

Southern Water Bexhill Sludge Treatment Work Permit Application – Response to Environment Agency

Environment Agency reference:	EPR/KP3630KV/V003	Date:	29 August 2024
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Table 1: Response to Environment Agency

Topic of relevancy	Question no.	Question	Response
Payment details	N/A	The correct application charge is £17,250. Following confirmation of the dryer plant, the final charge will be confirmed. (plus the fee for the waste activity identified). This leaves a balance of £1,241 to pay (plus the fee for the waste activity identified if required).	<p>Email from Sarah Raymond dated 09/08/2024, confirms the following:</p> <p>Based on the information provided, the application charge is £21,211. In the original application Southern Water have paid £21,215 so there is no outstanding balance to pay.</p> <p>Application fee</p> <ul style="list-style-type: none"> £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.

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			<ul style="list-style-type: none"> Surrender of dryer plant activity (not including associated land) – 1.17.6 – Minor Technical variation = £3,961. This replaces the payment for a waste activity in the original application. 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 <p>Therefore no further payment is required.</p>
Sludge Drying plant	1	<p>a) Confirm if it is your intention to surrender this activity (not including the land) as part of this permit variation or if you intend to keep this activity.</p> <p>b) Explain using guidance 'Understanding the meaning of regulated facility' (RGN2) (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/964487/LIT_6529.pdf) if this will be a directly associated activity. (DAA) to the section 5.4 anaerobic digestion activity.</p> <p>c) If this is a DAA provide an assessment against BAT, and update all relevant documents, site plans, emission points ect to include the activity.</p> <p>d) If this is not a DAA update all relevant documents and site plans (Odour, BRA, LDAR, waste acceptance, site plans, ect) to include the drying plant waste activity.</p>	<p>Southern Water confirm that it is their intention to surrender the dryer activity from the permit. Therefore, the questions below are not required. However, Form Part E2 has been completed, see doc ref 790101_App_PartE2_HAS August 2024</p>
National Grid references (NGR)	2	<p>Your national grid reference TQ 7665 0940 is outside of your permit boundary.</p> <p>a) Update 'Main Supporting Document 790101_MSD_Main_HAS' and any other relevant documents to include a NGR that is inside your permit boundary.</p>	<p>The National Grid Reference is TQ 76590 09381, and has been amended within the resubmitted documents.</p>
Documents that cannot be located	3	<p>We cannot locate the following documents as part of your submission. Please provide copies of the below documents/files.</p> <p>a) 790101_MSD_DrainagePlan_HAS</p> <p>b) 790101-MMD-IED-HAS-SIM-M-107 Option2(Rainfall Included)</p> <p>c) 790101-MMD-IED-HAS-SIM-M-108 Option2(Tank Failure Only)</p> <p>d) 790101-MMD-IED-HAS-SIM-M-109 Option3(Rainfall Included)</p> <p>e) 790101-MMD-IED-HAS-SIM-M-110 Option3(Tank Failure Only)</p>	<p>790101_MSD_DrainagePlan_HAS – provided with this submission</p> <p>The remaining documents referenced are now superseded by the updated ABDA Tool. Document reference 790101-MMD-IED-BAH-CA-C-001 - IED ADBA Tool P03 IED Risk Register Hastings August 2024.</p>
Application scope	4	<p>Your 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.</p> <p>a) Update your 'Main Supporting Document 790101_MSD_Main_HAS' to reflect the activities you are</p>	<p>Any reference to the WwTW is for context only and is not considered part of the permit. However, the Main Supporting Document has been amended to either remove additional references or identify it as for context.</p>

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		applying for and remove reference to WwTW which will not form part of this application.	
Process flow	5	<p>The process flow provided in '790101_MSD_Schematics_HAS' includes the WwTW which does not form part of your applied for process. It also shows that 'grit/grease removal' from the inlet is transferred to the thickened sludge storage which you have not applied for as part this permit. To accept this grit and grease 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 on whether you intend to undertake co-digestion.</p> <ol style="list-style-type: none"> Explain why accepting grit and grease from the inlet works into the AD process would not be co-digestion. If you are applying for co-digestion, update and re-submit your application to reflect co-digestion. If you do not require grit and grease to be accepted at the thickened sludge storage tanks then remove this from your process flow. Update your process flow to clearly show which assets will form part of your permit boundary, and which assets in the process flow are part of the WwTW. 	<p>The Process Flow Diagram has been updated to show that accepting grit and grease from the inlet works into the AD process is not undertaken, and clarification of the IED boundary and coverage of the Odour Control Unit (document reference 790101_MSD_Schematics_HAS August 2024).</p>
Secondary containment	6	<ol style="list-style-type: none"> Provide an update secondary containment report that clearly identifies the containment solution proposed within the permit boundary, the containment volumes, an explanation of how your proposals meet BAT and CIRIA C736. Update your permit boundary (and all relevant documents) to include your proposed containment solution 	<ol style="list-style-type: none"> <p>The report is provided separately as document reference 790101-MMD-IED-BAH-CA-C-001 - IED ADBA Tool P03 IED Risk Register Hastings August 2024. The previous report doc ref '790101-MMD-IED-HAS-CA-C-001 – IED Risk Register-Bexhill_and_Hastings' is therefore replaced by the above.</p> <p>Section 5 of the report addresses the following aspects, as per the Not Duly Made letter:</p> <ul style="list-style-type: none"> Considered jetting Contain all tanks, Explanation on volumes in regard to CIRIA C736 in relation to the 110%/25% rule Considered rainfall Explanation on how the chosen solution mitigates spillage from sludge storage tanks identified in the area holding the sludge storage tanks Provided further comment on impermeable surfacing Further details on the earth bund on how this will meet CIRIA C736 Addressing that all drainage will be returned to the WwTW, a receptor

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			b) The Site Layout Plan (doc ref 790101_MSD_SiteLayoutPlan_HAS August 2024) has been updated and provided separately in response to the Not Duly Made letter. It includes the containment solution within the permit boundary.
Activity Capacity	7	<p>Please confirm that the annual capacity of 189,944(t) per annum is correct by providing the following information:</p> <p>a) Total tonnage of indigenous and imported wet tonnes to be received at the sludge blending tank.</p> <p>b) Total tonnage per annum to be accepted at the anaerobic digesters</p> <p>c) Digester hydraulic retention time</p>	<p>A visual summary of the Site's throughout quantities in total dry solids (TDS) and wet tonnes is provided separately in doc ref 790101_AnnualThroughput_HAS August 2024.</p> <p>On reflection, the annual throughput provided in the application requires adjusting. The annual capacity is 1,227,082 tonnes (wet).</p> <p>Digester hydraulic retention time varies between 14-17.4 days at the Site. The minimum retention time for the digesters, as an operational standard, is 14 days.</p> <p>The Main Supporting Document Table 6.1 has been updated to reflect the requested annual throughout (document reference 79010_MSD_Main_HAS August 2024).</p>
Waste codes accepted	8	<p>'Wastes imported for Anaerobic Digestion':</p> <p>a) Provide the source of 16 10 02 that you intend to accept for anaerobic digestion.</p> <p>b) Explain why accepting 16 10 02 would not be co-digestion.</p> <p>c) If you are applying for co-digestion, update and re-submit your application to reflect co-digestion.</p> <p>d) If you do not require 16 10 02 for acceptance to the anaerobic digestion process confirm that this code is to be removed.</p> <p>'Wastes received under the Controlled Waste Regulations 2012': please note that we do not permit controlled waste regulation codes, as such these will not be included on any permit issued.</p> <p>e) Confirm your acceptance of the above.</p>	<p>'Wastes imported for Anaerobic Digestion': Southern Water confirm that the code 16 10 02 is to be removed from tables referring to 'Wastes imported for Anaerobic Digestion', as the intention is not for co-digestion at this site.</p> <p>'Wastes received under the Controlled Waste Regulations 2012': Southern Water acknowledge these waste codes will not be included in a permit</p> <p>The Main Supporting Document and Odour Management Plan have been amended and provided separately (doc ref 790101_MSD_Main_HAS August 2024 and 790101_ERA_OdourMP_HAS August 2024 respectively). The latest version removes the applicable 16 10 02, and caveats that controlled waste will not feature on the permit.</p>
Waste water emissions during storm overflow conditions at the WwTW	9	<p>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.</p> <p>b) Provide a description of the buffer storage proposals to control or hold emissions to the event of storm overflow conditions at the WwTW.</p> <p>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</p>	<p>As described in Section 3 of the Main Supporting Document, following the screening process flows in excess of 922 l/s (design maximum flow to full treatment is 1050 l/s) bypass the treatment process and are discharged via the long sea outfall. There is no storm storage on-site, storm storage for Hastings is provided in the catchment. 'Upstream' of the STC are three terminal water pumping stations (WPS) that have storm tanks which store all flows over/above the WPS sites pass forward rate. These then pump to the STC when flows subside.</p> <p>Southern Water will provide a wastewater and digestate buffer storage plan (listed in regard to BAT 4 in the Implementation Plan document reference 790101_MSD_Implementation Plan December 2023). The Plan's purpose is to propose and describe site contingency arrangements to provide appropriate storage capacity or other appropriate measures to prevent or minimise</p>

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			<p>emissions of wastewater or digestate being discharged off site during any occasions when the receiving wastewater treatment works is in storm overflow operating conditions. It is understood the Plan will be required to include, but not be limited to:</p> <ul style="list-style-type: none"> ● Proposals for additional storage capacity with secondary containment within the site boundary for wastewater and/or other digestate during any occasions when the receiving wastewater treatment works is in storm overflow operating conditions. ● Procedures to cease discharges during these conditions. ● Calculation of a reasonable contingency capacity of waste water and/or other digestate during any occasions when the receiving wastewater treatment works is in storm overflow operating conditions. ● A description and design specification of the buffer storage infrastructure and secondary containment measures. The design shall be completed by an appropriately qualified engineer and secondary containment shall be designed in line with CIRIA C736. ● A program of works with timescales for the implementation and construction of the buffer storage. ● A preventative maintenance and inspection regime.
Leak detection and repair	10	<p>Document '90101_MSD_LDAR_HAS January 2024' includes tracked changes.</p> <p>a) Provide an updated version of '790101_MSD_LDAR_HAS January 2024' with tracked changes removed.</p>	<p>790101_MSD_LDAR_HAS January 2024 has been resubmitted without track changes in response to the Not Duly Made letter.</p>
Site Condition Report	11	<p>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.</p> <p>b) Provide 'Appendix B. Landmark Envirocheck Report', and all supporting information identified in section 'supporting information'.</p>	<p>a) The SCR (doc ref 790101_MSD_SCR_HAS August 2024) has been updated to amend reference to activities in the wider WwTW, which do not form part of the permit boundary, and remove any identified exemptions. Reference to the sludge dryer has been amended to reflect this activity is to be surrendered.</p> <p>b) The Landmark Envirocheck Report and any other supporting document has been provided (doc ref 790101_MSD_SCR_HAS_AppB Envirocheck).</p>
Waste acceptance and pre-acceptance	12	<p>Provide a waste pre-acceptance and acceptance procedure for imported and indigenous sludge that meet the requirements of BAT 2.</p>	<p>The waste pre-acceptance and acceptance procedure for imported and indigenous sludge are provided in doc ref 790101_WasteAcceptance_HAS August 2024, and supersedes 790101_MSD_DutyofCare_HAS January 2024.</p>
Standby generator	13	<p>a) For the specified generator explain using the RGN2 DAA test why the generators meets the criteria of a DAA.</p>	<p>Southern Water do not have information available, at present, to confirm whether the generator is a directly associated activity. Therefore, supporting</p>

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		b) If it does not meet the requirements of a DAA remove this from your permit application and amend your site plans to reflect this..	documents within application have been amended to remove reference to the generator.
Emissions to air from OCUs	14	<p>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.</p> <p>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.</p>	<p>Southern Water confirm that characterisation of emissions from the odour control units will be undertaken in line with BAT 3 to demonstrate if TVOC and HCl are present in the waste gas stream.</p> <p>If TVOC and HCl are identified as relevant in the waste gas streams Southern Water will monitor these emission in line with BAT requirements.</p> <p>The Odour Management Plan has been updated Table 8 of the OMP to reflect the above commitments, document reference 790101_ERA_OdourMP_HAS August 2024.</p>
Indirect emissions to water	15	<p>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.</p> <p>b) 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.</p> <p>c) Provide a written statement with a commitment to undertake the sampling and analysis in line with BAT3.</p> <p>d) 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.</p> <p>e) 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.</p> <p>f) 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"</p>	<p>The site layout plan (doc ref 790101_SiteLayoutPlan_HAS August 2024) has been updated to include all indirect emission points for emissions to water and identifies the waste water streams.</p> <p>All emission points to sewer have been reviewed and Table 6.3 in the main supporting document has been updated to reflect the Site Layout Plan (doc ref 790101_MSD_Main_HAS August 2024) and the wastewater streams that drain to the sewer points and where these are monitored.</p> <p>A sampling proposal is provided in a separate document with a written statement to undertake the sampling and analysis in line with BAT3, doc ref 790101_Sampling proposal_HAS August 2024.</p> <p>"Domestic facilities" has been removed from Table 6.3 of the MSD.</p>

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		and ensure these emission points are clearly marked on any emission point plan. g) 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.	
Odour control unit	16	a) Explain how you will meet BAT 34 for the wet scrubber. b) Update your application to either remove emission point A09, or explain how this OCU serves the assets being applied for as part of this permit.	Bexhill has one odour control unit that serves the STC, consisting of a dual wet scrubber. Southern Water do not believe the installed OCU currently meets BAT 34. Southern Water is progressing detailed survey and assessment of the existing OCU to understand the additional measures required to meet BAT 34. Provisionally they believe that to meet the wet scrubbing definition of BAT 34 requires a scrubber in combination with activated carbon adsorption. A09 reference in the Main Supporting Document was an error. The site has one OCU that serves within the STC. The Site Layout Plan and Main Supporting document has been amended to reflect this.
Emissions to air	17	Your '790101_MSD_SiteLayoutPlan_HAS January 2024' does not reflect emission points identified in table 6.3 of your 'Main Supporting Document 90101_MSD_Main_HAS'. Your site plan does not include your existing permitted emission points. a) Update 790101_MSD_SiteLayoutPlan_HAS January 2024' and/or table 6.3 of your 'Main Supporting Document 790101_MSD_Main_HAS' to reflect the emission points that you are applying for.	As the dryer is surrendered, the previous emission points in the permit EPR/KP3630KV issued in 2010 are no longer valid and it is requested these are removed from the permit. Table 6.3 of the 790101_MSD_SiteLayoutPlan_HAS August 2024 has been updated to reflect the references and National Grid References in the site layout plan (790101_MSD_SiteLayoutPlan_HAS August 2024)
Other amendments and comments			
		OCUs	The Odour Management Plan 790101_ERA_OdourMP_HAS August 2024 has been updated to clarify there is one OCU serving the STC only.
		Firewater	The Environmental Risk Assessment has been updated to address firewater management, in the Risk Assessment Table. (Document reference 790101_ERA_HAS August 2024)
		Pressure Relief Valves	Pressure relief valves are subject to an existing maintenance routine but enhancements are required to fully meet BAT 14. Discussions are ongoing with Southern Water's specialist advisor with respect to implementation of periodic recertification for leak rates. Limit switches are not considered the preferred solution at this stage. A pilot scheme is underway to understand the efficacy of a pressure monitoring approach with respect to SCADA logging and ensuring the correct identification of emissions, particularly regarding duration. The outcome of this

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			pilot will inform the solution to be implemented at all sites to ensure compliance. Southern Water accept this may be subject to an improvement condition, as per the Aylesford EPR/DP3998HH/V007 Sch 5 notice Aug 2025.
Document	Related questions	Document Reference	Edited sections
Surrender application form	Question 1	790101_App_PartE2_HAS August 2024	New document
Site Condition Report	Question 1 Question 2 Question 11	790101_MSD_SCR_HAS August 2024	<ul style="list-style-type: none"> ● Site NGR amended ● Clarification on the scope of the SCR is amended throughout ● Section 'Permitted activities' refers to the surrender
Main Supporting Document	Question 2 Question 4 Question 7 Question 8 Question 13 Question 15 Question 16 Question 17	790101_MSD_Main_HAS August 2024	<ul style="list-style-type: none"> ● Section 1.1, Section 2, and Section 5.1 refers to the surrender of the sludge dryer ● Section 1.1 includes amended NGR ● Reference to generator is removed ● Table 1.3 amended to reflect changes in documents ● Section 3 is updated to further explain the catchment availability for storm conditions. ● Annual throughput and indigenous and imported quantities stated in Table 6.1, Section 6.1 and Appendix A. ● Table 6.2 amended to reflect the air emissions align with the Site Layout Plan ● Table 6.3 emissions to sewer are updated ● Waste codes updated as per Question 8 response, as shown in Appendix A
Air quality dispersion model report	Question 2 Question 13	790101_AQRA_HAS August 2024	<ul style="list-style-type: none"> ● Site NGR amended ● Caveat added to Section 1.2 that generator is for context only.
Environmental Risk Assessment	Question 2	790101_ERA_HAS August 2024	<ul style="list-style-type: none"> ● Site NGR amended ● Page 28 amended to include management of firewater
Accident Management Plan	Question 2	790101_MSD_AMP_HAS August 2024	Site NGR amended
Drainage Plan	Question 3	790101_MSD_DrainagePlan_HAS	Not applicable
Odour Management Plan	Question 4 Question 7 Question 8 Question 13	790101_ERA_OdourMP_HAS August 2024	<ul style="list-style-type: none"> ● Section 1.3, site NGR is amended ● Figure 1 updated to the latest site layout plan ● Section 2.1, reference to the sludge dryer is removed

Document	Related questions	Document Reference	Edited sections
	Question 14		<ul style="list-style-type: none"> Section 2.2, Table 1 and Section 4.1 amended to reflect only one odour control unit Reference to generators are removed Table 8 includes hydrogen chloride and TVOC as parameters Appendix B process flow has been updated Waste codes updated as per Question 8 response, as shown in Appendix C
Schematics	Question 5	790101_MSD_Schematics_HAS August 2024	Updated to show that accepting grit and grease from the inlet works into the AD process is not undertaken, and clarification of the IED boundary and coverage of the Odour Control Unit
IED Risk Assessment, Secondary containment report	Question 6	790101-MMD-IED-BAH-CA-C-001 - IED ADBA Tool P03 IED Risk Register Hastings August 2024	<p>Supersedes:</p> <ul style="list-style-type: none"> 790101-MMD-IED-HAS-CA-C-001 – IED Risk Register-Bexhill_and_Hastings 790101-MMD-IED-HAS -SIM-M-101 DoNothing(Rainfall Included) 790101-MMD-IED-HAS -SIM-M-102 DoNothing(Tank Failure Only) 790101-MMD-IED-HAS -SIM-M-103 Option1(Rainfall Included) 790101-MMD-IED-HAS-SIM-M-104 Option1(Tank Failure Only) 790101-MMD-IED-HAS-SIM-M-105 Option1A(Rainfall Included) 790101-MMD-IED-HAS-SIM-M-106 Option1A(Tank Failure Only) 790101-MMD-IED-HAS-SIM-M-107 Option2(Rainfall Included) 790101-MMD-IED-HAS-SIM-M-108 Option2(Tank Failure Only) 790101-MMD-IED-HAS-SIM-M-109 Option3(Rainfall Included) 790101-MMD-IED-HAS-SIM-M-110 Option3(Tank Failure Only)
Site Layout Plan	Question 6 Question 13 Question 15 Question 16 Question 17	790101_MSD_SiteLayoutPlan_HAS August 2024	<ul style="list-style-type: none"> Includes the containment solution within the permit boundary. Added sewer emission points, and monitoring points. Reference to generators are removed
Annual throughput	Question 7	790101_AnnualThroughput_HAS August 2024	New document
Leak Detection and Repair Plan	Question 10	790101_MSD_LDAR_HAS January 2024	Track changes removed
Envirocheck Report	Question 11	790101_MSD_SCR_HAS_AppB_Envirocheck	New document
Waste pre-acceptance and acceptance for imported and indigenous sludge	Question 12	790101_WasteAcceptance_HAS August 2024	Supersedes 790101_MSD_DutyofCare_HAS January 2024

Document	Related questions	Document Reference	Edited sections
Sampling proposal	Question 15	790101_Sampling proposal_HAS August 2024	New document