

Gate three query process

Strategic solution(s)	London Water Recycling
Query number	LWR003
Date sent to company	02/01/2025
Response due by	09/01/2025

Query

The London Water Recycling scheme has generated significant interest from the public due to environmental and water quality concerns. Please provide further details on how you plan to address these issues with customers and local communities.

Solution owner response

This response has been written in line with the requirements of the RAPID Gate 3 Guidance and to comply with the regulatory process pursuant to Thames Water's statutory duties. The information presented relates to material or data which is still in the course of completion. Should the solution presented be taken forward, Thames Water will be subject to the statutory duties pursuant to the necessary consenting process, including environmental assessment and consultation as required. This response should be read with those duties in mind.

Thames Water is committed to ensuring Teddington DRA does not deteriorate water quality within the river and has shared this commitment through the non-statutory public consultation in 2023 and again at the information events through 2024.

To demonstrate this commitment, the project team has been (a) undertaking a monthly in-river and Mogden final effluent sampling programme since 2020 to establish a comprehensive water quality baseline; (b) developing a

comprehensive hydrodynamic and water quality model of the River Thames; and (c) developing a pilot plant.

Since 2024 the proposed treatment processes are being tested through a pilot plant study at Mogden STW. The pilot plant study will run for between 12 and 18 months and provide real-world data about the effectiveness of what is being proposed. The initial results from the pilot plant study will be captured within the Statutory Consultation documentation issued next year.

These three core activities will provide direct evidence to feed into the understanding of whether there would be any impact to water quality or receptors and to directly address concerns raised. The outputs will also allow Thames Water, if necessary, to modify the treatment process to ensure there would be no deterioration of water quality or implement additional mitigation if effects are predicted.

Thames Water has been working closely with the Environment Agency to establish the discharge limits for substances and other determinands and continues to advance the understanding of the 'make-up' of the River Thames, including understanding levels of 'forever' chemicals so that robust assessments and permit limits can be applied to the Project. Once operational, regular monitoring of the water quality of the discharge would be undertaken to ensure it meets the requirements set by our permit.

The project team has already listened to concerns raised around water quality and made design changes to the Project. In 2024, the design was amended to commit to the diversion of the maintenance flow to Isleworth Ait using the existing discharge infrastructure from Mogden STW. This means that the new Project tunnel would only be discharging to the River Thames upstream of Teddington Weir when the Project is required to operate in drought conditions, on average once every two years for about four months. When not operational there would be no discharge and no potential pathways to impact on ecology, water quality, health or recreational users at the new discharge point location. This Project design change will further support one of the benefits of the Project by improving the quality of the water and the dissolved oxygen concentrations in the Thames Tideway, downstream of Teddington Weir. This is achieved because of a reduction in secondary treated effluent being discharged at Isleworth Ait and applying a tertiary level of treatment to 75ML/d of final effluent for discharge upstream during drought conditions and, treating a smaller proportion of final effluent through the Tertiary Treatment facility for discharge at Isleworth Ait as part of the maintenance mode at all times that the Project is not fully operational. Opportunities to refine the design and minimise impacts on the environment will continue to be explored.

We have also made several changes to the Teddington DRA design through Gate 3 which directly addresses a number of construction concerns raised by the public. These include:

- Constructing a larger diameter tunnel to reduce the need for shafts every 1,000m thereby directly removing above ground construction impacts and land-take on open space from four areas along the tunnel corridor.
- Using a tunnel boring machine which is a quicker way of building the tunnel, shorteneing any disruption caused by construction of the tunnel and allowing all tunnel excavation to be removed from Mogden rather than at each shaft site along the tunnel corridor.
- The tunnel alignment has altered slightly to reflect the change in construction technique and is now more direct and shorter to the River Thames, although the end point on land to the south of Burnell Avenue remains unchanged.

We will continue to work with all stakeholders and respond to concerns as the project progresses through Gate 4 and will start to publish more information and findings as studies conclude. It is expected that a large part of the baseline data collected since 2020 will be published as part of our statutory consultation planned for Q2/Q3 2025. In addition to the information that will be shared at our statutory consultation we will also share information through:

- Extensive engagement with three Local Planning Authorities, Environment Agency, other key stakeholders, and river users to address water quality concerns, this is also demonstrated through the EIA Scoping report (chapters 10, 13, 14, and 16).
- A quarterly newsletter which will provide updates on the development of Teddington DRA.
- Regular meetings with the opposition group 'Save our Land and River' (SOLaR).
- Engagement with river users including:
 - Thames 21 catchment meetings to address water quality queries.
 - Presenting to the Port of London Authority on river impacts and water quality.
 - Working with local water users groups

If you require any further information, please contact the strategic solution contact below.

Date of response to RAPID	09/01/2025
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