East Hyde, Not Duly Made Request for Further Information- 15th March

Date:	27 March 2024
Project name:	STC IED
Project no:	B22849AZ
Attention:	Sarah Raymond
Company:	Thames Water
Prepared by:	Tamsin Potter
Document no:	C.240328-8

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Dear Sarah Raymond

Thank you for your not duly made RFI and payment request letter on 15th March 2024. Please see below for the answers to your questions, with the numbering format used by the EA:

Application fee

Unfortunately, the application payment you sent is incorrect. The correct application charge is £21,229. **This leaves a balance of £2,501 to pay** as our records show that you have only paid £18,728 for this application. Further guidance in relation to application charges can be located at: https://www.gov.uk/government/publications/environmental-permitting-charges-guidance/environmental-permitting-charges-guidance The application charge is made up as follows:

- £13,984 application fee for - S5.4 a(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 application fee for the physical treatment of non-hazardous waste relating to the waste import to the head of the works.
- £793 application fee for the physical treatment of non-hazardous waste relating to the temporary storage of digested cake.

Additional Assessments (see below for further details)

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

Answer

We have reviewed the application payment and note the balance of £2,501 to be paid. We request the EA can take the balance of £2,501 out of the TW remittance number PSCAPPTHAMES103.

1. **Sludge contingency tanks**

Your process flow identifies that the 'sludge contingency tanks' can be used by the sludge blending tank (pre-Anaerobic Digestion (AD)) and (post AD) by the secondary digester tanks. Clearly explain:

a. **How you will ensure that undigested sludge transferred from the sludge blending tank will not bypass the AD process following dewatering.**
b. **Explain how you will ensure that digested and undigested sludge is not mixed within the sludge contingency tanks.**

Answer 1a

Please see document "B22849AZ-JA-EHANP1ZZ-LSX-DR-P-0003", as previously supplied, which confirms all transfers to the Contingency Storage Tanks are abnormal flows.

The two Contingency Storage Tanks are used independently on a contingency basis to receive sludge transfers. Transfer operations are a manual operation that is selected by site staff when instructed by site management, in response to abnormal operations or planned maintenance.

Following the planned maintenance or a return to normal operations, all undigested sludge is returned to the Sludge Blending Tank and is subject to the AD process. Contingency Storage Tanks used during this time are then subject to emptying.

This ensures undigested sludge is not able to bypass the AD process.

Answer 1b

Digested and undigested sludge is not mixed in the Contingency Storage Tanks due to the nature of the storage operations. Both sludge transfers, digested sludge from the Secondary Digester Tanks and undigested sludge from either the Picket Fence Thickeners or the Sludge Blending Tank, are abnormal transfers that are not routinely used. Each transfer makes use of separate sludge transfer pipework. There is no cross-over between this transfer pipework.

Digested sludge would be stored in the Contingency Storage Tanks during abnormal operations when the Digested Sludge Dewatering Plant is unavailable (i.e. unplanned maintenance) and digested sludge would be over-pumped to the identified Contingency Storage Tank. Once dewatering plant is available the digested sludge would be returned for dewatering. When storage is required, digested sludge is transferred to a single, empty Contingency Storage Tank (or one already containing digested sludge) selected by the site management.

Undigested sludge would be stored in the Contingency Storage Tanks during abnormal operations and undigested sludge pumped to the identified Contingency Storage Tank. Once normal operations resume, undigested sludge would be transferred to the Sludge Blending Tank and onwards for treatment. When required, undigested sludge is transferred to a single, empty Contingency Storage Tank (or one already containing undigested sludge) selected by the site management.

2. Open pre-AD tanks

You have advised that the sludge blending tank pre- AD is open. You have advised that "Thames Water is committed to meeting the requirements of BAT. A full BAT risk assessment is required to determine the potential need to cover open topped tanks."

Your activity includes prior to the AD (the biological treatment of waste) the thickening and dewatering process which is a directly associated activity (DAA) of the AD process. The BAT AELs and techniques identified for the dewatering activity are defined under the BREF as 'Treatment of water-based liquid waste'. The BREFgoes on to further 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 will be subject to the BAT AELs specified within BAT conclusion 8 and any odour control unit that serves this DAA must meet the requirements of BAT 53.

BAT 53 requires that "In order to reduce emissions of HCl, NH3 and organic compounds to air, BAT is to apply BAT 14d (Containment, collection and treatment of diffuse emissions) and to use one or a combination of the techniques including adsorption, biofilter, thermal oxidation and/or wet scrubbing.

a) **Provide commitment to cover all pre-anaerobic digestion tanks identified as the consolidation tank in line with BAT 53 and14d.**
b) **Provide the specification of the abatement technology that will be implemented in line with BAT 14d and BAT 53 to treat air emissions.**
c) **Provide the proposed NGR of the OCUs air abatement plant emission points.**
d) **Provide a written statement which explains why the abatement plant will be effective at treating point source waste gas and odour emissions.**

Answer 2

Thames Water is committed to meeting the requirements of BAT/BREF to the extent that BAT 14 and BAT 53 apply. A full BAT risk assessment is required to determine the potential need to cover open topped tanks. Thames is not able to commit to covering tanks by the stated deadline of 31st March 2025, delivery timescales will be subject to the outcome of the PR24 and subsequent price review discussions.

TWUL request the Environment Agency includes an Improvement Condition in the determined permit which addresses the detail in b to d.

3. Open Tanks Post AD

Under BAT conclusion 14 you 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 you are producing combustible biogas you must take steps to collect the biogas. Biogas should not be vented to the environment. If the source does not produce an explosive environment (i.e. less biologically active) you will need to propose plans to enclose, collect and

direct the waste gas emissions to an appropriate abatement system.

For all open tanks post AD, confirm that you will undertake the following:

a. **If digestate is still biologically active and you are producing combustible biogas you will take steps to collect the biogas and direct this to your gas collection system in line with BAT 14.**
b. **For open tanks that do not produce an explosive environment (i.e. less biologically active) you will enclose, collect and direct the waste gas emissions to an appropriate abatement system in line with BAT 14 and 34.**

Answer 3

Thames Water is committed to meeting the requirements of BAT 14 and 34. A full BAT risk assessment is required to determine the potential need to cover open topped tanks. Thames is not able to commit to covering tanks by the stated deadline of 31st March 2025, delivery timescales will be subject to the outcome of the PR24 and subsequent price review discussions.

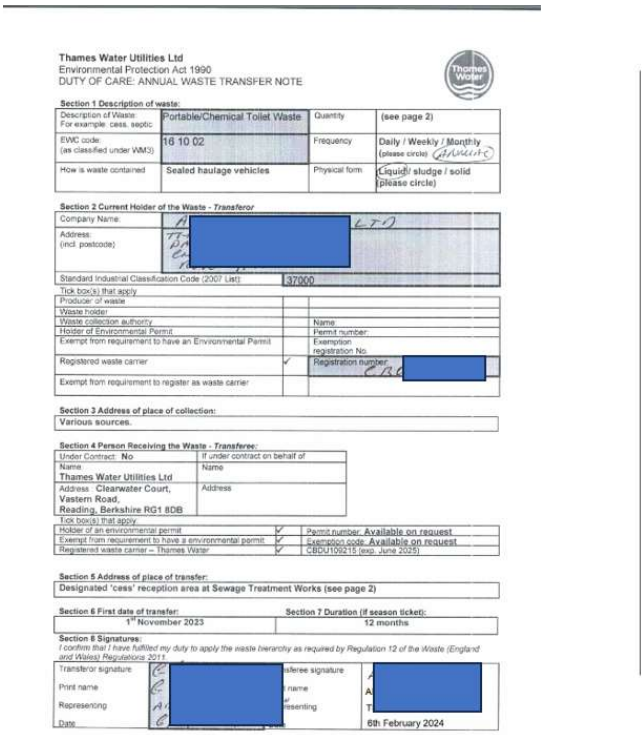
TWUL request the Environment Agency includes an Improvement Condition in the determined permit which addresses a and b.

4. **Table B3 – 1b (ii) Waste accepted at the head of the works import point.**

a. **Provide transfer notes to demonstrate that the wastes requested are already accepted on the site.; or if waste is not currently accepted.**
b. **Provide an assessment of the fate an impact of the substances emitted to water from this activity following the Environment Agencies risk assessment guidance in line with relevant guidance (https://www.gov.uk/guidance/non-hazardous-and-inert-waste-appropriate-measures-for-permitted-facilities/6-emissions-control)**

Answer 4a

Please find below an example Portable Toilet Waste, Annual Waste Transfer Note and on page 2 confirmation East Hyde STW is a TWUL site used by the customer. Note: customer details redacted solely for the purpose of this response.



Thames Water Utilities Ltd
Environmental Protection Act 1990
DUTY OF CARE: ANNUAL WASTE TRANSFER NOTE

Section 1 Description of waste:

Description of Waste: For example: cess, septic	Portable/Chemical Toilet Waste	Quantity	(see page 2)
EWC code: (as classified under WM3)	16 10 02	Frequency	Daily / Weekly / Monthly (please circle)
How is waste contained	Sealed haulage vehicles	Physical form	Liquid / sludge / solid (please circle)

Section 2 Current Holder of the Waste - *Transferor*

Company Name:	[redacted] LTD
Address: (incl. postcode)	[redacted]
Standard Industrial Classification Code (2007 List)	37000

Tick box(s) that apply

Producer of waste			
Waste holder			
Waste collection authority		Name	
Holder of Environmental Permit		Permit number	
Exempt from requirement to have an Environmental Permit		Exemption registration No.	
Registered waste carrier	✓	Registration number:	[redacted]
Exempt from requirement to register as waste carrier			

Section 3 Address of place of collection:
Various sources.

Section 4 Person Receiving the Waste - *Transferee*:

Under Contract: No	If under contract on behalf of
Name: Thames Water Utilities Ltd	Name
Address: Clearwater Court, Vastern Road, Reading, Berkshire RG1 8DB	Address

Tick box(s) that apply:

Holder of an environmental permit	✓	Permit number: Available on request	
Exempt from requirement to have a environmental permit	✓	Exemption code: Available on request	
Registered waste carrier – Thames Water	✓	CBDU100215 (exp. June 2025)	

Section 5 Address of place of transfer:
Designated 'cess' reception area at Sewage Treatment Works (see page 2)

Section 6 First date of transfer:	Section 7 Duration (if season ticket):
1st November 2023	12 months

Section 8 Signatures:
I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England and Wales) Regulations 2011.

Transferor signature	[redacted]	Transferee signature	[redacted]
Print name		Print name	
Representing		Representing	
Date		Date	6th February 2024

Thames Water Utilities Ltd
DUTY OF CARE: ANNUAL WASTE TRANSFER NOTE
Environmental Protection Act 1990
Please select which sites you will be disposing at:

Thames Water Sites	Site Environmental Permit Ref. No. / T21 Exemption Ref. No.	Please tick which sites you will dispose at : ✓	Please provide estimated total annual input at each site (cubic metres):
Alton STW	RPS277	✓	50
Aylesbury STW	RPS277	✓	50
Banbury STW	RPS277	✓	50
Basingstoke STW	RPS277	✓	100
Beckton STW	RPS277	✓	50
Beddington STW	RPS277	✓	50
Bicester STW	RPS277	✓	50
Bishops Stortford STW	RPS277	✓	50
Camberley STW	RPS277	✓	50
Chertsey STW	RPS277	✓	50
Cirencester STW	RPS277	✓	50
Crawley STW	RPS277	✓	50
Crossness STW	RPS277	✓	50
Dartford, Long Reach STW	RPS277	✓	50
Deephams STW	RPS277	✓	50
Didcot STW	RPS277	✓	50
East Hyde STW	RPS277	✓	50
Farnham STW	RPS277	✓	50
Guildford STW	RPS277	✓	50
Little Marlow STW	RPS277	✓	100
Maple Lodge STW	RPS277	✓	50
Mogden STW	RPS277	✓	50
Newbury STW	RPS277	✓	50
Oxford STW	RPS277	✓	50
Reading STW	EPR/MP3338LU	✓	100
Rye Meads STW	RPS277	✓	50
Sevenoaks Dunbrik Depot (Kent County Council)	Ref. Kent County Council		
Slough STW	RPS277	✓	100
Swindon STW	RPS277	✓	50
Wantage STW	RPS277		
Wargrave STW	RPS277	✓	100
Witney STW	RPS277	✓	50
Woking STW	RPS277	✓	50

Answer 4b

Not applicable

5. F1 form

On review of your re-submitted F1 form this is blank. Please re-submit a completed F1 form.

Answer 5

An updated Form F1 is provided as "TW_STC_EPR_12a_EHE_FF1"

6. OCUs

You have advised that "OCU covering PFTs and the old sludge blending tank is not operational requiring significant refurbishment or replacement, an assessment will be required." BAT 53 requires that "In order to reduce emissions of HCl, NH3 and organic compounds to air, BAT is to apply BAT 14d and to use one or a combination of the techniques given below." Which are identified as adsorption, biofilter, thermal oxidation or wet scrubbing.

Explain how you will re-instate or replace OCUs to meet the requirements of BAT and 53.

Answer 6

As per our odour improvement plan (OIP) previously supplied, an assessment will need to be completed to assess if the OCU will need to be replaced or refurbished before we can supply details on how this will be completed. Following the assessment, we will engage with the supply chain to identify suitable parameters for the unit and choice of media.