

Mrs Anita Manns  
Mott MacDonald  
Mountbatten House  
Grosvenor Square  
Southampton  
SO15 2JU

**Our ref:** EPR/QP3337QC/A001

**Date:** 18<sup>th</sup> November 2024

Dear Anita,

**We need more information about your application and underpayment of application charge**

**Application reference:** EPR/QP3337QC/A001

**Operator:** Southern Water Services Limited

**Facility:** Gravesend is a Sludge Treatment Centre (STC), Dering Way, Gravesend, Kent, DA12 2QF

Thank you for your updated application received on 06/03/2024

Unfortunately the application payment you sent is incorrect. Currently correct application charge is £22,801. Following confirmation of the waste activities we will confirm the final charge.

**Application fee**

- £13,984 Substantial variation 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.
- Application fee for the for the acceptance of waste to the head of works – 1.16.12 - £3,965 at 50%
- Application fee for the dewatering activity – 1.16.12 - £793
- Application fee for the temporary storage of cake and other wastes (Grit screenings) – 1.16.12 - £793

**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 to the below questions.

Permitting and Support Centre, Quadrant 2, 99 Parkway Avenue, Sheffield, S9 4WF  
Customer Contact Centre: 03708 506 506  
Email: [enquiries@environment-agency.gov.uk](mailto:enquiries@environment-agency.gov.uk)  
[www.gov.uk/environment-agency](http://www.gov.uk/environment-agency)

### 1) Diesel generator

*Your existing permit includes a CHP engine and a diesel generator. It is unclear if the 2.86MWth generator is a DAA's to the section 5.4 activity you have applied for. To ensure that the site is permitted correctly we need to understand:*

- a) **Is the 2.86MWth generator a DAA to the section 5.4 AD activity?**
- b) **If it is we can include this on your revised permit, however if they are not please :**
  - a. **Apply to surrender the 2.86MWth generator from the existing permit**
  - b. **Remove all reference of the generator from your application.**

*Note: If you require further clarification on this please contact me to discuss further. If you generator is not a DAA you will need to apply for a separate permit for this combustion unit.*

### 2) Alternative Storage Tank

*You have identified an alternative storage tank within your application, however we cannot locate how this tanks works within the process that you are applying for.*

**Update your non-technical summary to clearly explain how the alternative storage tank will be used within the process.**

### 3) Open tanks

*On review of aerial photographs we are unclear if you have open tanks within your permit boundary. 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.*

- a) **Provide a list of all tanks used within the process that you are applying to permit. Confirm the tank volume and weather they are enclosed or open.**
- b) **For all open tanks, confirm that you will undertake the following:**
  - i. **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.**
  - ii. **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.**

### 4) Import of grit and screenings from sewer cleaning

*You have identified in Table A.2 - 19 08 01, 19 08 02 and 19 09 01 for the import of grit and screenings from sewer cleaning for receipt at skips on-site. It is our understanding that these*

wastes will not undergo anaerobic digestion and as such this activity is not a DAA to the section 5.4 activity but a separate waste activity. In order to progress this activity you will need to provide all 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 this element of your application:

- a) **Payment as identified above**
- b) **Non-technical summary, and process flow including how you will keep this activity separate from your installations activity**  
**(<https://www.gov.uk/guidance/waste-environmental-permits>)**
- c) **Assessment against Non-hazardous and inert waste: appropriate measures for permitted facilities**  
**(<https://www.gov.uk/guidance/non-hazardous-and-inert-waste-appropriate-measures-for-permitted-facilities>)**
- d) **Completion of relevant forms – B4 new bespoke waste operation -**  
**<https://www.gov.uk/government/publications/application-for-an-environmental-permit-part-b4-new-bespoke-waste-operation>**
- 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.**

*Note: We are unclear if you intend to temporarily store digested cake on site prior to transfer off site that has not been produced within the onsite AD process. 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 which we can include in the screening storage activity. In order to progress the temporary storage of digested cake, you will need to provide all information identified above for this waste. Payment as identified above.*

## **5) Dewatering activity**

*You have identified EWC code 19 06 06 which you have stated is accepted for “intersite transfers of post digested liquid sludge as per EMS480. Common example of this is if centrifuges are offline which necessitates exports of digested liquid. Definition is with reference to RPS231. <https://www.gov.uk/government/publications/waste-codes-for-sewage-sludge-and-sludge-containing-other-materials-rps-231/wastecodes-for-sewage-sludge-and-sludge>.” It is our understanding that these wastes will not undergo anaerobic digestion and as such this activity is not a DAA to the section 5.4 activity but a separate waste activity (if less than 50 tonnes per day). In order to progress this activity you will need to provide all 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 this element of your application:*

- a) **Payment as identified above**
- b) **Non-technical summary, and process flow including how you will keep this activity separate from your installations activity**  
**(<https://www.gov.uk/guidance/waste-environmental-permits>)**
- c) **Assessment against Non-hazardous and inert waste: appropriate measures for permitted facilities**  
**(<https://www.gov.uk/guidance/non-hazardous-and-inert-waste-appropriate-measures-for-permitted-facilities>)**
- d) **Completion of relevant forms – B4 new bespoke waste operation -**  
**<https://www.gov.uk/government/publications/application-for-an-environmental-permit-part-b4-new-bespoke-waste-operation>**

- 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.**

*Note: the above is for a waste activity, if you exceed the 50 tonnes threshold then this will be to be applied for as an installation activity.*

## **6) Liming**

*Note: Your application advises that you will undertake liming for cake produced only from the AD activity. Should you want to undertake liming for cake that will not be processed by the AD then this would be a separate waste activity that you have not applied for as part of this application.*

## **7) Acceptance of waste to the head of the works (HoW)**

*You have provided table A.3 'Wastes to import under a waste activity permit' for 16 10 02, 19 09 02 and 19 09 06 to be accepted at the HoW. It is our understanding that these codes will not undergo anaerobic digestion and as such this activity is not a DAA to the section 5.4 activity but a separate waste activity. In order to progress this activity you will need to provide all 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 this element of your application:*

- a) **Payment as identified above**
- b) **Non-technical summary, and process flow including how you will keep this activity separate from your installations activity**  
**(<https://www.gov.uk/guidance/waste-environmental-permits>)**
- c) **Assessment against Non-hazardous and inert waste: appropriate measures for permitted facilities**  
**<https://www.gov.uk/guidance/non-hazardous-and-inert-waste-appropriate-measures-for-permitted-facilities>**
- d) **Completion of relevant forms – B4 new bespoke waste operation -**  
**<https://www.gov.uk/government/publications/application-for-an-environmental-permit-part-b4-new-bespoke-waste-operation>**
- e) **Updating and inclusion of this activity in all relevant management plans such as the Odour management plan, accident management plan, residue management plan, site layout plan etc.**

*For existing operations and would look to implement an improvement condition to assess the fate of impact of the substances emitted to water in line with the improvement condition provided previously. The IC would also be in line with the requirements of 'Non-hazardous and inert waste: appropriate measures for permitted facilities' section*

*6.4 <https://www.gov.uk/guidance/non-hazardous-and-inert-waste-appropriate-measures-for-permitted-facilities/6-emissions-control>.*

*For waste not currently imported to the head of works we would require an assessment of the fate and impact of the substances emitted to water and sewer following the Environment Agency's [risk assessment guidance](#), and this would not be able to be captured in any improvement condition implemented.*

**Therefore, please provide:**

- f) Evidence that you are currently accepting the waste codes identified for acceptance to the HoW. (Note: This can be a single waste transfer note demonstrating that this waste stream has been accepted at site.)
- g) If you are not currently accepting the EWC code identified, provide an assessment of the fate and impact on the receiving waters in line with the Environment Agency's risk assessment guidance.

*As the HoW waste activity would be discharged off site to the Wastewater Treatment Works. Effluent discharged to the head of the works is a point source emission to sewer. The 'Non-hazardous and inert waste: appropriate measures for permitted facilities' requires operators to assess the fate and impact of the substances emitted to water and sewer following the Environment Agency's risk assessment guidance. We acknowledge that applicants may not hold this information in order to inform a quantitative risk assessment for existing discharges. For this application provide the following information:*

- h) Provide a summary of the sampling and analysis methodology of the effluent discharged and specify the likely pollutants in the effluent (guidance here Monitoring discharges to water: guidance on selecting a monitoring approach - GOV.UK (www.gov.uk) and Surface water pollution risk assessment for your environmental permit - GOV.UK (www.gov.uk)).
- i) Provide a written statement with a commitment to undertake the sampling and analysis in line with the 'Non-hazardous and inert waste: appropriate measures for permitted facilities'
- j) Provide a written statement with a commitment that those undertaking the sampling and analysis will be by accredited to MCERTs or provide evidence of equivalent standards.
- k) Provide a revised site plan which identifies the effluent sampling point and emission point for the effluent discharge from the head of works activity.

#### 8) Emissions to air

*You are applying to add new combustion plant to your permit. This includes two boilers, and a flare that is potentially operated for over 10%. You will need to provide an assessment of your emissions in line with guidance 'Air emissions risk assessment for your environment permit'*

- a) Provide an assessment of your emission to air in line with guidance 'Air emissions risk assessment for your environment permit'
- b) Provide an updated C2.5 form.
- c) Confirm the MWth rating of the less than 1 MWth boiler.

#### 9) Documents that cannot be located

*We cannot locate the following documents as part of your submission. Please provide copies of the below documents/files. Please note that your application will not be duly made until these have been checked.*

- 790101\_MSD\_DrainagePlan\_GRA
- 790101-MSD-IED-GRA-SIM-M-104
- 790101-MMD-IED-GRA-SIM-M-101 (Tank failure base run)
- 790101-MMD-IED-GRA-SIM-M-102 (Rainfall base run)
- 790101-MMD-IED-GRA-SIM-M-103 (Rainfall included)(Scenario 1)

- 790101-MMD-IED-GRA-SIM-M-104 Option1 (Tank failure base run) Scenario 1
  - 790101-MMD-IED-GRA-SIM-M-105 (Rainfall included) (Scenario 2)
  - 790101-MMD-IED-GRA-SIM-M-106 Option2 (Tank Failure Only) Scenario 2
- Application scope

#### 10) WwTW reference

*You application includes reference and information to the WwTW throughout. You are not applying to permit the WwTW, and this will not form part of your permit boundary.*

**Update your 'Main Supporting Document 790101\_MSD\_Main\_GRA' to reflect the activities you are applying for and remove reference to WwTW which will not form part of this application.**

#### 11) Process flow

*The process flow provided in '790101\_MSD\_Schematics\_GRA' includes the WwTW which does not form part of your applied for process, does not include all assets applied for, and does not include the waste activities.*

**Update your process flow to clearly show which assets will form part of your permit boundary, ensure all activities are included and remove or clearly identify which assets in the process flow are part of the WwTW and not part of this permit application.**

#### 12) Flare operation

*BAT 15 states that "BAT is to use flaring only for safety reasons or for non-routine operating conditions (e.g. start-ups, shutdowns) by using both of the techniques given below. "which are identified as providing the correct plant design which includes the provision of a gas recovery system with sufficient capacity, and plant management which includes balancing the gas system and using advanced process control.*

*You have advised in your application that "This is part of a biogas programme of projects to ensure assets are correctly sized and operate within the requirements. It is accepted that not all BAT requirements are currently met and a plan outlining the measures to be completed to meet BAT will be provided within 6 months of permit issue" This statement does not meet BAT and proposals must be submitted with your application.*

**Provide your solution for compliance with BAT 15.**

#### 13) Secondary containment

*BAT conclusion 19 requires that tanks for liquids must be located in a suitable secondary containment, and that impermeable surfacing must be provided. Under guidance Control and monitor emissions for your environmental permit - GOV.UK (www.gov.uk), you must prevent leaks or accidental release of liquids that could cause pollution from tanks, sumps, containers bunds. You have provided '790101-MMD-IED-GRA-CA-C-001 - P02 IED Gravesend ADBA Tool (Feb 24)'. On initial review of this high level document we cannot clearly identify that this meets BAT.*

- Provide an update secondary containment report and ADBA assessment that clearly identifies the containment solution proposed, the containment volumes,**

**an explanation of how your proposals meet BAT and CIRIA C736. This must be for the assets that you are requesting to be permitted.**

- b) Ensure your permit boundary (and all relevant documents) include your proposed containment solution**

*Note: As a result of our initial review we have identified the following areas of concerns which as a minimum will need to be addressed in any updated report.*

- *You have not considered jetting.*
- *Your preferred solution does not clearly show how volumes have been calculated, or confirm that all tanks have been included.*
- *We cannot identify how you have considered rainfall.*
- *Your solution includes different proposals, proposals that are not to be taken forward should be removed to ensure no confusion*
- *Your containment volume does not reflect your areas proposed*
- *Your solution advises that it is based on the future retention of assets and not what you are applying to permit. Your solution must be based on the assets you are applying to permit.*

*Please note that a failure to clearly address key risks within your application will result in this application being returned.*

#### **14) Activity Capacity**

*Table 6.1 of your main supporting document advises that you are applying for an annual capacity of 277,821m<sup>3</sup> per annum. This volume seems low based on an Anaerobic Digestion capacity of 2,580m<sup>3</sup> and we require further confirmation that this volume is correct. Also your volume must be provided in tones not meters cubed. Provide the following information:*

- a) Total tonnage of indigenous and imported wet tones to be received at the sludge treatment centre per annum.**
- b) Total tonnage per annum to be accepted at the anaerobic digesters**
- c) Digester hydraulic retention time**

#### **15) Waste codes accepted**

*You have provided table 'A.1 Waste imported for anaerobic digestion'. This table includes EWC code 16 10 02 in which you have listed waste types that you intend to accept under this code. (some would not meet the WM3 requirements for 16 10 02). To accept a varied list under 16 10 02 would cause the digester outputs to fall outside of the sludge use in agriculture regulations meaning that your site would be undertaking co-digestion. As such we require further information on the classification of this waste.*

- a) Provide the source of 16 10 02 that you intend to accept for anaerobic digestion.**
- b) Explain why accepting 16 10 02 would not be co-digestion.**
- c) If you are applying for co-digestion, update and re-submit your application to reflect co-digestion.**
- d) If you do not require 16 10 02 for acceptance to the anaerobic digestion process confirm that this code is to be removed.**

*Table A.2 – please note that we do not permit controlled waste regulation codes, as such*

*these will not be included on any permit issued.*

## **16) Odour management plan**

*You odour management plan advises that the site uses carbon filters which does not match other site descriptions.*

**Update all documents to ensure that the Odour control unit reflects the unit operated on site.**

## **17) 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 waste water from the installation could bypass the WwTW treatment processes and be emitted as a direct discharge to water. It is 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 waste water from the installation from bypassing the WwTW treatment processes directly to surface water during storm overflow conditions.*

- 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.**
- 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.**

*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.*

## **18) Site Condition report**

*On review of your site condition report this includes activities in the wider WwTW which do not form part of your permit boundary, and does not include Appendix B. Landmark Envirocheck Report.*

- a) Update your SCR to reflect the permit area and application you are applying for, removing activities that will not be included within your permit.**
- b) Provide 'Appendix B. Landmark Envirocheck Report', and all supporting information identified in section 'supporting information'.**

## **19) Waste acceptance and pre-acceptance**

*You have advised in 'Southern water – Duty of care' that "There are no specific pre acceptance procedures for sludge imports, they are acceptable for importing to any of Southern Water's 16 permitted Sludge Treatment Centres (STCs)". This does not meet the requirements of BAT 2.*

**Provide a waste pre-acceptance and acceptance procedure for imported and**



**indigenous sludge. Guidance on what this should include can be located at <https://www.gov.uk/guidance/biological-waste-treatment-appropriate-measures-for-permitted-facilities>.**

## **20) 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 submission you have identified the monitoring of H<sub>2</sub>S and NH<sub>3</sub>, however 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.**
- 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.**

## **21) Indirect emission to water**

*You have identified indirect emissions to water from:*

- *Condensate from the gas pipelines and gas storage bag*
- *Boiler blow down to minimize damage from high mineral content water*
- *Drain down of plan – (Occurs during maintenance when it is necessary to drain down the feed water, hot well or boiler shell.)*
- *Uncontaminated roof water from buildings.*
- *Run off from impervious surfaces*
- *Domestic facilities.*
- *Washwater*

*This however does not seem to include all emissions such as liquors returning to the head of works. To confirm the WwTW does not form part of your permit boundary, effluent discharged to the head of the works/WwTW is a point source emission to sewer. BAT conclusion 3 requires operators to have an emissions inventory for the effluent. You must identify all emissions and clearly identify where these can be sampled and where they will leave the site boundary. Where you have a separate waste process such as the dewatering of digested sludge you must clearly identify any emission point and keep this separate.*

*The indirect emission to water and sources feeding the sampling point(s) require clarification and updating on relevant site plan before we can duly make your application. Your emission points should be clear, identify the process, identify the emission and sampling location in line with guidance Monitoring discharges to water: guidance on selecting a monitoring approach*

- a) **Update your emission point plan to ensure all that all indirect emissions to water are included, and clearly explain which emission point includes which waste water stream.**
- b) **Include your emission/sampling point for the HoW waste activity and dewatering activity ensuring that these are representative of the discharge.**
- c) **Update table 6.3 of your main permit application to identify all relevant indirect emissions to water, ensuring that it reflects the site plans you have provided.**
- d) **Provide a written statement with a commitment to undertake the sampling and analysis in line with BAT3 for the installation activity and appropriate measures for waste activities.**
- e) **You have identified emission point “Domestic facilities”, domestic facilities will not be regulated as part of this permit and should be removed from your application.**
- f) **You have identified “Condensate from the gas pipelines and gas storage bag”, “Boiler blow down to minimise damage from high mineral content water” and “Runoff from impervious surfaces” however it is not clear where these emissions will be released on site or sampled. Provide separate emission points and sampling point locations for these emissions.**
- g) **You have identified “Uncontaminated roof water from new buildings”. To discharge uncontaminated water, such as clean rainwater from roofs (as explained in groundwater protection position statement G12) or from small areas of hardstanding to surface water you will not require emission limits, however the location on your site plan should be clear so that it can be included in any permit issued. Provide the locations and NGRs for all “Uncontaminated roof water from new buildings” and ensure these emission point are clearly marked on any emission point plan.**
- h) **You have identified “Washwater from the washing down of mechanical equipment during maintenance activities” and “Drain down of plant” as intermittent releases. Confirm where these will be emitted and sampled prior to discharge.**

Please send the information and any outstanding payment, quoting the above application reference, to:

[Sarah.raymond@environment-agency.gov.uk](mailto:Sarah.raymond@environment-agency.gov.uk)

Please send the information within 10 working days of this letter.

If we do not receive the information and payment within 10 working days we will return your application.

If we do receive the requested information and payment within 10 working days, we'll continue to check your application. We'll check to see if there's enough information for the application to be 'duly made'. Duly made means that we have all the information we need to begin determination. Determination is where we assess your application and decide if we can allow what you've asked for.

We'll let you know by letter whether your application can be duly made. If it can't be duly made, we'll return your application to you.

If we do have to return your application we'll send you a partial refund of your application payment. We'll retain 20% of the application charge to cover our costs in reviewing your application and requesting information. This maximum amount we'll retain is capped at £1,500. Further information on charging can be found at:

<https://www.gov.uk/government/publications/environmental-permitting-charging-scheme-2019>

If you have any questions please phone me on 07557 139052 or email [sarah.raymond@environment-agency.gov.uk](mailto:sarah.raymond@environment-agency.gov.uk)

Yours sincerely

**Sarah Raymond**  
**Senior Permitting Officer - Installations**