



Teddington Direct River Abstraction

Changes to the project at Mogden Sewage Treatment Works

September 2026

Teddington Direct River Abstraction is a vital drought-resilience project for London. During drought periods, the project would provide up to an extra 75 million litres of water a day. It would help top up existing reservoirs with water from the River Thames, while simultaneously replacing the water taken from the river with recycled water from a new tertiary treatment plant at Mogden Sewage Treatment Works.

In summer 2025, we carried out a statutory public consultation on our project proposals. Since then, we've been considering the feedback received and refining our design. This document sets out the changes we're proposing at Mogden Sewage Treatment Works.



Mogden Sewage Treatment Works

When the project is in use, wastewater produced at Mogden Sewage Treatment Works (STW) will undergo extra treatment at a new Tertiary Treatment Plant (TTP) before it's discharged into the River Thames at Teddington at a proposed outfall near to Burnell Avenue.

To carry the recycled water from the TTP to the proposed outfall, we'll need to build a new tunnel, known as the recycled water conveyance tunnel, which will start within the Mogden STW site.

The design we presented during our 2025 statutory public consultation

During our statutory public consultation last year, we outlined our proposals to locate the TTP on the eastern side of Mogden STW, on a new platform above two existing storm tanks. To facilitate building the TTP

and the recycled water conveyance tunnel, we also explained plans to establish two construction working areas within Mogden STW:

- **Eastern work area** – where we proposed building our TTP and its supporting infrastructure, including an interception shaft (to provide access to the tunnel once it's built)
- **Western work area** – where we proposed building the drive shaft needed to launch our tunnel boring machine to provide support for the tunnelling operations.

The recycled water conveyance tunnel was proposed to run under the site, between the drive shaft and the interception shaft. The design that we presented during the 2025 statutory public consultation, is shown in Figure 1.

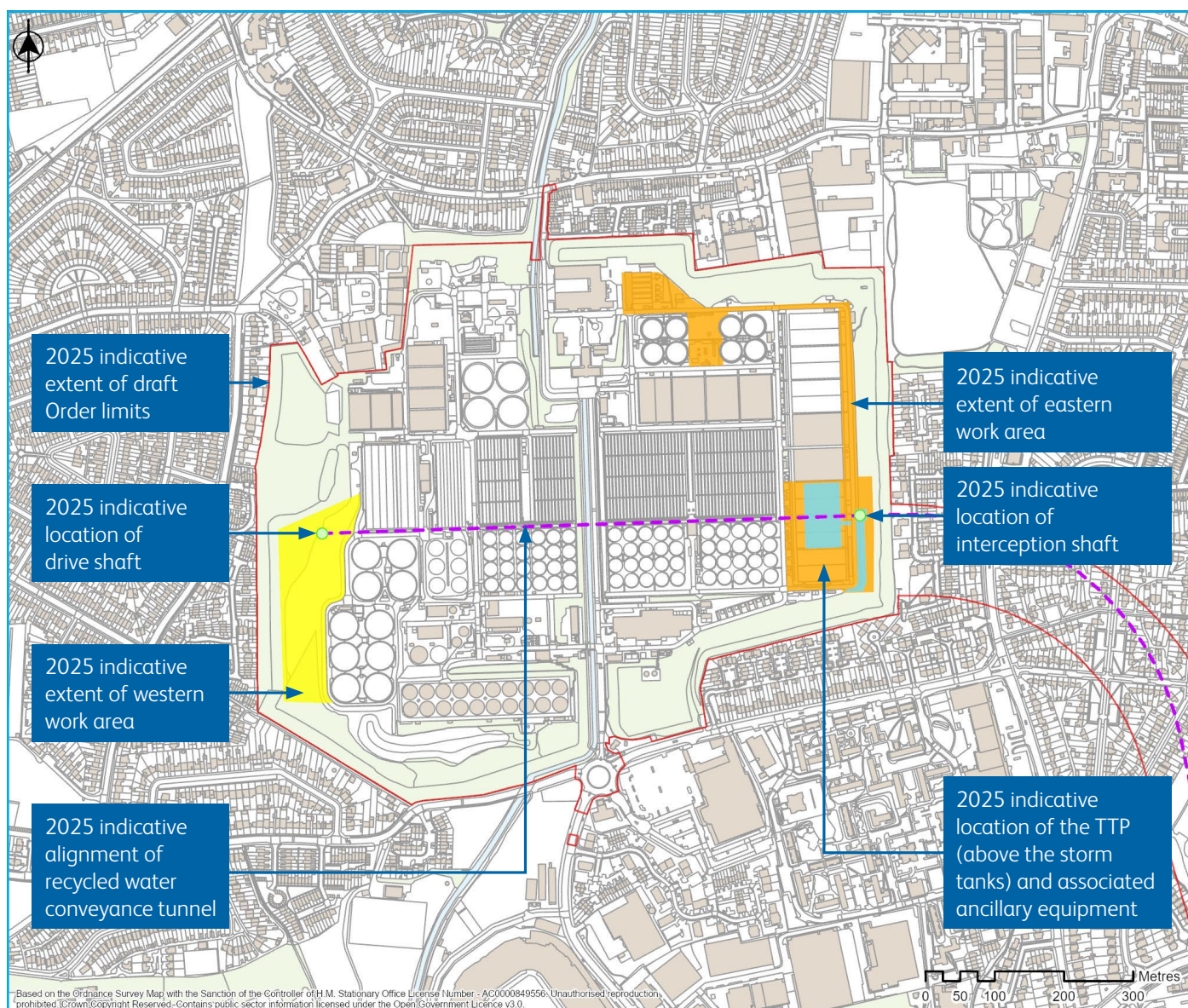


Figure 1: Indicative locations of proposed permanent infrastructure and construction worksites within Mogden STW as shown during the 2025 statutory public consultation

Updated proposals since our 2025 statutory public consultation

Since our statutory public consultation last year, we've been considering alternative locations for the proposed infrastructure. We've also been looking closely at how we can best carry out tunnelling operations.

Having done this, we're now proposing changes that would make the project safer, and reduce the risk of there being impacts on current operations at Mogden STW. Our revised proposals are:

- To extend the eastern work area south and to move the location of the TTP to this southern area (away from the storm tanks)
- To move the interception shaft to the southern part of the eastern work area, close to the TTP

- To extend the western work area and to locate the drive shaft (from which we'd launch the tunnel boring machine) south of its previously proposed location
- To realign the proposed new tunnel under Mogden STW so that it runs along the southern edge of the site, away from existing STW equipment.

We've also refined our draft Order limits, extending them slightly south near the roundabout, removing sections to the north of Mogden STW and reducing the width of the tunnel corridor.

Our new proposals are shown in Figure 2 below.

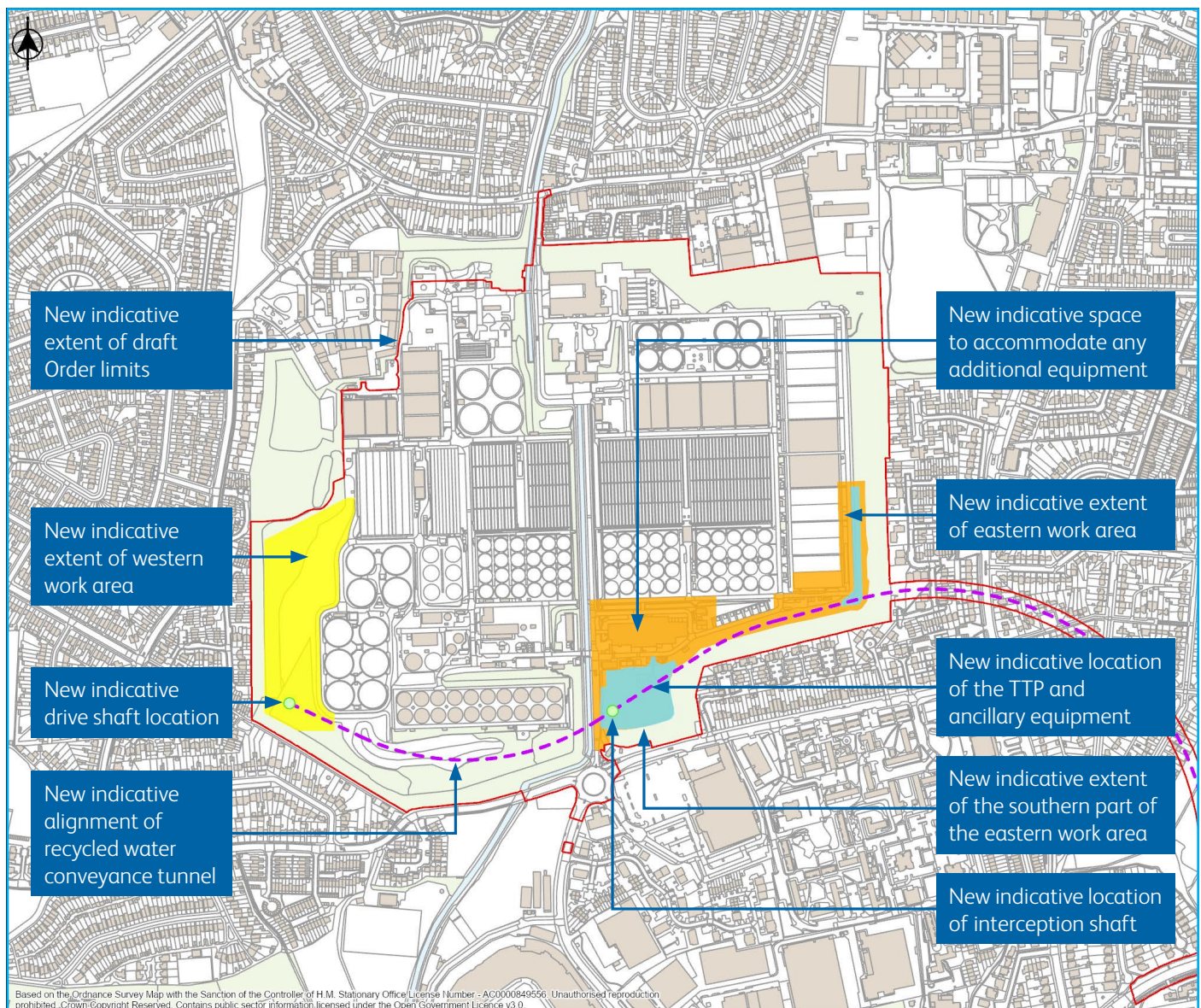


Figure 2: Revised indicative locations of proposed permanent infrastructure and construction worksites within Mogden STW

Construction in the western work area

The western work area is needed to build the drive shaft, from which we'd launch the tunnel boring machine and begin to build the recycled water conveyance tunnel. In our updated plans, we've extended this work area to accommodate the drive shaft being located in the south of the western work area.

The activities within the western work area would be very similar to those presented during our 2025 statutory public consultation, with the following changes:

- Some additional vegetation to the south and west would need to be removed during construction

- We've moved some of the proposed temporary parking, space for materials and equipment from the eastern work area to the western work area
- We're proposing installing a 90m-long retaining wall at the western side of the work area. Most of the wall (roughly 60m) would be 0.5m high or less, with roughly 30m of the wall between 0.5m and 2m (see Figures 3 and 7). This would maintain the stability of the work area and help us to retain nearby trees.

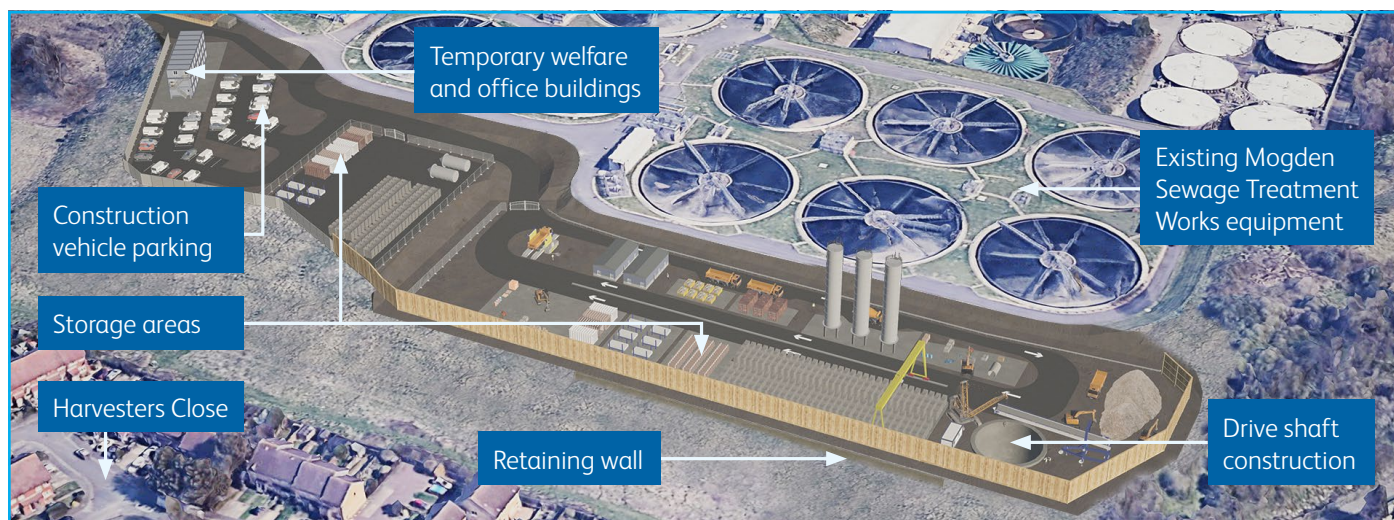


Figure 3: Indicative image of the western work area during construction

Construction in the southern part of the eastern work area

We've moved the proposed TTP and interception shaft from what was previously called the eastern work area, to the southern part of the eastern work area, avoiding potential impacts on existing infrastructure such as the storm tanks.

To build the TTP and interception shaft in this new location, we'd need to remove vegetation, then dig out and reinforce the existing embankment, creating a level working area. This would reduce the ground level to

make space for the new development, with the total area likely to be roughly 9,000m². We'd also need to move some existing equipment currently in this area, including relocating a pair of deluge tanks. We'd need to remove trees from the top of the embankment, but we'd leave the trees and vegetation on the southern, outward-facing side of the embankment. During some of the construction works, we'd use tower cranes to build the TTP, which would be visible from outside the site (see Figure 4).



Figure 4: Indicative image showing construction in the southern part of the eastern work area

Construction in the eastern part of the eastern work area

Although we're planning to move the TTP and interception shaft southwards, we'd need to keep the eastern part of the eastern work area to build structures, pipes, pumps and electrical equipment required to operate the TTP. We'd also need to build pipework to feed the TTP, remove waste away from it, and to allow us to drain the tunnel when required.

Part of this pipework would run along the corridor between the southern part and the eastern part of the eastern work area. It would be roughly 300m-long

by 10m-wide. To build it, we'd need to remove part of the southern embankment, divert utilities, dig trenches and install the pipework before covering with excavated material.

Construction in the eastern part of the eastern work area would be less extensive than proposed during our 2025 statutory public consultation because the TTP has been relocated. Figure 5 shows an indicative layout of the worksite during the main works of the construction phase.

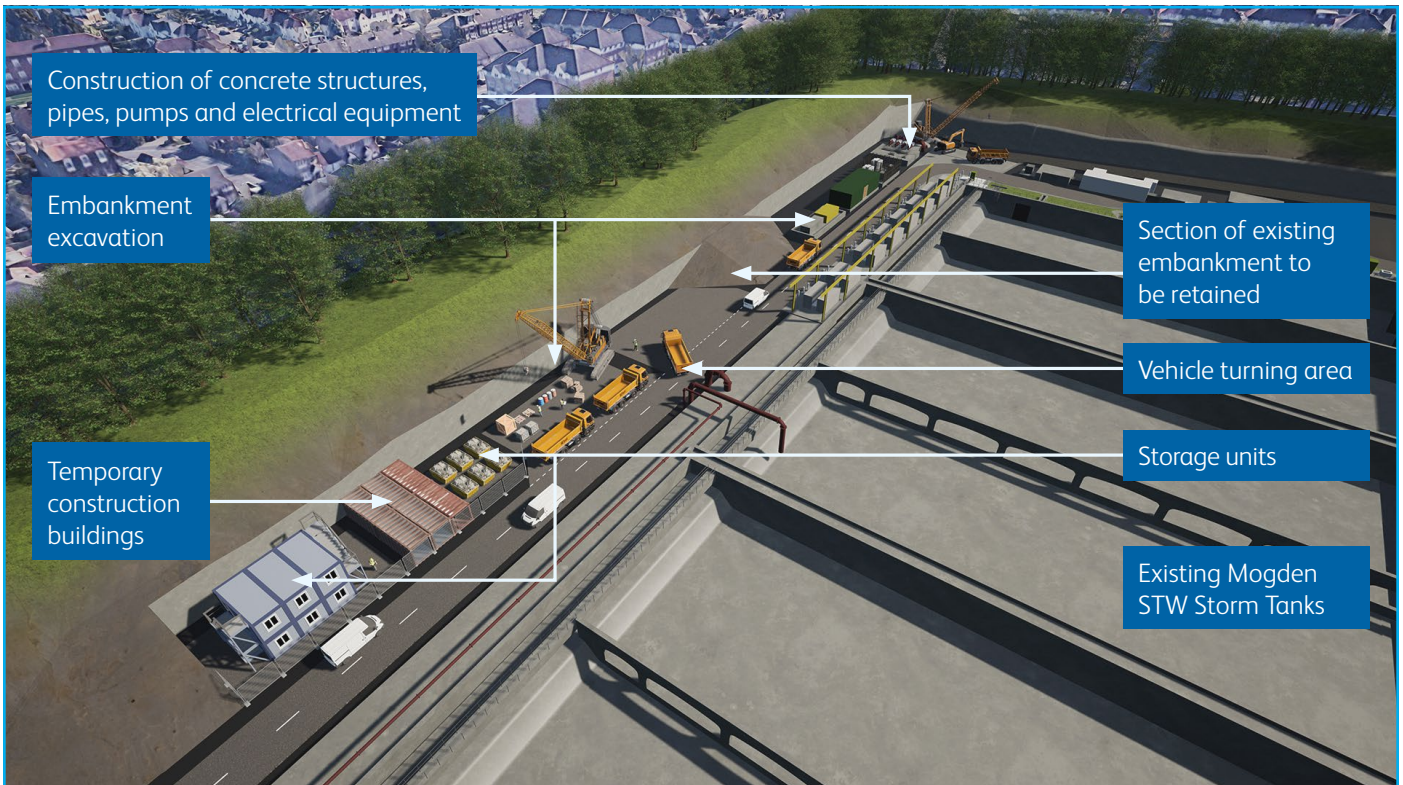


Figure 5: Indicative image showing construction in the eastern part of the eastern work area

Other proposed changes at Mogden STW

There are some other changes within Mogden STW that we're now proposing. These include internal vehicle holding areas to manage HGV movements and reduce congestion; upgrades to internal roads to allow for additional construction traffic; and new electrical infrastructure, power connections and pipes. The pipes would be needed for the supply of water and the return of waste from the TTP to the wider Mogden STW site.

Additionally, the retaining wall at the western side of the work area would also remain in place after construction for the lifetime of the project (see Figure 7), and we'd look to screen this wall with trees, where we reasonably can.

We're continuing to engage the Environment Agency on our project's design and associated operating permit. As we continue these conversations, we may need to make further changes to the layout of our TTP, and so we've included additional space within the southern part of the eastern work area to accommodate any additional equipment that may be needed. This area is shown in Figure 2, to the north of the TTP location.

HGV movements and construction schedule

We've updated our estimates for the number of heavy goods vehicles (HGV) movements needed to carry out the works at Mogden STW. Compared to what we presented at our 2025 statutory public consultation, HGV movements would increase, partly because we'd need to carry out additional embankment excavations to provide space for the TTP. This means more excavated material being removed from the site by HGV.

Table 1 shows the estimated total HGV movements for the entire construction period (where a movement is one journey either in or out of the worksite), as well as peak daily HGV movements – in other words, the maximum daily number of HGVs that would be needed during the busiest part of the construction period. In our indicative construction programme, peak HGV movements are expected to occur for several months in 2029. However, this time period could change depending on how the appointed contractor chooses to phase construction works. Outside of this period, peak daily movements are expected to be considerably lower.

We'd carefully manage construction traffic through agreed routes and other traffic management measures which would be put in place to help reduce impacts on local roads and communities. More information will be provided in a document called the outline Construction

Traffic Management Plan, which will be published as part of our development consent order application early in 2027.

	2025 statutory consultation estimate	2026 targeted consultation estimate
Total HGV movements during construction	47,886 (23,943 in; 23,943 out)	83,500 (41,750 in; 41,750 out)
Peak daily HGV movements	100 (50 in; 50 out)	200 (autumn 2029) (100 in; 100 out)

Table 1: Estimated total HGV movements and maximum daily peak HGV movements for the Mogden Sewage Treatment Works worksites

Revised construction schedule

During our 2025 statutory public consultation, we said we would need roughly four years to build the proposed infrastructure at Mogden STW, from the beginning of 2029 to the end of 2032, as well as some preparatory activities taking place in 2028. As shown in Figure 6, we now expect construction to take roughly six years, with the first activities starting in 2028 and works finishing in 2034.

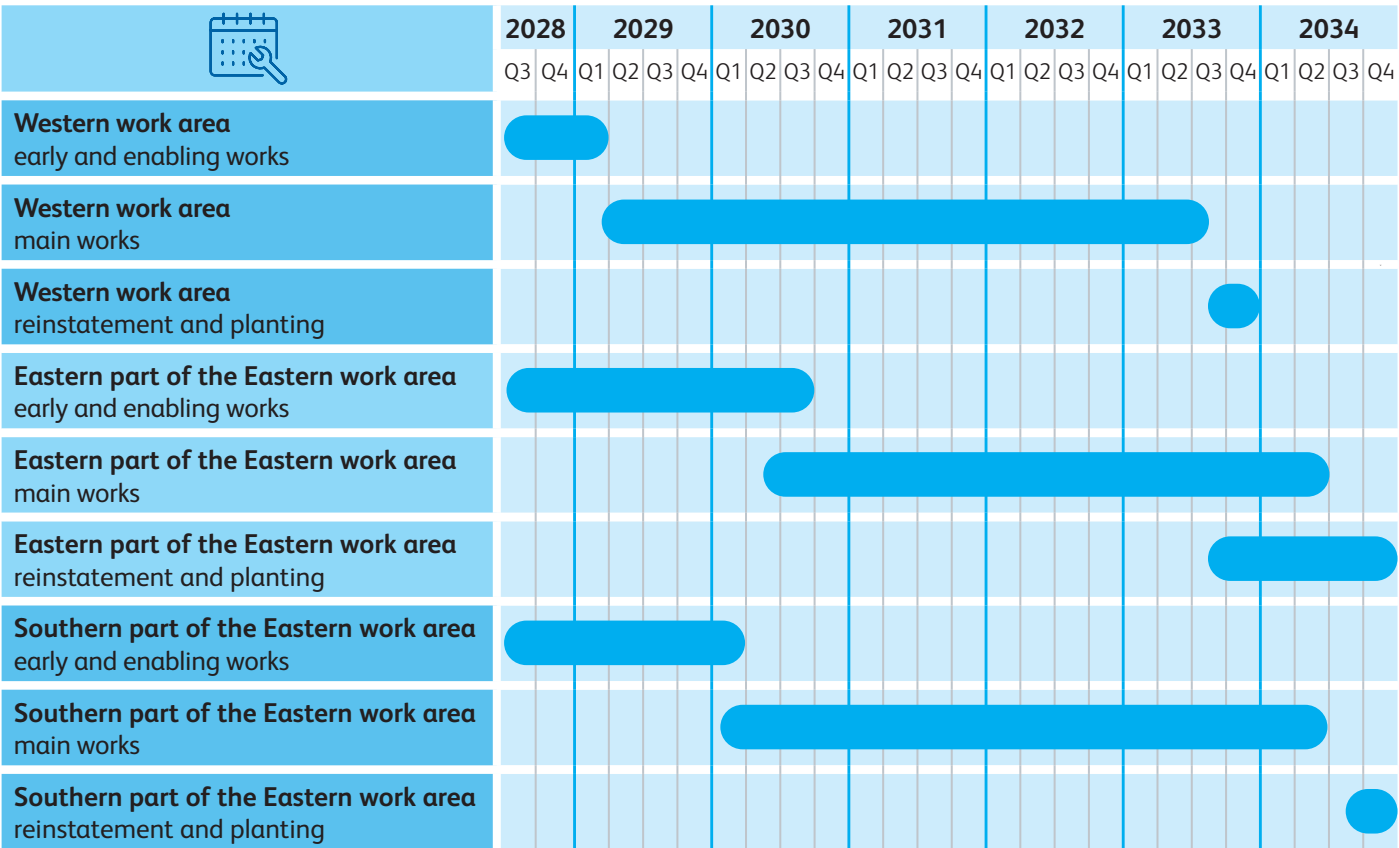


Figure 6: Indicative timetable for construction activities at the Mogden STW worksites. Testing and commissioning will continue after these dates.

Permanent infrastructure in the western work area

Once we've finished construction, there would be limited permanent impact in the western work area. An above-ground cover slab, with a diameter of roughly 16.5m, would remain above the drive shaft. The retaining wall would also stay in place (see Figure 7).



Figure 7: Indicative image of the permanent infrastructure in the western work area

Permanent infrastructure in the southern part of the eastern work area

The proposed TTP would be located within the excavated area in the southern part of the eastern work area (see Figure 8). We'd dig out the inner face of the embankment and reduce the ground level to make space for the new equipment. The tallest parts of the TTP would be roughly 2m above the top of the

embankment earthworks, but we'd plant new trees on the embankment's outer slope to provide screening.

The predicted likely significant effects of the TTP during operation are presented in the section on environmental and community impacts below.



Figure 8: Indicative image of the Tertiary Treatment Plant and interception shaft in the eastern work area

Permanent infrastructure in the eastern part of the eastern work area

During the 2025 statutory public consultation we explained that some of the TTP equipment would be located in the eastern part of the eastern work area. This is now proposed to be located away from the TTP, but still within the eastern work area (see Figure 9), connected to the TTP with pipework within the existing embankment.



Figure 9: Indicative image of the proposed permanent infrastructure in the eastern work area

Realigned recycled water conveyance tunnel

We've also realigned the proposed recycled water conveyance tunnel's route underneath Mogden STW to account for the new locations of the drive and interception shafts. The tunnel would now run along the southern boundary of the site, before leaving Mogden STW from its south-eastern corner (see Figure 2).



Environmental and community impacts

Our preliminary environmental appraisal of our revised design shows there will be some environmental and community effects beyond those we identified during our 2025 statutory public consultation. Where this is the case, this is set out in Table 2. We haven't included information on environmental topics where there is no change beyond what was presented during our 2025 statutory public consultation. A full assessment of environmental effects and proposed mitigation will be presented in the Environmental Statement we submit as part of our DCO application in early 2027.

Table 2: Predicted environmental effects of the revised design at Mogden Sewage Treatment Works

Environmental Topic	Identified impacts and likely significant effects
Water resources and flood risk	During the 2025 statutory public consultation, we advised of no likely significant effects on the Duke of Northumberland's River, which runs north-south through Mogden STW in a concrete channel. By moving the TTP closer to the river, there may be a small amount of ground settlement during construction, beyond what we presented at the 2025 statutory public consultation. However, our assessments have concluded this would not create a likely significant effect on the concrete channel, and that by following the measures we adopt through the outline Code of Construction Practice (see page 11) there will be no likely significant effects on water quality. The flood risk impacts remain unchanged.
Terrestrial ecology	During our 2025 statutory public consultation, we said that works along the embankment in the eastern work area would mean the removal of active badger setts through a licence issued by Natural England. Despite moving the TTP and interception shaft, this requirement remains the same. In addition, the changes we've made to the design within the southern part of the eastern work area means we'd now need to remove several disused badger setts in this location as well. We'd also need to remove a soprano pipistrelle bat roost from a tree in the southern part of the eastern work area. The roost is considered of low conservation importance and would be removed under licence from Natural England. We'd also now need to remove more stag beetle habitat than previously assumed. Where reasonably practicable, this would be moved to a suitable new location within Mogden STW. The design changes across the site would mean removal of priority deciduous woodland which also forms part of the Mogden STW Site of Importance for Nature Conservation (SINC). The amount of woodland being removed would increase compared with what was previously proposed. As Mogden STW is an operational site, it may be difficult to replace woodland within the site itself. Opportunities to both replace woodland and enhance areas of retained woodland, to compensate for loss, are being explored. On a precautionary basis, it has been identified that this woodland loss may lead to a potential likely significant effect on terrestrial ecology. Further assessments will inform the environmental statement and Habitats Regulations Assessment submitted with our development consent order application.
Aquatic ecology	The revised design introduces a potential impact pathway to the Duke of Northumberland's River through construction-related surface water runoff. This will be managed through the measures in the outline CoCP. There are no predicted likely significant effects on aquatic ecology.

Environmental Topic	Identified impacts and likely significant effects
Townscape and visual	The changes presented could introduce further likely significant townscape and visual effects, compared with likely significant effects presented previously. The latest proposals include the removal of more vegetation (plants and trees) within the southern part of the eastern work area. This vegetation currently helps screen Mogden STW from properties to the south. Existing vegetation within the Order limits including temporary works areas would be retained as far as reasonably practicable. Mitigation planting would be incorporated where practicable, although this could take up to 15 years to establish. There would also potentially be likely significant effects on South Isleworth/Twickenham Road townscape character area (TCA) during construction and operation due to additional removal of vegetation. This is because the proposed changes would potentially open up views into Mogden STW from properties to the south, including residents along Mogden Lane and at Beaumont Place. Major earthworks and additional development within the southern part of the eastern work area would also introduce further likely significant visual effects during operation for users of the Duke's River Walk. Space for replacement planting, including trees, would likely be limited meaning these effects could remain when the project is operational. Construction activity within the Western Work Area could potentially cause likely significant effects on South Hounslow/West Isleworth TCA during construction. Within the Western Work Area, vegetation loss would potentially open up views into Mogden STW from residential properties to the west. This would potentially cause likely significant effects during construction and during operation, including in the long term if scope for mitigation planting is limited. Due to these additional likely significant townscape and visual effects, we've expanded the visual impact assessment work that we're undertaking for our development consent order application to include new and amended viewpoints, including from Mogden Lane, Beaumont Place, the southern end of Harvesters Close and closer to the southern end of the eastern work area.
Ground conditions and contaminated land	As a result of the drive shaft being located in the south of the western work area, the works are now within the footprint of the former Mogden STW landfill site. During construction, any potentially contaminated excavated material would be managed using established construction good-practice measures, as set out in the outline CoCP. This would mitigate potential contamination risks. The assessment that will be reported in the Environmental Statement takes these mitigations into account when assessing potential effects. Where piling is proposed – in particular, through areas of landfill and made (artificial) ground – this would be designed appropriately to manage risks of contamination of the underlying ground water. The interception shaft and TTP would be located in areas for which we have preliminary ground investigation data. Based on the available information, we do not expect any likely significant effects related to ground conditions or contaminated land within either work area.
Traffic and transport	To help manage construction traffic and reduce congestion, we're looking at how we can regulate the distribution of HGV traffic. For example, we would implement a Vehicle Movement Planning System (VMPS), which is a digital tool used to manage movements across construction sites. We are also proposing a vehicle holding area on the A316 (near Kempton Park) to help manage construction traffic. We would also ensure effective traffic management within the Mogden STW worksite to keep vehicles flowing and reduce the likelihood of traffic entering or leaving the site from impacting the road network. Despite these measures, it is likely that an increase in HGV movements would result in an adverse effect on traffic congestion at A316 Chertsey Road/B361 Whitton Road, B361 Whitton Road/Rugby Road, and the Mogden Lane Roundabout junctions during peak hours.

Environmental Topic	Identified impacts and likely significant effects
Air quality	Heavy Goods Vehicle (HGV) and workforce traffic during construction would slightly increase emissions on local roads around the northern and southern works areas. However, the effect of changes in traffic on local air quality, both on surrounding roads and within the work sites, is likely to be negligible to low, given the existing air quality in the area and the relatively low number of vehicles expected during construction. The Mogden STW Site SINC, within which the works would take place, is a locally designated ecological site and is therefore considered to be of low sensitivity to air quality impacts. The proposed location of the drive shaft in the southern part of the western work area would move the construction works closer to residential properties, including Harvesters Close and Glen Walk, to the west and south of the site. The proposed relocation of the TTP and interception shaft would move the works further away from residential properties to the east of the previous location but would bring the works closer to other nearby properties, with the nearest properties now located at Beaumont Place and Mogden Lane. Given their proximity, there is potential for dust effects during construction. However, the implementation of good practice mitigation measures set out in the outline CoCP is expected to effectively control dust emissions and manage any likely significant effects. Odour emissions associated with the construction of the TTP would remain negligible, in line with the predicted effects of building it at the previous location above the storm tanks, and are not expected to result in any likely significant effects.
Noise and vibration	At the western work area, the changes would move the drive shaft closer to some residential properties, and, without mitigation, there are likely to be significant effects during the night-time tunnelling works. Mitigation in the form of a noise barrier to south and west of the western work area would remove the likely significant adverse effect. At the southern part of the eastern work area, the new works would be close to residential properties, and others to the east in Beaumont Place. However, with no night works planned at this location, it is unlikely there would be any significant effects from noise or vibration during construction. The interception shaft and the main TTP works have been removed from the eastern part of the eastern work area, although there would still be some works at this location. At the 2025 statutory public consultation there were no likely significant adverse noise effects predicted during construction and operation, and this remains the same. Previously, a likely significant adverse effect was predicted for vibration on residents located closest to the eastern work area, but this is no longer expected.
Historic environment	The relocation of the TTP and interception shaft removes the potential impact upon the setting of the Grade II listed Mogden House, to the east of the site, resulting in a no likely significant effect on the heritage asset.

Code of Construction Practice (CoCP)

During our 2025 statutory public consultation, we consulted on a draft CoCP, which set out the proposed measures to control and manage environmental impacts of the project during construction.

We're in the process of developing an outline CoCP which will be submitted as part of our DCO application. The outline CoCP will set out the measures that the contractor must abide by.

The contractor will use the approach set out in the outline CoCP to develop a Construction Environmental Management Plan (CEMP). The CEMP will be implemented to mitigate potential likely significant effects on the local community and environment during construction.



For further information, please visit
thames-sro.co.uk/tdra