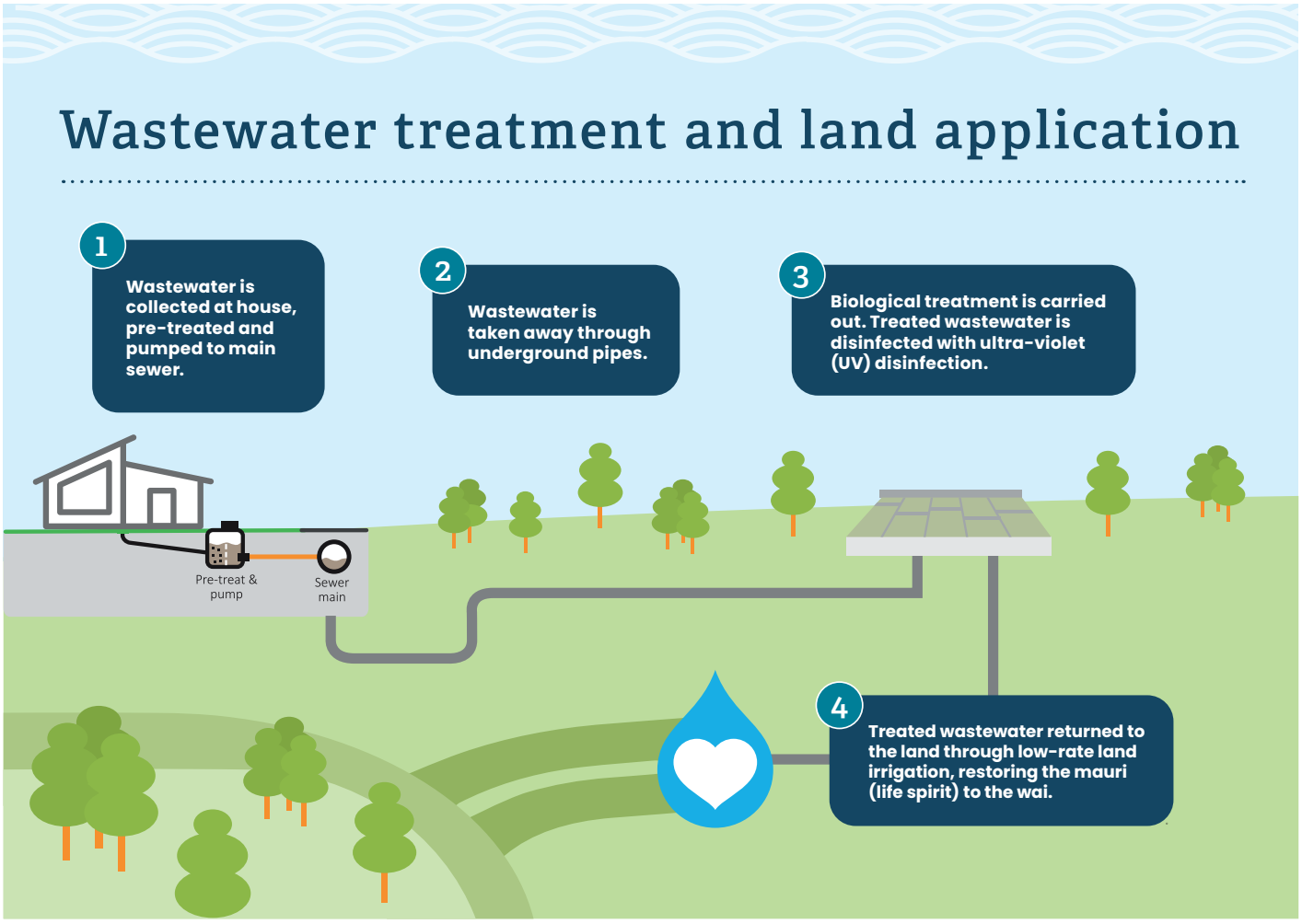
Te Niaotanga ō Mataatua ō Te Arawa Matatā Wastewater

Preferred option key elements

Ngā āhuatanga o te kōwhiringa e mariu nei

Note: *All key elements are subject to further technical work and resource management requirements and therefore may change.*

A typical land-based wastewater system has the following key elements (shown in the below diagram).



Preferred option

Te kōwhiringa e mariu nei

In September 2025 Whakatāne District Council approved a preferred option for the Matatā Wastewater Project. The project is now in the consenting strategy phase of development.

Medium scale system

Pūnaha tauine wawaenga

The preferred option includes:

- Wastewater treated centrally via a packaged medium technology, modular treatment plant with low sludge production.
- The liquid effluent is suitable for land-based disposal methods.

The preferred option will contain the following components:

Reticulation	Pressurised system
Household collection	STEP (Septic Tank Effluent Pump) system
Treatment	Packed bed bioreactor with ultra-violet (UV) disinfection
Land application	Low-rate land irrigation matched to the soil capacity

Wastewater reticulation – Pressurised system

Ngā kōrere parakaingaki – he pūnaha pēhanga

- A pressurised wastewater system is a modern method of transferring sewage from individual properties to the treatment plant site.
- Each property is equipped with a small pump unit that conveys wastewater through sealed, small-diameter pipes under pressure, rather than relying on gravity and large, deep pipelines.
- Because the system is fully closed, stormwater and groundwater cannot enter, helping maintain network efficiency and reducing the risk of overflows during heavy rainfall.

Household collection – STEP system

Kohikohinga ā kāinga – pūnaha STEP

- A STEP system (Septic Tank Effluent Pump) is a type of wastewater collection system that combines on-site treatment with a shared network.
- Each property has an on-site septic tank that collects and separates solids from the liquid wastewater.
- The clarified liquid (effluent) is pumped through sealed, small-diameter pipes to a local treatment plant.
- The solids remaining in each STEP tank are periodically collected and removed by the network operator as part of scheduled maintenance.

These images are illustrations only of a STEP system (source: Orenco Systems Prelos Collection System Wastewater Collection System (orenco.com/prelos)

Wastewater treatment plant – Packed bed bioreactor

Whare Rāwekeweke Parakaingaki – Pūnaha Whakatika Wai Tāhawahawa

- A packed bed bioreactor (PBBR) is a type of biological wastewater treatment system designed to breakdown contaminants in wastewater.
- Wastewater from the households is pumped to the wastewater treatment site using the reticulated pipeline.
- The PBBR system uses a filter bed packed with media (such as textile sheets) that provides a large surface area for microorganisms to grow on. These microorganisms break down contaminants through natural biological processes.
- PBBR systems are compact, efficient, and reliable, making them well suited to small community or decentralised wastewater treatment schemes.
- Following treatment through a PBBR system, treated effluent is disinfected by UV light prior to applying to land.

Illustrations only of a packed bed bio-reactor system at Jacks Point, Queenstown (land) and Ongare Point, Katikati (bioreactor).

Application – Low rate land disposal

Whakarapatanga – porowhiua whakahaere ki te whenua

- Low-rate land disposal is a controlled method of discharging treated wastewater onto land, where the soil and vegetation provide further treatment.
- The treated effluent is applied at a slow, sustainable rate, allowing the soil to naturally filter and further reduce contaminants. Plants also take up the nutrients to help them grow before the purified residual water reaches groundwater or nearby waterways.
- This approach supports nutrient recycling, enhances soil moisture and provides an environmentally responsible final step in the treatment process.
- Low-rate land disposal systems are carefully managed and monitored to protect soil health, maintain treatment performance, and ensure environmental compliance.
- Application can be undertaken with infrastructure either above ground or below ground (subsurface) depending on the project requirements.
- The wastewater quality and land application rates will be managed to ensure there are no adverse ecological or human health effects on the freshwater receiving environment downstream of the land disposal area.
- Note: These photos are illustrations only. The appropriate irrigation system is reliant on further technical work including the level of treatment required to be provided and mitgating effects such as buffer zones. Further technical work is currently underway to support future decisions.

Dripper line irrigation

Solid set irrigation