

# Put your wastewater to good use

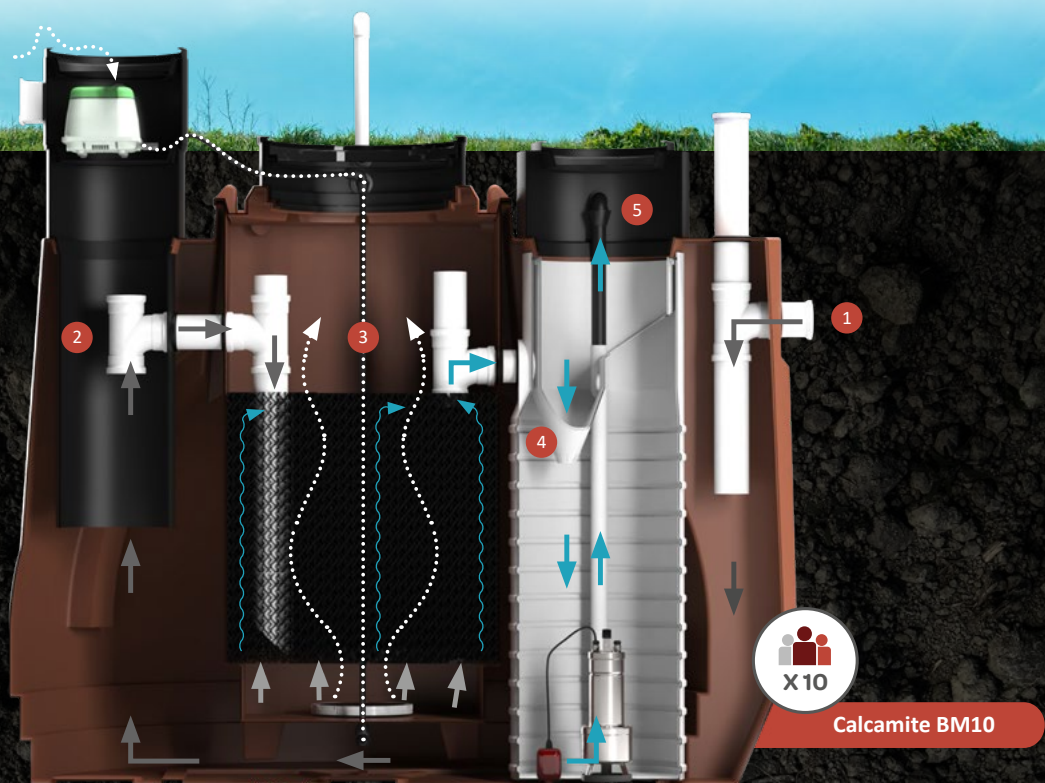
**Calcamite**  
SANITATION + WASTEWATER

Our on-site wastewater treatment plants provide you the opportunity to recycle all domestic wastewater for any non-potable application.

Easily customisable and scalable to cater for anything from 4 to 500 people.

## The purpose:

To receive all domestic wastewater and treat it to a specified quality, typically so that it can be safely re-used for non-potable applications, or returned to the environment without any negative impact.



## How it works:

### 1 Septic tank first chamber

- Domestic sewage enters the primary settlement chamber, where the heavier organic materials separate from the liquids. The heavier organic particles settle to the bottom of the tank where they will be subjected to anaerobic digestion.
- Lighter material (fats, oils and grease) accumulate on the water surface, forming a scum layer. This natural separation process allows a relatively solid-free, supernatant effluent to form in the mid-section of the water column.

### 2 Septic tank second chamber

- This chamber or inner baffle is designed to extract water from the clearest, most solid free zone of the primary settlement tank.

### 3 Bio-reactor

- Here, aerobic conditions are established by transferring predetermined quantities of air from the atmosphere via a small mechanical blower.
- As a result, aerobic bacteria (present in the wastewater) manifest on the surface area of a unique plastic filter media inside the Bio-reactor, and feed on the organic compounds in the wastewater.

### 4 Disinfection

- In the final stage of the treatment process, the settled effluent is disinfected to eliminate pathogenic bacteria. This ensures that potential disease outbreaks are mitigated.
- Chlorine is a preferred option as a disinfectant, and is offered as a standard in our solutions. Alternative disinfection methods can be considered if needed.

### 5 Reuse of processed water

- The treated wastewater is then pumped to the garden for irrigation or other non-potable applications.
- It is important to note that the wastewater can be processed to a specific target effluent quality, and utilised for a variety of applications. For the purpose of the illustration presented above, the re-use of the treated effluent for irrigation is indicated.

Contact us for a free quotation based on your unique requirements and specifications.