

Martinborough Wastewater Treatment Plant Overflow Incident Investigation and Report: Jan 2020

In Summary:

The Martinborough Wastewater Treatment Plant (WWTP) has had two overflow incidents, which may have been non-compliant with resource consent conditions. The Plant is being progressively upgraded to reduce discharges to the Ruamahanga River. The first stage of irrigation to land was installed a few years ago, although there have been some operational and maintenance issues with this equipment.

The overflow discharge problems experienced of late relate to progressively discharging to land. The irrigator did not perform as it should, which meant that there was a build - up of wastewater in the wastewater ponds. At the same time, the overflow preventer wasn't working properly.

To fix the problem, a new valve has been installed and a back-up inflatable bung, just in case. The irrigator is now working properly and the wastewater ponds are also at acceptable levels. A full review of potential points of operational failure has been completed towards further mitigating overflow risk.

Cause and Contributing Factors:

15 January 2020: The primary cause was human error, due to not putting the temporary bung (in lieu of the mechanical valve what was out of service for maintenance) in place after the flow of river had decreased below the minimum permitted for discharge of treated wastewater.

27 January 2020: The primary cause was the failure of the temporary inflatable bung between the primary and maturation ponds. This resulted in the maturation ponds exceeding capacity and a discharge to the Ruamahanga River at flows within the threshold of those permitted by consent.

Other factors which contributed to the incidents are:

- An earlier failure of the mechanical valve between the oxidation and maturation ponds
- Multiple failures of the land irrigator
- Unsuccessful corrective maintenance of the land irrigator carried out by the supplier
- Lack of risk assessment for the actions to be taken to remedy the equipment problem
- Inadequate operating and maintenance manuals and processes for the plant

Avoiding Similar Incidents happening again

Despite effects on the environment being minimal, these incidents are not in keeping with being respectful of the environment. We are committed to progressively moving away from discharging to watercourses to discharging to land; we only discharge fully treated wastewater to the environment. To prevent similar incidents happening again:

- A permanent mechanical valve between the primary and maturation pond has been installed
- Critical control point operating processes is being developed for risk management
- The irrigator has been repaired and a review of its operation is in progress
- A review for additional storage when the irrigator is unavailable is in progress
- Full condition assessment of the wastewater facilities is in progress
- Operational and maintenance plans are being developed
- Staff training and support is under way