

Application reference: EPR/VP3829SK/A001
Operator: United Utilities Water Limited
Facility: Burnley WwTW Sludge Treatment Facility

In response to the questions received on 11/12/2023 on the above permit application, please refer to the additional information provided in blue text.

- 1) With regards to medium combustion plant (MCP) provide the following information for the CHP engine and dual-fuel boiler:
 - a) Date of the start of the operation of the medium combustion plant or, where the exact date of the start of the operation is unknown, proof of the fact that the operation started before 20 December 2018;

2009 is the operational start date for both the CHP engine and boiler.

- b) Sector of activity of the medium combustion plant or the facility in which it is applied (NACE code);

E 37 sewage treatment

- c) Expected number of annual operating hours of the medium combustion plant and average load in use;

Operating hours per year - 8,760

Average load in use – 56.42%

- d) Where the option of exemption under Article 6(3) or Article 6(8) is used, a declaration signed by the operator that the medium combustion plant will not be operated more than the number of hours referred to in those paragraphs;

Not applicable

- e) Name and registered office of the operator and, in the case of stationary medium combustion plants, the address where the plant is located.

Registered Office Address:
United Utilities Water Limited
Haweswater House
Lingley Mere Business Park, Lingley Green Avenue,

Great Sankey, Warrington, WA5 3LP

Plant Address:

Jenbacher 312 GS-BL engine and Cambi Boiler
Burnley WwTW Sludge Treatment Facility
Woodend Lane, off Barden Lane
Burnley, BB12 9DS

- 2) Confirm the number of Odour Control Units (OCUs) on site. The BAT Improvement Programme document refers to there being 3 OCUs on site. However, all other documents refer to a single OCU. If there is a single OCU on site, please amend all documents to reflect this.

There is one operational OCU (emission point A4) serving the majority of assets at the Burnley sludge treatment facility. There are two non-operational OCUs serving the sludge screen press enclosure and the dewatering building (centrifuges/conveyors). The operational OCU has excess treatment capacity (in relation to the design airflow) and thus the proposal is to divert the flow from the screen press enclosure and the dewatering building to this OCU. The BAT Improvement Programme has been updated to make this clear. Please find enclosed.

- 3) Include the unscreened sludge buffer tank in all containment tank tables. The 37m³ tank has not been included in the tank capacity table in the BAT Improvement Programme document or in Table 1: Assets table in the secondary containment report.

The unscreened sludge buffer tank was unfortunately missed from the secondary containment modelling assessment. This tank is situated adjacent to the screened sludge tank which has a capacity of 2,500m³. The screened sludge tank is in Group 2 of the tank grouping for the spill containment modelling. An inflow file of 2,750m³ was created for Group 2 (110% of 2,500m³ tank volume) and applied to the model simulation. Given the comparatively small capacity of the unscreened sludge buffer tank (37m³), there is a high degree of confidence that the proposed containment volume and wall height in this area would be adequate to contain a catastrophic release from the unscreened sludge buffer tank.

The containment solution based on the October 2022 modelling assessment (presented in the Improvement Programme) is conceptual, and design work is ongoing to refine this. United Utilities are committed to meeting BAT, or justified BAT equivalent, for the final containment solution at the Burnley sludge treatment facility.

The position of the unscreened sludge buffer tank in relation to tank Group 2 (screened sludge tank) is shown on the figure below extracted from the containment modelling assessment report. Also see Appendix E of the Application Support Document for tank positioning.

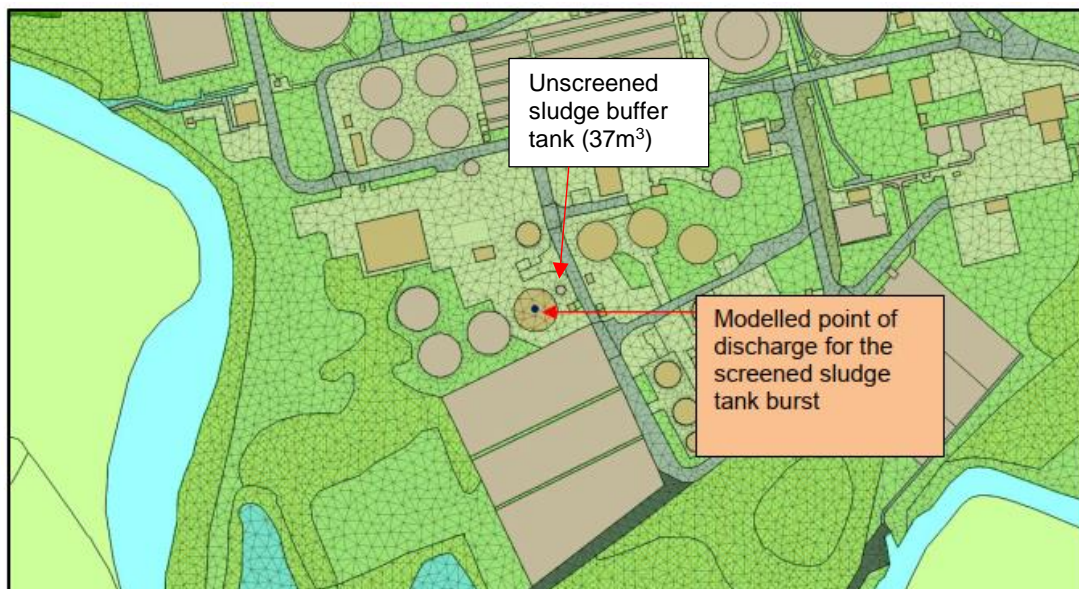


Figure 8 Burnley STC Modelled Point of Discharge for Screened Sludge Tank

- 4) Include the 10m³ screened sludge buffer tank in Table 1: Assets table in the secondary containment report.

The screened sludge buffer tank was unfortunately missed from the secondary containment modelling assessment. This tank is situated adjacent to the thickening centrate (buffer) storage tank which has a capacity of 200m³. The thickening centrate tank is in Group 6 of the tank grouping for the spill containment modelling. An inflow file of 217m³ was created for Group 2 (110% of 200m³ tank volume) and applied to the model simulation. Given the comparatively small capacity of the unscreened sludge buffer tank (10m³), there is a high degree of confidence that the proposed containment volume and wall height in this area would be adequate to contain a catastrophic release from the screened sludge buffer tank.

The containment solution based on the October 2022 modelling assessment (presented in the Improvement Programme) is conceptual, and design work is ongoing to refine this. United Utilities are committed to meeting BAT, or justified BAT equivalent, for the final containment solution at the Burnley sludge treatment facility.

The position of the screened sludge buffer tank in relation to tank Group 6 (thickening centrate tank) is shown on the figure below extracted from the containment modelling assessment report. Also see Appendix E of the Application Support Document for tank positioning.

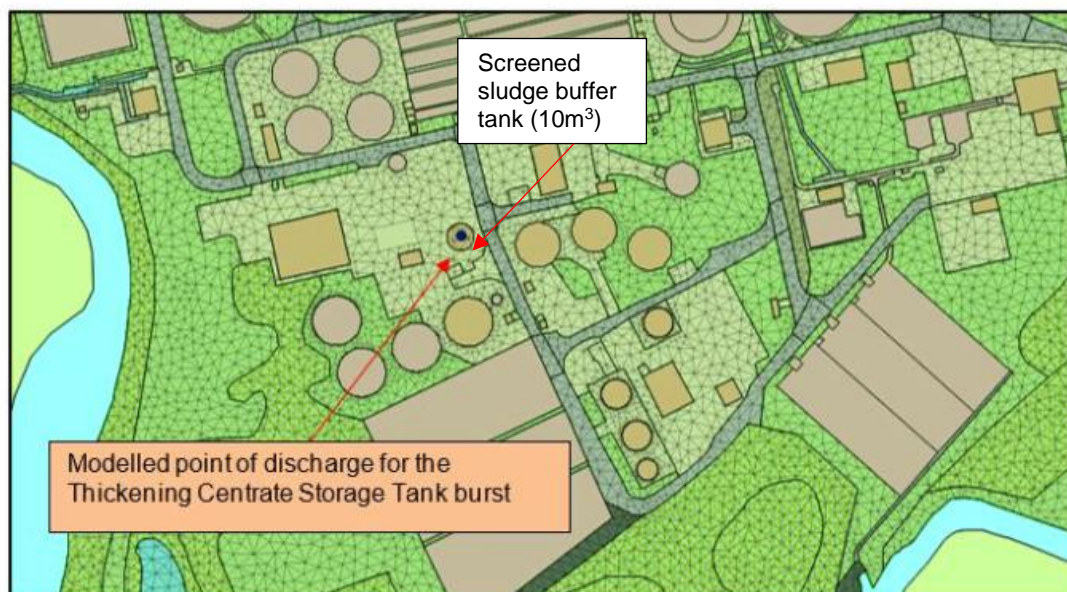


Figure 16 Burnley STC Modelled Point of Discharge for Thickening Centrate Storage Tank

- 5) Confirm whether the unscreened sludge buffer tank and the screened sludge buffer tank are within the bunded area and that they will be included in the final secondary containment design.

The unscreened sludge buffer tank and the screened sludge buffer tank are within the bunded area and will be included in the final secondary containment design.

- 6) Routine emissions to the WwTW from the installation will be controlled via monitored emission limits as an indirect discharge (as defined in the Waste Treatment BREF). However, as WwTWs periodically discharge sewage during storm conditions, it's possible that wastewater from the installation could bypass the WwTW treatment processes and be emitted as a direct discharge to water. It's not clear from the application how this abnormal situation will be prevented. Operators of environmental permits cannot emit waste waters directly to surface waters without detailed risk assessment. You must therefore have procedures to prevent the discharge of wastewater from the installation from bypassing the WwTW treatment processes directly to surface water during storm overflow conditions.

Section 4.9. Question 6e: Waste, states that centrate from the centrifuge processes for thickening and dewatering sludge is returned to the head of the wastewater treatment works (after the storm overflow) for full biological treatment. All wastewater streams are returned after the storm overflow and thus there is no risk of discharge to water during storm conditions.

Q6 a-c are therefore not applicable.

- a) Provide written procedures which describe the site's contingency arrangements to prevent digestate and effluent being discharged off site while the WwTW are in storm conditions.
- b) Provide a description of the buffer storage proposals to control or hold emissions to the event of storm overflow conditions at the WwTW.
- c) Should any contingency arrangements use storage tanks to act as a buffer, provide evidence that demonstrates the waste waters or digestates can be held in this storage during the period of storm overflows.

Enclosure: Revised BAT Improvement Programme, October 2023 Re-Issue