
Gate three query process

Strategic solution(s)	London Water Recycling (LWR)
Query number	LWR008
Date sent to company	28/01/2025
Response due by	29/01/2025

Query

Follow up questions to query LWR005:

- Please provide further details for Q3 of query response LWR005 on the identified mitigations for the three limiting hazards that have been found to be statistically significant, nitrate, *E. coli* and alkalinity. If mitigation is to be at the treatment works, please provide sufficient detail as to which different processes will be used to mitigate the risk and that these are sufficient for any increased risk.
- We note in response to query LWR005 that the SWQRA utilised water quality data that represent the worst-case scenario. Can you please provide details as to how this analysis was completed to provide the worst-case scenario, e.g. was this only water quality during periods of low flow conditions so that normal flow conditions did not mask any other limiting hazards that may be seen otherwise.

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.

Q1: Please provide further details for Q3 of query response LWR005 on the identified mitigations for the three limiting hazards that have been found to be statistically significant, nitrate, *E. coli* and alkalinity. If mitigation is to be at the treatment works, please provide sufficient detail as to which different processes will be used to mitigate the risk and that these are sufficient for any increased risk.

R1: Our Gate 3 risk assessments indicate no additional mitigation is required at Coppermills Water Treatment Works (WTW) as a result of Teddington DRA operation. The WTW process already treats all the limiting hazards identified in section 3.2 of Annex B and has sufficient flexibility to treat these at the concentrations measured without additional measures being required. This includes for water quality parameters identified as being statistically different between Hampton and Teddington.

Q2: We note in response to query LWR005 that the SWQRA utilised water quality data that represent the worst-case scenario. Can you please provide details as to how this analysis was completed to provide the worst-case scenario, e.g. was this only water quality during periods of low flow conditions so that normal flow conditions did not mask any other limiting hazards that may be seen otherwise

R2: Our water sampling programme started in 2020 with sampling undertaken monthly and parameters reviewed quarterly and adjusted to meet the latest requirements. Our sampling site just upstream of Teddington Weir represents the quality of water expected to be abstracted through the Project. This dataset and our work undertaken to date represents worst-case due to:

- 1) The sampling point includes discharge from the Hogsmill and Mole upstream of the sampling point.
- 2) The dataset includes a range of conditions including low, medium and high flows. Worst-case for different parameters may occur under a range of different flow conditions, for example some parameters may occur at higher levels after a sudden intensive storm event whereas other parameters may be more concentrated during low flow conditions.
- 3) Our SWQRA has not included dilution/blending within the TLT, with water abstracted at Hampton combining with water from Teddington, nor dilution within the reservoirs. In not considering dilution at this stage through any of the means described the current Gate 3 SWQRA is assuming worst-case.

- 4) Our SWQRA at Gate 3 includes a number of DWSPs and water quality data we considered appropriate to include at the time of production, including those where a potential pathway could exist. This precautionary position is considered worst-case. As our understanding and work develops through Gate 4 so the SWQRA will be updated to only include those DWSPs where there is a physical link to the TLT which is expected to reduce the risks identified.

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

Date of response to RAPID	28/01/2025
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