# TROWBRIDGE BC (11799) IED PERMIT APPLICATION AUGUST 2024
# EPR/BB3934AG/A00 (103333)
# FORM C6 – VARY A BESPOKE WATER DISCHARGE ACTIVITY

## Application Form C6 – Additional Responses

Question 3b: What is the maximum volume of effluent you will discharge in a day?
3,746 m3/d

Main elements discharged are:

| Source | Maximum volume (m3/d) | Measurement method |
|---|---|---|
| GBT Filtrate | 2,559.60 | Flowmeter |
| Dewatering (centrate and belt presses) | 1,183.77 | Flowmeter |
| Gas to Grid process clean up water | 3 | Flowmeter |

Smaller estimated volumes from:

Chiller, gas compressors, condensate, and site drainage. These are estimated to be <1 m3/day in total.

Question 3c: What is the maximum rate of discharge in litres per second?
56 l/s

This value comes two largest flows: the GBT filtrate and Dewatering. This has been derived from the telemetry flow trends.

Question 3d: What is the maximum volume of non-rainfall dependent effluent you will discharge in a day?

3,746 m3/d, as above and doesn't contain rainfall dependent drainage.

There is no Question 3f.

Question 5a: How far away is the nearest foul sewer from the boundary of the premises?
Not applicable – the installation is located within the curtilage of Trowbridge WRC and the installation wastewater emissions discharge into the works UWWT inlet via dedicated pumping stations and rising mains.

Question 5b2: Discharges from all other premises including trade effluent
Not applicable.

Question 7b:

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Table 2 complete and then asked to complete question 7g. Several treatment stages weren't included in Table 2, and have been added in here.

| Order of treatment | Description |
|---|---|
| First | Screening |
| Second | Primary Settlement |
| Third | Dosing using iron for phosphate removal |
| Fourth | Biological filtration |
| Fifth | Humus settlement |
| Sixth | Dosing using iron for phosphate removal |
| Seventh | Tertiary solids removal and biological treatment |
| Eighth | Solids filtration |

Question 7g: You must provide details on an extra sheet of the final effluent discharge quality that the treatment system is designed to achieve.

Trowbridge WRC treatment process operates and is continuously reviewed in line with its final effluent discharge permit limits as per permit reference 102153 and the UWWT Directive. Permit Limits are detailed below:

| Parameter | 95% Look-Up Table Limits | Maximum Value Limits | Regime |
|---|---|---|---|
| Aluminium | | 1mg/l | OSM |
| Ammonia | 10 mg/l | 37 mg/l | OSM |
| BOD | 45 mg/l | 90 mg/l | OSM |
| Iron | 4 mg/l | 8 mg/l | OSM |
| Suspended Solids | 55 mg/l | | OSM |
| Total Phosphorus (Stretch Target) | 0.5 mg/l | | Catchment Permitting |
| BOD | 25 mg/l | 50 mg/l | UWWT |
| COD | 125 mg/l | 250 mg/l | UWWT |
| Total Phosphorus (annual average) | | 2 mg/l | UWWT |

Questions 8

Question 8: b, c, d, e, f

For all these parts please see response below:

There are no direct emissions to surface water or groundwater from this installation therefore monitoring for all substances listed within the referenced risk assessment at the site has not been

undertaken so far. There are emissions to sewer, which are all routed into the WRC flow to full biological treatment (see answer to Q7g). These wastewater emissions are limited to the following:

- Filtrate from the GBTs;
- Dewatering liquors from the centrifuges and belt presses;
- Condensate from the CHP engine, chiller, gas compressors and biogas lines;
- G2G Process clean up water
- Surface water drainage

The proposed monitoring for wastewater returns to the WRC inlet will be in line with the following:

*Surface water pollution risk assessment for your environmental permit - GOV.UK (www.gov.uk)*

*Freshwaters_specific_pollutants_and_operational_environmental_quality_standards.ods (live.com)*
*Freshwaters_priority_hazardous_substances__priority_substances_and_other_pollutants_environmental_quality_standards__1_.ods (live.com)*

After we have completed the BAT 3 Inventory monitoring, as part of the Improvement Conditions and the H1 risk assessment this will inform the analysis requirements for BAT 6 and 7, along with those determinands already stipulated in BAT 6.

Question 9: e, f

The installation discharges indirectly to a freshwater (non tidal) river from this installation and please see answer to Q8. The Environmental Risk Assessment (H1) will be carried out in line with our answer to Q8.

Question 10a: What is the national grid reference of the inlet sampling point? (for example, SJ 12345 67890)
Not applicable to this installation.

Question 10b: What is the national grid reference of the effluent sample point?

| Plan Location & reference | Name | Waste type | Sampling point NGR |
|---|---|---|---|
| S1 | Dewatering liquors | Centrate from the digestate dewatering assets | ST 84749 58862 |
| S2 | Thickening liquors | Gravity Belt Thickener liquors | ST 84822 58810 |
| S3 | Dewatering liquors | Filtrate from the digester dewatering assets | ST 84748 58828 |
| S4 | Wastewater liquors | Wastewaters consisting of condensate, chiller, gas compressors, GtG process | ST 84850 58804 |

| | | | |
|---|---|---|---|
| | | clean up water, but will also contain site drainage | |

Question 10d: What is the national grid reference of the flow monitoring point?
N/A. Flow meters are present for three flows as detailed in response to Question 3b. They are due to be used as part of the BAT 3 characterisation work.

Question 10e: Does the flow monitor have an MCERTS certificate?
There are flow meters as detailed above, but not to MCERT standard.

Question 11a: Where will the effluent discharge to?
The discharge is to non-tidal river, via the WRC. We have named this effluent Process Effluent as in Question 1b.

## Section 2 - Discharges to non-tidal river, stream or canal

We've answered this as it appears to be needed, but it has been answered in relation to Trowbridge WRC UWWT final effluent discharge point (outside of the installation); permit number 102153

2.1 Trowbridge WRC Final Effluent

2.2. ST8505059680

2.3. River Avon

2.4 Non tidal river

2.5 No

2.6. No

2.7 No

2.8 N/A