



The Tidworth Journey

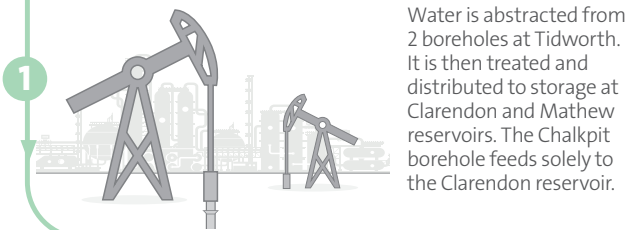
Sustainable solutions for water and wastewater for Tidworth Town
and water supply to Wessex Water for rural areas north of Tidworth

The wastewater treatment process

Clean water production at Tidworth

We treat over 2 billion litres of water per year, that's enough to fill around 900 Olympic sized swimming pools every year! We do this at the Tidworth and Chalkpit Water Treatment Works.

900



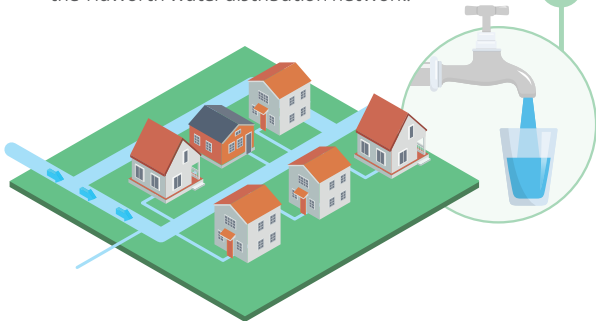
Water is abstracted from 2 boreholes at Tidworth. It is then treated and distributed to storage at Clarendon and Mathew reservoirs. The Chalkpit borehole feeds solely to the Clarendon reservoir.

The 'raw' water is treated via a process called Granulated Activated Carbon (GAC) filtration. This removes chemicals and organic material, as well as any matter that can affect the odour or taste of the water.



Small amounts of chlorine are added before the water is pumped to either the Clarendon or Mathew Reservoirs.

Using natural gravity, the water outflows from Clarendon and Mathew reservoirs into the Tidworth water distribution network.

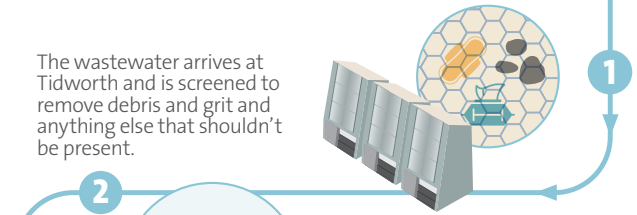


Wastewater treatment at Tidworth

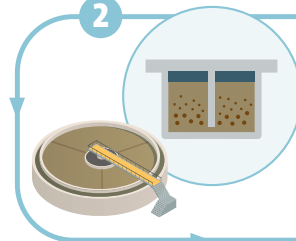
The Tidworth Wastewater Treatment Works treats on average 800 million litres of wastewater per year, enough to fill over 133 million toilets every year!

133m

The wastewater arrives at Tidworth and is screened to remove debris and grit and anything else that shouldn't be present.

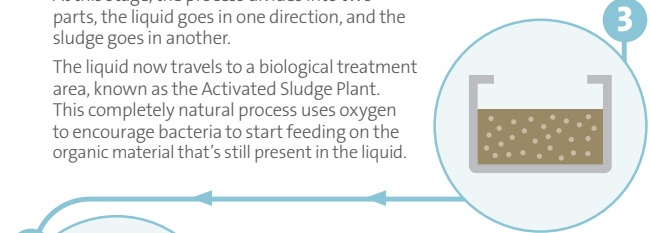


The wastewater travels to the two Primary Settlement Tanks where it starts to separate with the heavier solid material sinking to the bottom where it is removed, allowing the liquid to pass on to the next stage.

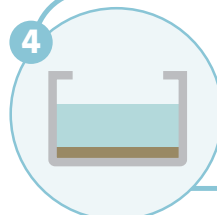


At this stage, the process divides into two parts, the liquid goes in one direction, and the sludge goes in another.

The liquid now travels to a biological treatment area, known as the Activated Sludge Plant. This completely natural process uses oxygen to encourage bacteria to start feeding on the organic material that's still present in the liquid.



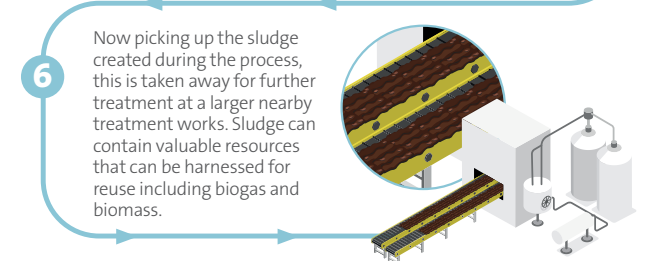
With the organic material now removed, the liquid settles in the Final Settlement Tanks where it has transformed from a muddy murky brown colour, to a clear liquor.



Any solids still present are removed along with dead bacteria to undergo further treatment. Now that the treated liquid meets stringent environmental standards set by regulators, it heads off to a soakaway lagoon system unique to our process which offers a haven to wildlife. This system relies on underlying chalk strata and fissures within the chalk, to allow final effluent to discharge into the underground aquifer for recharge.



Now picking up the sludge created during the process, this is taken away for further treatment at a larger nearby treatment works. Sludge can contain valuable resources that can be harnessed for reuse including biogas and biomass.



Water.

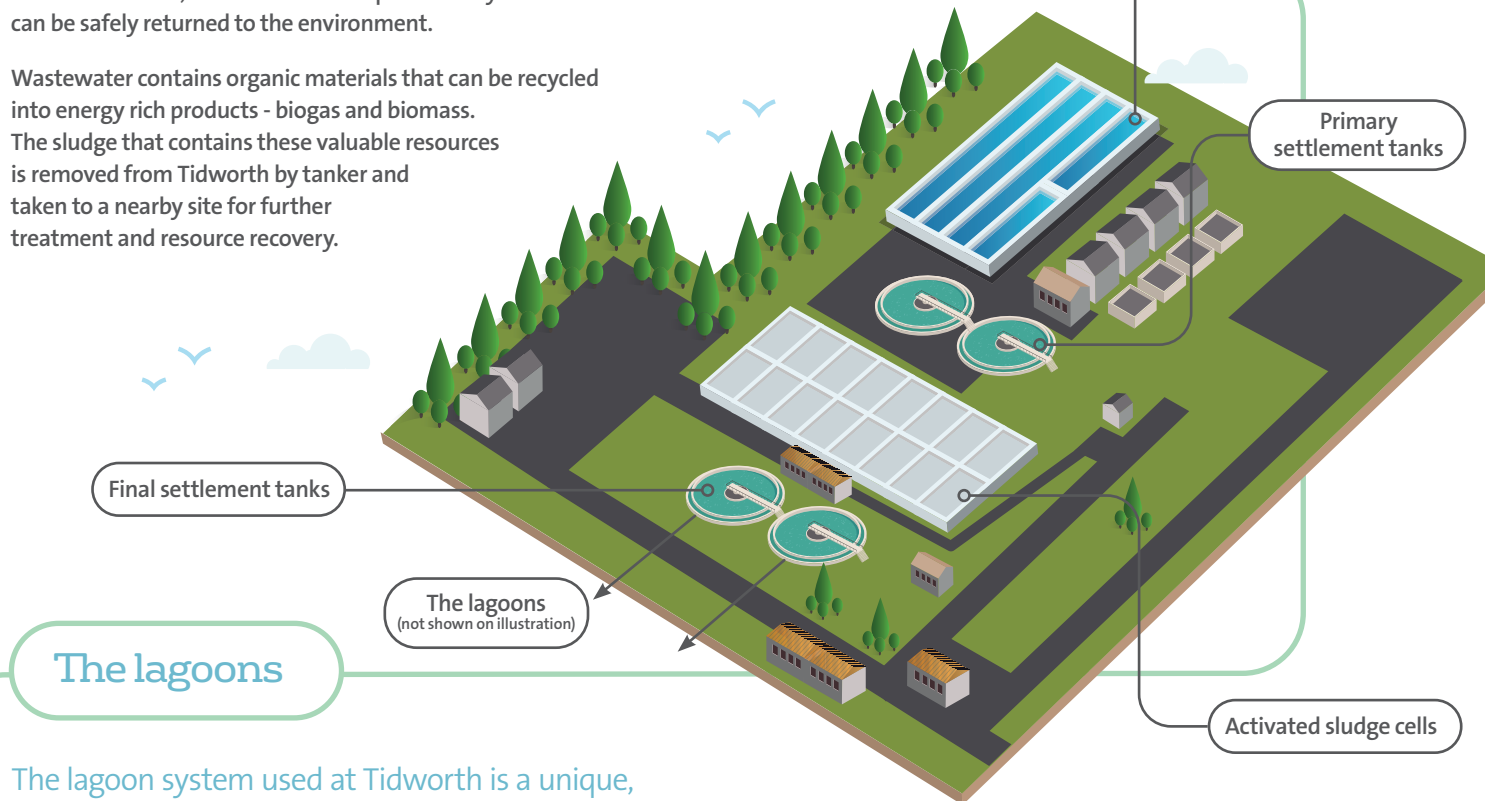
We take it for granted.

It falls from the sky, right? True, but water should be thought of as a finite resource. Water scarcity is a problem affecting us right now with droughts happening with increasing regularity. And what about the water we waste, the water that goes down our sinks, toilets and drains?

All of our water needs to be treated. This includes water for drinking, and the wastewater we produce in our homes and businesses.

At Veolia, we work all year round to provide communities with safe, clean drinking water. At the same time, we take the waste produced by communities and treat this so that it can be safely returned to the environment.

Wastewater contains organic materials that can be recycled into energy rich products - biogas and biomass. The sludge that contains these valuable resources is removed from Tidworth by tanker and taken to a nearby site for further treatment and resource recovery.



The lagoons

The lagoon system used at Tidworth is a unique, environmentally friendly sustainable solution for dealing with the final effluent (the treated liquid) created during the treatment process.

In most other locations, the final effluent is returned to river or sea. However, at Tidworth, the final effluent goes into our soak away lagoon system. This provides an enhanced system of treatment where the final effluent enters the lagoon before it is slowly released through time back into the water table deep underground.

The naturally formed rock, earth and mineral systems act as a water filtration and purification system, removing anything harmful and allowing only clean water to enter the water table.

Water is a precious resource.

We're encouraging our customers to rethink their water use with these simple tips.

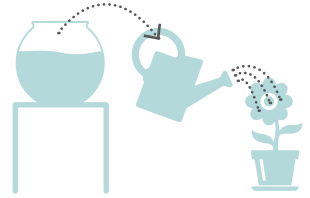
Taking care of your garden?

Save water by mulching your garden and managing the water pressure of your hose. In just one hour, a hose running at full volume can use up to 2,000 litres. That's enough to fill up 28 baths! As for the mulching, the process conserves soil water and reduces evaporation up to 70%.



Cleaning your fish tank?

Use the dirty water on your house plants. It's rich in nitrogen and phosphorus which provides an excellent fertiliser.



Using your dishwasher?

A single wash takes between 40-80 litres of water. Select the economy setting or wait until you have a full load.



Washing vegetables?

Save water by using a bowl filled with water to wash them.



The average washing machine cycle uses up to **95 litres**. Save water by always washing a full load. **You'll save as much as 125 litres per full wash.**



You can use **collected rainwater** for the garden, or even reuse household 'grey' water. As long as there are no harsh chemicals such as bleach or harsh laundry powder you can **water your trees and plants** with it.



Veolia. Our commitment to you.

- Veolia supplies Regulated Water and Waste Water services to over **900 civilian properties** and over **120 commercial properties** in and around the Wiltshire town of Tidworth. In addition, an agreement with the Ministry of Defence includes services to the Tidworth Military garrison where up to **6,000 personnel** can be based on the site at any one time. The Contract also includes the provision of similar services to some **1,300 Service Families** accommodations in the town and surrounding communities.

Water Key Facts

- The boreholes that supply Tidworth are capable of providing up to **9 million litres** of water per day. There is plenty of spare capacity to meet future growth in demand.
- The Tidworth Water Treatment Works supports around **10 direct jobs**, with a number of indirect jobs too.
- Any rocks or soils removed during excavation or maintenance operations are reused on site or used elsewhere as new products.

Wastewater Key Facts

- Tidworth WwTW treats the wastewater from the Wiltshire town of the same name as well as many smaller settlements or properties in the area.
- It treats sewage and wastewater from **14,158 people**, from homes and industry.
- The site employs a small number of people in direct jobs and supports many more through indirect supplier contracts.
- Sludge removed from the site following preliminary treatment is taken to a nearby location for further secondary treatment.