

Esholt STF Request for Further Information issued: 8th October 2024

Deadline: 22nd October 2024

Response submitted: 22nd October 2024

Application fee

- £13,984 application fee for - S5.4 1) (b) (i) Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day (or 100 tonnes per day if the only waste treatment activity is anaerobic digestion) involving biological treatment.
- £3,965 at 50% - (1.16.12) - Temporary storage of cake (subject to confirmation and information provided in relation to this activity below)
- £793 @ 10% - (1.16.12) - Dewatering of cake (what will not undergo anaerobic digestion, note this is based on a waste activity and not an installation activity.)

Additional Assessments (see below for further details)

- Odour management plan – a fixed charge of £1,246
- Habitats assessment – a fixed charge of £779
- Emission Management Plan – a fixed charge of £1,241

I need to ask you for some missing information before I can do any more work on your application. Please provide us with more information identified in the questions below.

Please see 4. This provides a summary of fees that have been paid in support of the Esholt application.

4. Summary of fees payable

The fees have been calculated as follows:

- Variation of existing CHP permit to include AD activity - Section 5.4 a(i) and (b)(i) – Non-hazardous waste installation – biological treatment (1.16.1.2) Non haz waste installation: £13,984
- A review of the Odour Management Plan, fee: £1,246
- A review of the Emissions Management Plan: £1,241
- Habitats Assessment (1.19.2): £779

We have paid the relevant fee of £17,250 via BACS payment. The YW payment ref is PSCAPPYORKSWI015.

1) Temporary storage of cake

You have identified within table 'C3: 1b-2 – Types of waste accepted – Imported wastes for dewatering/storage only (prior to recovery)': If you are importing cake for temporary storage and transfer of site without wastes being processed through the AD this will be a separate waste activity. In order to progress this activity, you will need to provide the information identified within our application process, this includes but is not limited to the below. (Please note it is your responsibility to ensure that information is provided in line with our requirements, failure to provide this will mean that we will not be able to progress these elements of your application)

a) Payment in line with guidance 'When and how you are charged' and above summary.

YW has decided not to carryout interim storage of imported raw sludge or biosolids at Esholt.

b) Non-technical summary, and process flow including how you will keep this activity separate from your installations activity.

N/A

c) Assessment against Non-hazardous and inert waste: appropriate measures for permitted facilities.

N/A

d) Completion of relevant forms – B4 new bespoke waste operation.

N/A

e) Updating and inclusion of this activity in all relevant management plans such as the Odour management plan, accident management plan, residue management plan etc.

N/A

2) Dewatering of cake that will not undergo AD

You have identified within your application table 'C3: 1b-2 – Types of waste accepted – Imported wastes for dewatering/storage only (prior to recovery)': If you are importing waste for dewatering only and transfer of site without wastes being processed through the AD this will be a separate waste or installation activity (depending on the tonnage and process). In order to progress this activity as a waste activity you will need to provide the information identified within our application process, this includes but is not limited to the below. (Please note it is your responsibility to ensure that information is provided in line with our requirements, failure to provide this will mean that we will not be able to progress these elements of your application)

a) Payment in line with guidance 'When and how you are charged' and above summary.

YW has decided not to import waste for dewatering that will not undergo AD.

b) Non-technical summary, and process flow including how you will keep this activity separate from your installations activity.

N/A

c) Assessment against Non-hazardous and inert waste: appropriate measures for permitted facilities.

N/A

| | | |
|---|-----------------------|---------------------|
| d) Completion of relevant forms – B4 new bespoke waste operation. | | |
| N/A | | |
| e) Updating and inclusion of this activity in all relevant management plans such as the Odour management plan, accident management plan, residue management plan etc. | | |
| N/A | | |
| 4) Bioaerosol Risk Assessment | | |
| <p>You have stated that you have carried out “quantitative bioaerosol monitoring in accordance with Technical Guidance Note M9 ‘Environmental Monitoring of Bioaerosols at Regulated Facilities’ and determined that “Esholt STF installation is not a significant source of bioaerosols” and “the risk assessment will be updated upon receipt of the monitoring data”.</p> <p>You need to send us a Bioaerosol Risk Assessment that is specific to your site. This should meet the requirements of our M9 Position Statement and be specific to the facility you are applying to permit. This must show that the process and/or abatement measures adequately prevent, or where this is not possible, significantly reduce the risk of bioaerosols release. It must show that the resulting activity will be unlikely to expose the nearest sensitive receptor to elevated concentrations of bio-aerosols. The detail and level of risk assessment must be site specific, process, and location dependent. You must have measures and process controls in place to control and minimise the risks identified. These must be clearly stated in your assessment.</p> <p>Provide a Bioaerosol Risk assessment in line with M9 guidance.</p> <p>Please see Bioaerosol Risk Assessment.</p> | | |
| 5) Accident Management Plan | | |
| <p>You have submitted a risk assessment under section Q 6-7 of your submission in relation to accidents, however this does not meet the requirement set out in our guidance.</p> <p>Provide a standalone accident management plan that meets the requirements of the above guidance.</p> <p>Please see the Esholt STF Accident Management Plan.</p> | | |
| 6) Emission Points | | |
| <p>On review of your ‘Principal Emission Points’ plan this includes the location of your pressure release valves (PRV) as a V reference point.</p> <p>Update the ‘Principal Emission Points’ plan to include the location of the PRVs as activity point references (e.g. A15, A16, A17 etc) and provide the National Grid Reference for each PRV.</p> <p>Please see the revised “Figure 3 Principal Emission Points_Rev.D” and “Figure 2 Site Layout Plan_Rev.D”. The NGR for each PRV is as per the table below.</p> | | |
| Emission Point Reference | Asset | NGR |

| | | |
|-----|------------|---------------------|
| A8 | Gas holder | SE 18561 39440 |
| A9 | Gas holder | SE 18572 39445 |
| A18 | Digester | SE 18630 39419 |
| A19 | Digester | SE 18613 39402 |
| A20 | Digester | SE 18595 39383 |
| A21 | Digester | SE 18597 39432 |
| A22 | THP | See the table below |

There are 10 PRVs associated with the THP, as listed in the table below.

| Emission Point Reference | NGR |
|--------------------------|----------------|
| A22a | SE 18694 39474 |
| A22b | SE 18692 39470 |
| A22c | SE 18692 39267 |
| A22d | SE 18691 39464 |
| A22e | SE 18691 39461 |
| A22f | SE 18690 39458 |
| A22g | SE 18690 39456 |
| A22h | SE 18687 39369 |
| A22i | SE 18686 39454 |
| A22j | SE 18686 39453 |

For your information, YW has also updated the proposed future OCUs in the Emission Point Plan, the NGRs as listed in the table below. YW has also updated the OMP to include these OCU's. The OMP is attached to this response.

| Emission Point Reference | Asset | NGR |
|---|-------------------------------------|----------------|
| A14 (Replacing the existing odour dispersion stack) | Degassing tanks | SE 18652 39449 |
| A15 | Screen sludge transfer pump station | SE 18629 39510 |
| A16 | Cake import reception unit | SE 18760 39490 |
| A17 | Consolidation tank | SE 18703 39426 |

7) Secondary Containment

Document 'Esholt Secondary Containment Assessment' does not include spill modelling following the implementation of the proposed high level solution.

Provide a revised secondary containment assessment with the final detailed design and spill modelling to demonstrate that the proposed solution will contain spills in line with CIRIA C736.

The original application document included a Pondsims model, ADBA risk assessment and concept solution. The next step was for Arup to model how deep the spills would be and the

corresponding wall heights and outline designs. The Secondary Containment Report has been updated with the modelling completed by Arup which determines how high the walls need to be to ensure CIRIA compliant solutions. At present MMB are working on detailed design, these designs are not available to share yet but they will be discussed and agreed with local EA as part of improvement condition discussions.

8) Waste water emissions during storm overflow conditions at the WwTW

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 WwTW 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 wastewaters 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.

Note, this information can be included as an addendum to your accident management plans as part of BAT conclusion 21, Emissions from accidents and incidents.

- a) Provide written procedures which describes the site's contingency arrangements to prevent digestate and effluent being discharged off site while the WwTW are in storm conditions.

All STF return liquors from the installation boundary are downstream of the storm overflow point. There is no ability for return liquors to enter the storm tank or 6x channel and discharge during storm conditions.

- b) Provide a description of the buffer storage proposals to control or h emissions to the event of storm overflow conditions at the WwTW.

This is not required as there is no route for return liquors to discharge via site overflows.

- 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.

N/A

9) Emissions to air from odour control units

Under BREF guidance BAT conclusion 8, BAT is to monitor channelled emission to air at agreed frequencies and standards. On review of your submission we can see no mention of parameters for the 'Treatment of water-based liquid waste' (TVOC and HCl), or evidence that TVOC and HCl have not been identified as relevant in the waste gas stream. Your activity includes prior to the AD process (the biological treatment of waste) the thickening and dewatering process which is a directly associated activity of the AD process. The odour control units identified serve this directly associated activity. The BAT AELs are appropriate for the activity defined under the BREF as 'Treatment of water-based liquid waste'. The BREF provides examples of wastes that would be considered as water-based liquid wastes. These include wastes under the category '19 08 wastes from waste water treatment plants not

otherwise specified'. The treatment of this waste in the dewatering and thickening stage and the subsequent emissions to air from connected abatement could be subject to the BAT AELs specified within BAT conclusion 8.

a) Confirm that you will characterise emissions from the odour control units in line with BAT 3 to demonstrate if TVOC and HCl are present in the waste gas stream.

YW will characterise emissions from the OCUs to demonstrate if TVOC and HCl are present in the waste gas stream.

b) Confirm that if TVOC and HCl are identified as relevant in the waste gas streams that you will monitor these emission in line with BAT requirements.

If TVOC and/or HCl are identified, YW will monitor in line with BAT requirements.

10) ISO Certificate

On review of your ISO 14001 certificate this has expired.

Provide an updated ISO 14001 certificate.

Please see ISO 14001 certificate.

11) Technical competence

On review of the technical competence certificate this has expired.

Provide an up-to-date certificate which demonstrates continuing competence has been maintained.

Please see the attached certificate.

12) Throughput figures

We need to establish the correct daily throughput figure for ARI activity within the permit Table S1.1 in m³/day. Table C3: 1a-1 Types of activities says 204,537m³/d but your calculation sheet says 1,060 m³/day.

a) Can you confirm the daily throughput (in wet tonnes) for the sludge AD operation to use in Table S1.1 of the permit at Esholt Sludge Treatment Facility?

Anaerobic digestion is restricted to 1,178M³/d. That is the figure that forms part of ARI under Table S1.1. Please see the amended Q12 Esholt Sludge Figures - with commentary V002.

Full description for the purposes of the table as follows: Anaerobic digestion of waste in four tanks followed by burning of biogas shall be limited to 1,178M³/d.

We need to establish the correct annual throughput figure for Table S2.2 in Schedule 2 of the permit. The figure of 2,250,825 m³/year has been derived from the wet tonnes' volumes specified in table C3: 1a-1 in the main supporting document and is the sum total of: Site indigenous SAS sludge 555,104 m³/year, Liquid sludge imports from other treatment works 339,273 m³/year, Site indigenous SAS Sludge 1,330,500 m³/year; and Cake sludge imports from other treatment works 25,948 m³/year.

b) Can you confirm that the annual throughput (in wet tonnes) for the sludge AD operation at Esholt Sludge Treatment Facility is 2,250,825 m³/year for Table S2.2 of the permit?

That's correct, for the purposes of Table S2.2, the annual throughput shall not exceed 2,250,825t.