

Find out about

- Our proposals for building the upgrade on our preferred site
- The phases of construction

How we will build the upgrade

Keeping the works running during construction.

Throughout the time it takes to build the Deephams Sewage Works Upgrade, we will have to continue to treat the 209,000 cubic metres of sewage that arrives at the works each day. This can increase to over 1.3 million cubic metres during heavy rainfall – enough to fill 520 Olympic swimming pools.

It is likely that we will have to completely replace and rebuild the existing sewage treatment facilities to meet quality standard for treated wastewater set by the Environment Agency. However, we will try to reuse parts of the existing process, where possible. We plan to build the upgrade in two or three main phases, allowing us to keep the existing works running while we construct the new sewage treatment process on the same site.

We think that the sludge treatment facilities at the existing sewage works will be able to treat the additional sludge that will be produced by the predicted increase in the number of local homes and businesses within the area already served by the works.

However, if we need to improve the sludge treatment facilities, one possible option for treating this additional sludge would be to build a new thermal hydrolysis plant to heat the sludge and produce extra ‘biogas’ that can also be used to make electricity to power the site.

At the moment, if we were to stop using a section of the existing treatment process and rebuild a part of the new works on the same piece of land, the other parts of the existing sewage works would not be able to cope with the amount of sewage that needs to be treated. The works would also be unable to meet the current treatment standards set by the Environment Agency, while the new section was being built.

To allow us to keep the sewage works running at full capacity and to meet the current treatment standards, we plan to build and start using a new section of the upgrade first, before knocking down and rebuilding sections of the existing treatment works, one after another.

Phases of construction

Phase 1

If we build the upgrade in three phases, we plan to knock down parts of the works that we do not use anymore and use the small amount of available land within the site to build a brand new section of the treatment process. This new section would be able to treat about a third of the sewage arriving at the site each day. At the same time we will also build an additional part of the treatment process to filter the treated wastewater before it flows into the Salmon’s Brook.

Phase 2

Once the first phase is complete and has been brought into use, we will knock down a section of the old treatment process that previously treated about a third of the sewage. We will then use this land to build the second new section of the upgrade, again treating about a third of the sewage, before demolishing the second existing section of the old treatment process.

Phase 3

We will repeat the process once more to complete the third and final phase of construction. This final phase will also include adapting some of the old settlement tanks so that we can reuse them as additional storm tanks to hold the extra sewage arriving at the works during heavy rain.

Figure 1 shows an aerial view of what our preferred site might look like after construction has finished. It also shows the various phases of construction in different colours.

As we are still at the early stages of planning and design for the upgrade, we are unable to say how long each phase of construction will take, but it is likely to take us up to seven years to build the upgrade and bring it into full use.

Following the two phases of public consultation in 2012 and 2013, we plan to submit an application for permission to build the upgrade in early 2014. Subject to permission being granted, we hope to start the main construction work in 2015.



Figure 1: Example aerial view of what our preferred site might look like after construction

We have looked at the amount of space available on the existing Deephams Sewage Works site, which is unlikely to provide enough land for the contractor to store all of the equipment and materials needed to build the upgrade. If this is the case, we may need to temporarily locate this storage area on a separate site close by while the new sewage works is built and put back to its original state after construction has finished. One possible site is part of the Thames Water-owned land at Lower Hall.