitoring suggests the environmental impact of the discharge into Hawke Bay remains low.

The key findings of the performance report were as follows:

- The volume of wastewater being discharged is within consented limits, however the amount of organic material in what arrives at the BTFs exceeds consented limits.
 - Despite this, the BTFs continue to efficiently remove the elevated levels of organic material from the discharged wastewater
 - Industrial flows from the Pandora Industrial Zone are contributing to this while the Pandora Trade Waste Pipe remains offline.
- Levels of ammonia and zinc in the wastewater are above consented limits.
 - It is difficult to understand the exact source of these chemicals without testing every wastewater connection. However, the elevated ammonia and zinc likely comes from industrial sites.
- The levels of suspended solids have consistently exceeded consented limits.
 - The high amount of suspended solids are primarily due to the Awatoto Industry inputs. This means there may be a visible plume at the point of discharge and has happened due to the absence of clarification in the process train. A drop in the suspended solids removal efficiency in the effluent may also be related to the high biological loadings (see bullet point one), which may have pushed the BTF process to operate under higher loadings beyond the design limit and thereby affecting solids removal efficiency.
- The amount of fats, oils and grease in the discharged wastewater occasionally exceeded consented limits.



- The pH levels of the discharged water are fully compliant.
- Levels of faecal coliform and bacteria are safe and within consented limits.
- Efficiency of the BTFs slightly decreased during the review period. This has yet to result in reduced performance and is managed through routine maintenance and renewals.
- Several leaks in the outfall pipe occurred during the reporting period. These have all been repaired
 - Annual inspections of the outfall revealed damage caused by fishing vessels. A protected area around the outfall has now been established.
- A series of tests were conducted in response to the outfall leaks to confirm their location and impact on the marine environment
 - The increased risk to marine flora and fauna from the leaks was found to be low and confined to the immediate vicinity of the leaks

What are we doing to improve?

We know some of these results are not as good as they should be and we remain committed to ensuring that wastewater entering Hawke Bay is safe. We have a significant amount of investment in our water infrastructure over the next ten years and some of this will help improve our wastewater quality.

A short-term initiative we have planned is the recommissioning of the Pandora Trade Waste Pipe. This will divert effluent from the Pandora Industrial Area and reduce the load on the BTFs at Awatoto resulting in a more efficient wastewater treatment.

We note that the elevated levels of zinc and ammonia are potentially coming from the Pandora and Awatoto industrial areas. Council's Environmental Solutions Team continue to work with businesses in these areas to ensure what enters the wastewater network from these sites is safe. Council monitors industrial users holding a trade waste consent on their discharge quality. Point source upgrades have been considered as a potential mitigation measure. We will also be reviewing the Trade Waste Bylaw, which will provide us with more control over discharges into the wastewater network.