

Guildford STW proposed relocation

We're proposing we relocate our existing Guildford Sewage Treatment Works (STW) to an area north east of Slyfield Industrial Estate, Guildford.

This will give Guildford Borough Council the space they need to complete the development work allocated in their Local Plan, providing much-needed housing for the local area.

Our online pre-application public consultation is open from Monday 24th May to Friday 16th July 2021.

If you have any comments or questions, please respond to the consultation through our website: thameswater.co.uk/guildfordrelocation.



Why are we relocating Guildford STW?

Guildford STW is currently located on part of the land allocated for the council's Slyfield Area Regeneration Project (SARP), which will include the new [Weyside Urban Village](#). We've agreed to relocate our STW so that Guildford Borough Council can bring this plan to life.

Their mixed-use regeneration project will provide thousands of new homes, new community facilities and 6,500m² of commercial space to improve the local area.



We're planning to move our STW to an area that can't be used for housing because of its previous use as a landfill site.

Guildford Borough Council is funding the relocation project, and we're working closely with them to ensure a smooth overlap on both our projects.

Back to basics: How we treat your wastewater

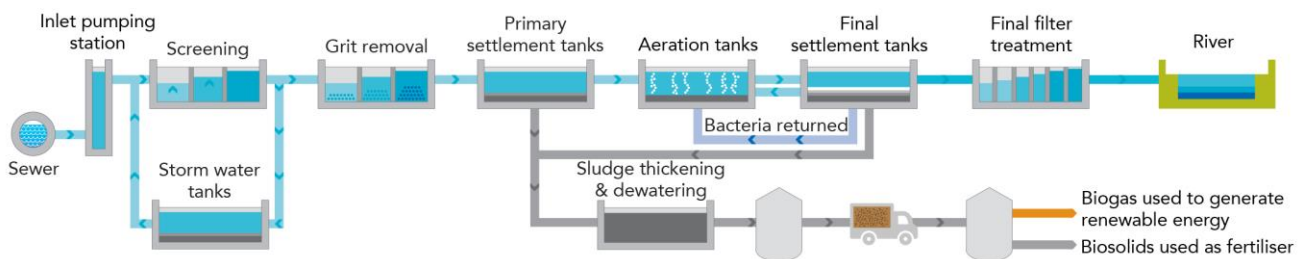
Every day, we collect billions of litres of wastewater from 15 million customers like you and transport it to our sewage treatment works for cleaning. Here's how it works:

Where does wastewater come from?

Whenever you flush the toilet or run water down your sink, wastewater goes down your drain and into a pipe, eventually flowing into a larger sewer pipe under the road. This joins a vast network of over 68,000 miles of sewers, 5,235 pumping stations and 1.48 million manholes, eventually delivering the wastewater to our sewage treatment works.

Your wastewater then goes through several intense cleaning processes before we return it safely to rivers.

Our wastewater treatment process



- We screen your wastewater to remove large objects which could block or damage our equipment or pollute rivers.
- The wastewater flows into large settlement tanks. Solids sink to the bottom, creating “sludge”, which we pump away for further treatment.
- The remaining wastewater flows into rectangular tanks called aeration lanes. Here, we pump air into the water to help good bacteria break down biodegradable materials and consume them as food.
- The treated wastewater passes through a final settlement tank so that good bacteria can sink back to the bottom. This forms more sludge, some of which is recycled back to the aeration lanes.
- The liquid from the final settlement tanks passes through a final filter, and the resulting clean water flows into the river.
- We remove and transport any extra sludge to our renewable energy generation facilities so we can turn it into power.

We'll transfer all wastewater from our existing STW to our proposed site through a brand-new transfer tunnel. This will make sure we can continue to provide our essential treatment service for you.

How we'll relocate the site

Our new STW needs to be built, connected to the network and fully operational before we can shut down the old site.

This means we'll construct the new site while the current site continues to treat your wastewater. Once we've connected and tested the new site carefully, we'll transfer wastewater between the two sites and take the current site offline.

There are three key elements to our relocation project:

1. A new STW located to the north-east of the existing Slyfield Industrial Estate in Guildford, which will replace the existing Guildford STW
2. A new effluent and storm water outfall pipe to the River Wey, just north of the new STW
3. A new gravity transfer tunnel running from the existing inlet pumping station to the new STW, to transfer incoming wastewater from existing sewers to the new STW



Construction of the new STW should take approximately three years, followed by around 12 months of commissioning (during this time we'll test the new site's treatment processes thoroughly before use). If our planning application is approved, we expect to start our work in summer 2022 and complete it by autumn 2026.

Key benefits of our new STW



The move will enable Guildford Borough Council to build 1,500 new homes. This will help the council meet local housing needs and form part of the new Weyside Urban Village. .



The new STW will make use of a former landfill site at the northern edge of the Slyfield Industrial Estate, which can't be used for housing development.



The new STW will future-proof our wastewater treatment capacity so we can continue delivering your essential service as Guildford's population grows.

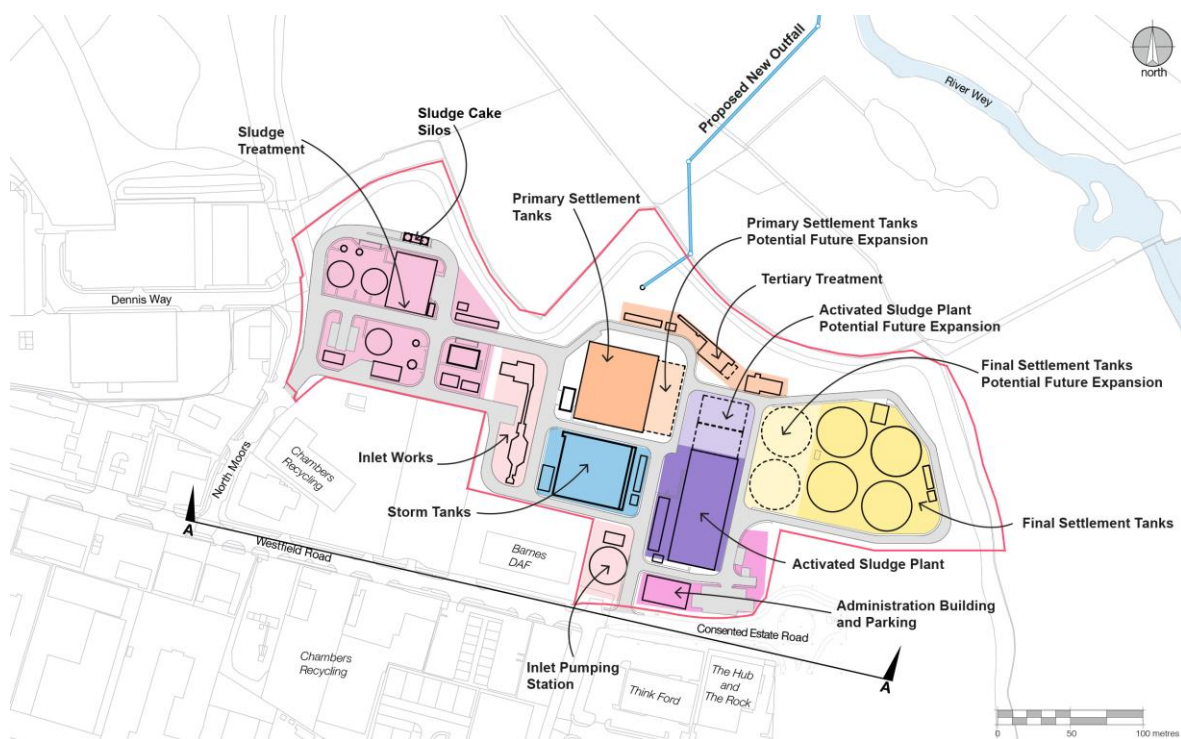


Our new STW in detail

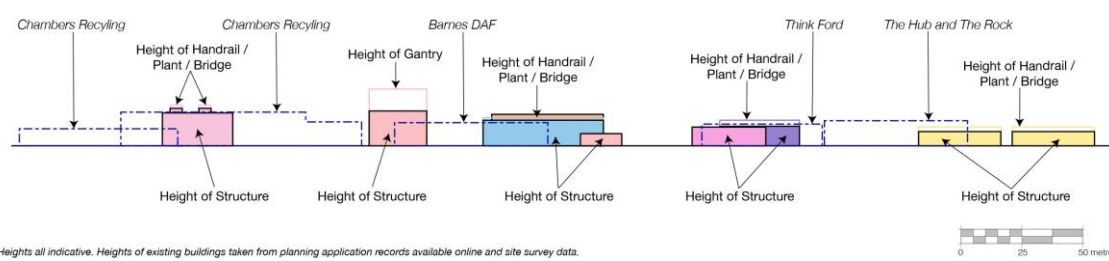
We'll build our new Guildford STW as a like-for-like replacement of our current site, which treats wastewater for around 120,000 people right now.

We'll take into account any new housing developments within the catchment for the STW and make sure there's room to expand in the future if needed. We'll also take care to meet the Environment Agency's strict standards for discharged water quality.

Our proposed site will take up an area approximately 8 hectares to the north east of the Slyfield Industrial estate. To provide suitable operational access, we'll add two permanent vehicle access points from North Moors and Westfield Road (see diagram below).



We're building on the former Slyfield landfill site, and our design means we won't need to remove much of the landfill – we'll be able to build most structures above ground on piled foundations. This means the site will be raised slightly higher than the current site. But it'll be in the context of industrial estate buildings, and the surrounding trees will ensure this doesn't have a negative visual impact for our neighbours.



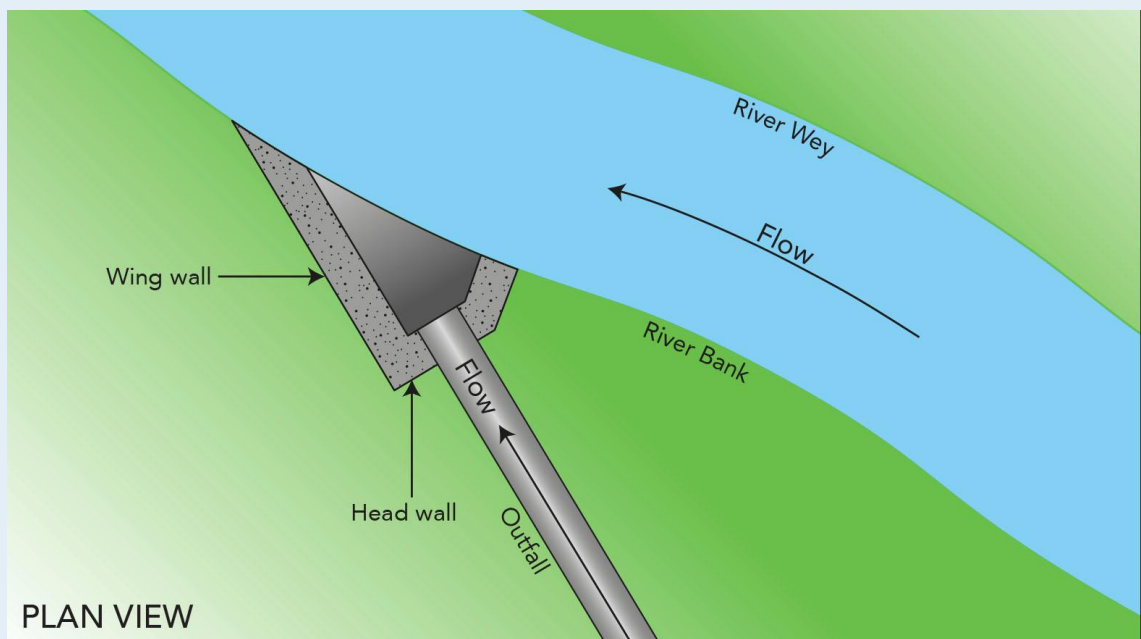
Note: Heights all indicative. Heights of existing buildings taken from planning application records available online and site survey data.

The new outfall pipe in detail

To transport the treated water from our proposed new site north-east to the River Wey we need a new outfall pipe.

At around 150 metres long, the new outfall pipe will follow a route between the proposed new site and the River Wey. Once constructed, the pipe will be completely hidden below ground. However, as part of the construction, we'll also need to include a new permanent structure on the southern bank of the river.

This structure will absorb some of the energy of the treated water as it flows into the river, to help keep the riverbed and banks from eroding and to protect the river environment.



There'll be some temporary impacts on the local natural environment, eg grassland, as we safely construct the new structures. But we'll make sure the area is restored, and we plan to use a bespoke seed mix to support the local habitats.

The new transfer tunnel in detail

Our new gravity transfer tunnel will take wastewater from our existing sewers to the new STW. This will make sure we can continue delivering our essential service for you.

How will we build the tunnel?

We'll dig beneath a stable layer of London clay around 12m below ground level. It'll measure approximately 1.4km long and 1.5m in diameter and run roughly parallel to the River Wey to reach our new STW site.

How will it be connected to the local network?

A series of shafts along the tunnel length will connect it with our existing sewers.

We're proposing eight shafts along the length of the tunnel. At each of the shaft locations, we'll build underground access manholes, vehicle parking/layby areas, a vent pipe approximately 6m in height and a small kiosk. We're working closely with the Council to make sure that, once completed, these shaft access locations are carefully integrated into the Weyside Urban Village design.



What impact will this work?

The majority of these locations are away from local residents to reduce our impact. However, shaft number 8 is within 100m of the residents of Bellfields. It is necessary for the shaft to be constructed in this location as the flow from a number of existing sewers needs to be connected to the tunnel here. We are expecting to need to work some night time hours when constructing this shaft but we would work to minimise any disturbance and would contact affected neighbours when this is required.

To reduce how much power we need to use to pump wastewater to our treatment works, the tunnel will use gravity to push wastewater 'downhill' from south to north.

More on the impacts of our work can be found on following information boards.

Minimising our impact during construction

During construction, we'll do everything we can to minimise our impact on you.

Traffic

We'll design our site carefully to avoid the need for too much coming and going, and we'll submit a detailed Transport Statement with our planning application.

Air quality

We'll plan our site layout so that machinery and dust-generating activities are as far as possible from our neighbours. All vehicles will comply with European emission levels.

Odour

We don't expect the construction of the new STW to create a smell. However, we'll be building on an old landfill site so we'll carefully monitor this as we work.

Noise

We'll follow all guidance relating to construction noise and vibration, and we'll outline a series of control measures in our planning application. We'll also let you know when we plan potentially noisy construction works near residential areas.

Lighting

We'll minimise the use of artificial lighting while we work to avoid impacting you and the local area.

Biodiversity

We'll be careful to protect existing vegetation wherever possible. Any areas we use for temporary construction will be restored – by us or as part of the Weyside Urban Village plan. We're limited in how much we can boost biodiversity at our new

STW, so we'll support Guildford Borough Council in developing new areas of green space at Burpham Court Farm.

Visual impact

We'll take care to leave existing trees standing at our new STW site whenever possible. If the construction of our new outfall pipe affects certain areas, we'll reinstate them using a bespoke local seed mix.

Historic environment

We'll carry out archaeological investigations as we build our outfall pipe in summer 2021, but it's unlikely we'll disturb anything of historical importance.

Ground conditions and contamination

We'll support most structures with piled foundations to avoid digging up the landfill site wherever possible. We'll submit a Remediation Strategy alongside our planning application to reduce any potential contamination risks.

Water environment and flooding

We'll manage ground and surface water quality as we work to reduce any additional contamination or flood risks. We'll also store chemical compounds and soil deposits outside of the floodplain wherever possible.

Minimising our impact after construction

Once constructed, our new site will largely replicate our current STW. We'll continually work to minimise the impact on you within our day-to-day operations.

Traffic

The amount of traffic should be the same as for the existing STW, with no change to the number of vehicle movements on Woking Road and the wider highway network.

Air quality

Vehicle emissions will also stay the same, and there'll be no dust associated with the day-to-day operation of the site.

Odour

We'll follow careful measures to control any smells, which will be set out in our strict Odour Management Plan.

Noise

We'll consider noise mitigation as we construct our new site, so you shouldn't hear anything outside of our new STW once it's in operation.

Historical environment

We don't expect our work to impact any historical sites.

Lighting

To meet operational health and safety requirements, we'll always need to use some lighting on site. But we'll design our layout carefully to reduce outside glare and direct light away from any sensitive ecological features.

Biodiversity/nature

After construction, we'll continue to invest in biodiversity around the local area, including working with Guildford Borough Council on their public open space development at Burpham Court Farm.

Landscape

The new site will add buildings and structures visually in-keeping with the industrial surroundings. The existing trees around the north and eastern boundaries will help limit any external views of the site.

Ground conditions and contamination

We'll use a new surface water drainage system to reduce the risk of soil or groundwater being contaminated at any point during our sewage treatment process. We'll outline more details in our Remediation Strategy and make sure to monitor ground conditions post-construction.

Water environment and flooding

We'll design our outfall pipe carefully to prevent the riverbed from eroding. We'll also reduce the risk of flooding through a surface water drainage design that meets discharge consent requirements.

The planning permission process

We're expecting to submit a planning application to Surrey County Council (the waste planning authority) in late 2021.

We're currently looking for the right design and build contractor to create our new STW. After we've appointed one later this year, we'll use their comments, as well as yours from this consultation, to create a final design for our planning application.



Timeline of the application

1. Our public consultation will take place in May/June/July 2021
2. We'll consider your feedback in September/October 2021
3. We'll submit our planning application by the end of 2021
4. Surrey County Council will carry out a public consultation on the application
5. If approved, construction will start in summer/autumn 2022

Next steps

Now you have all the information on our proposed Guildford STW relocation project, we hope you have a good understanding of why, how and when this work will take place.



This pre-application consultation is open until Friday 16 July, so if you have any questions or comments, please go to our webpage and complete the feedback form thameswater.co.uk/guildfordrelocation