

Request for Further Information – Mogden 20th December 2024

Date: 9 January 2025
Project name: STC IED
Project no: B22849AZ
Attention: Sarah Raymond
Company: Thames Water
Prepared by: Tamsin Potter
Document no: C.250109

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Dear Sarah,

Thank you for your email “Application RFI and payment request - Mogden - EPR/WP3533LT/V006 - Thames Water response 2 of 2” on Friday the 20th of December 2024. Please see below for the answers to your questions:

1) Permit EPR/CP3999LE/A001

You have not updated your permit boundary to include the current permitted area providing and updated plan ‘Figure 2 installation boundary and air emission point’ where you have excluded areas by referencing these as “area covered by urban waste water treatment regulations”. If you wish to surrender existing permitted area this must be undertaken in line with our guidance. (Note: the consolidation of EPR/CP3999LE/A001 is not required to undertake the IED WaSC application)

Either update your permit boundary to include the existing permitted area or confirm that you will not be including the consolidation of EPR/CP3999LE/A001. You must also ensure that all relevant plans that include your permitted area are updated.

Answer 1

Please find attached the updated permit boundary as per “Figure 2 Installation Boundary and Air Emission Points”, B22489AZ-JAC-MGN-DR-0002, P07.

Thames Water understand that only those permitted assets located within the permit boundary (green line) and associated with the permitted activities in table s1.1 of any permit determined by the Environment Agency are subject to regulation under said permit, these activities being distinct and separate from the activities regulated under the UWWT Regs.

The following documents have also been updated with this updated permit boundary and are attached to this email:

- Site Areas Within the Installation Boundary plan, B22489AZ-JAC-MGN-DR-0003, P04
- Appendix E, Odour Management Plan, January 2025, AM-OMP Mogden STW.pdf.
- Appendix F: Bioaerosol Risk Assessment, TW_STC_EPR_13a_MGN_APPF.pdf, v3.0 January 2025
- Appendix G: Containment Options Report, B22849AZ-JA-MOGDS1ZZ-100-RP-Z-0001.docx

2) Secondary Containment

You have advised within your response that “All of the solutions follow the 110%/25% approach as these were submitted by the Environment Agency deadline of 20th December 2023, however again, in light of the Planning Inspector’s Decision in respect of the Permit Appeal for Reading STC, we reserve our right to amend our position to reflect that ruling.” Your application will be assessed on the information submitted and should include the high level proposal that you intend to implement. As the Agency have advised on multiple occasions, we would only envisage minor changes to the approach put forward in Containment Options Reports provided and if you intend to provide a different solution this must be provided in duly making. The IC implemented is not for an operator to consider alternative approaches or different solutions and is only in place to deliver the high-level solutions that are proposed as part of the information that Thames have provided.

- a) Confirm that the secondary containment proposal you have submitted for assessment with your application is the solution that you intend to implement subject to final detailed designs.**

You have not included your contingency storage tank in your secondary containment solution advising “Contingency Storage Tank volume not included as this tank is normally empty and only used for emergencies”. All tanks used in the operation of the activity must be included within your secondary containment solution.

- b) Update your containment solution to include the contingency storage tank or explain how you will decommission this tank and remove it from operation.**

Your secondary containment option report includes the following items that need to be addressed.

- c) Your uncontained spill volume of 2,347m³ is based on the largest digester tank which you have advised is below ground and not included within your containment report. Update your uncontained spill volume to reflect the containment volumes required.**
- d) Table 3.2 – Estimating critical spill volumes does not match tank volumes i.e. area 1 and 3 combined you have advised = 738m³ at 25% and 572m³ at 110% when your total tank volumes to be contained is 3,871m³. Update table 3.2 to reflect the correct volumes.**
- e) You state in your report that “All the digesters are semi-submerged underground.” and also that these tanks are below ground. For the primary digester tanks confirm that there is no above ground storage of sludge. If the tanks include above ground volume include these in your secondary containment solution.**
- f) Update your report to clearly state the containment volume to be provided form zone 1,2 and 3.**

Answer 2

- a) Thames Water confirms that the secondary containment proposal submitted for assessment with the application is the solution that we intend to implement subject to final detailed designs.
- b) Thames Water confirm that the contingency tank has been removed from this permit application as it is not in use. The process flow diagram and site plan have been updated accordingly (see attached documents B22849AZ-JA-MOGDS1ZZ-100-RP-Z-0001.docx and B22849AZ-JA-MOGDS1ZZ-LSX-DR-P-0003.pdf). The contingency tank has been emptied and the inlet valve locked off to prevent future use.
- c) The section on the uncontained spill in the containment report (Section 3.2.1) has been updated to explain that the spillage shown is a conservative approach based on the largest tank in the area which is a primary digester, although these tanks cannot spill due to being subsurface. This is an illustrative section only to demonstrate where flows will occur to.
- d) Table 3.2 has been updated in the report.

Table-3.2--Estimating-critical-spill-volumes¶

| Containment-Area¶ | 25%-Scenario¶ (m³)¶ | 110%-Scenario¶ (m³)¶ | Largest-Tank-+ Rainfall- Scenario¶ (m³)¶ | Critical-Spill- Volume-¶ (m³)¶ |
|------------------------------------|------------------------|-------------------------|---|--------------------------------------|
| Area-1-and-3- (Interconnected)¶ | 968¶ | 572¶ | 1230¶ | 1230¶ |
| Area-2¶ | 753¶ | 1656¶ | 2051¶ | 2051¶ |

- e) The primary digester tanks are all located subsurface, as can be seen in the photograph below. While there are raised portions on some of the tanks, for example the two to the right of the photograph, these are the floating roofs on these tanks which contain the captured biogas.



f) The report has been updated accordingly. Note that zones 1 and 3 are described with a joint volume as they are linked by a pipeline. See Table 6.1 in Section 6 of the report, reproduced below

Table 6.1—Containment Area Summaries

| Containment Area | Description of containment |
|------------------|--|
| Area 1 & 3 | <ul style="list-style-type: none"> → Close containment with the top water level of containment at 6.61 m AOD, bund walls will be 1.31 m at the highest point. → A transfer pipeline will convey sludge from Area 1 to Area 3 in the case of a spill. → 3 large ramps will provide access for vehicles as the area is frequently visited during the day. → The containment volume provided shall be at least 1,230 m³ and is driven by the case of "largest tank plus site specific rainfall arising in the recovery period" rather than the 25%/110% rules. |
| Area 2 | <ul style="list-style-type: none"> → Close containment with the top water level of 7.59 m AOD, the reinforced concrete wall to be constructed will be 1.84 m at its highest to contain spillage. → Access provided for infrequent vehicular access by large flood gates. → The containment volume provided shall be at least 2,051 m³ and is driven by the case of "largest tank plus site specific rainfall arising in the recovery period" rather than the 25%/110% rules. |

3) Emissions to air from odour control units

Note: The Agency confirms that as outlined in previous communications both the 'biological treatment of waste' and the 'treatment of water-based liquid waste' apply.

Answer 3

Thames Water notes this comment.

4) Containment storage tank (Post AD)

You have stated in your response that "A full BAT risk assessment is required to determine the potential need to cover open topped tanks including the 'Contingency storage tank'" To reiterate our position which we have communicated to Thames on multiple occasions under BREF guidance for the waste treatment sector BAT conclusion 14 operators must ensure that diffuse emissions are contained. This includes techniques such as storing, treating and handling waste and material that may generate diffuse emissions in enclosed buildings and/or equipment, and collecting and directing the emissions to an appropriate abatement system. If digestate is still biologically active, and operators are producing combustible biogas, steps must be taken to collect the biogas. Biogas should not be vented to the environment. If the source is less biologically active, Thames will need to propose plans to enclose, collect and direct the waste gas emissions to an appropriate abatement system. A risk assessment is only appropriate to determine if the emission should be directed to a gas or abatement system and is **not** to be used to determine if a tank should be covered. Any IC that the Agency issue is on the above basis and not for operators to "determine the potential need to cover open topped tanks".

Confirm that you agree to the implementation of the IC on the above basis.

Answer 4

Not applicable - as Thames Water have removed the 'Contingency storage tank', from this permit application (please also see response to Q2b above).