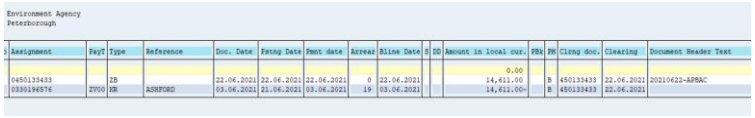
MOTT MACDONALD

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

Environment Agency reference:	**EPR/BP3296SB/V004**	**Date:**	**6th December 2024**
Prepared by:	Lucia McDermott	Checked by:	Claire Cowdrey
Approved by:	Anita Mamms	Document reference:	790101_NDM Response_ASH_ December 2024

Table 1: Response to Environment Agency

Topic of relevancy	**Question no.**	**Question**	Response
Payment details	N/A	Unfortunately the application payment you sent is incorrect. The correct application charge may be as follows but will be subject to confirmation of the activities being applied for. We have currently calculated this as £28,348. This leaves a potential balance of £28,348 as we cannot locate any payment against this application. Please confirm this fee prior to payment and submission of the information provided below. Application fee • £12,586 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.	In the original application Southern Water have paid £14,611 on 25th June 2021 (remittance no: 450133433) – a snippet is below (a copy is included as 790101_Payment 2021_ASH.  Environment Agency Peterborough We believe the correct application fee based on below is £23,590.40. Our records show that Southern Water have paid for Application fee

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		• £1,398.4 – 10% application fee for the liquor treatment plant activity (Note; please confirm treatment type and correct payment). • Application fee for the variation of the head of works activity – 1.16.12 - £2,379 • Application fee for the physical treatment of non-hazardous waste relating to temporary storage of cake and other wastes (Grit screenings) – 1.16.12 - £3,965 • Application fee for the dewatering activity – 1.16.12 - £793 • Potential surrender of dryer plant - £3,961 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 (BRA) – a fixed charge of £1,241	• £12,586 application fee for - (1.16.2.1) 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 • Odour management plan – a fixed charge of £1,246 • Habitats assessment – a fixed charge of £779 Based on the above and confirmation from Sarah Raymond on 29/11/2024 the remaining amount of £8,979.40 will be paid into acct# 10014411, sort code 607080. The payment will be in the Environment Agency's account by 10th December 2024. Payment ref is PSCAPPSOUTH004. • £1,398.40 – (1.16.2.1) S.5.4 A1 (b)(i) non-hazardous waste installation relating to the biological liquor treatment plant @10% • £2,379 – (1.16.12) Variation fee for the physical treatment of non-hazardous waste relating to the waste import to the head of the works • £3,961 – Surrender of dryer activity under EPR/BP3296SB • £1,241 – Emission Management Plan • SWS has confirmed they do not require temporary storage of cake or other wastes (grit and screenings). • SWS has confirmed there is no acceptance of wastes to the head of works.
Application scope	1	*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_FOR' to reflect the activities you are applying for and remove reference to WwTW which will not form part of this application.	This has been completed to reflect all activities being applied for and to remove references to the WTW, which do not form part of this application. Some references to the WTW have been left in to provide context.
Site Layout Plan	2	You have provided '790101_SiteLayoutPlan_ASH December 2023' on review of the permit boundary this does not include your current permitted boundary. Update and resubmit '790101_SiteLayoutPlan_ASH December 2023' to include your full permit boundary. Please note you will need to ensure that all documents that include this site plan are also updated, or remove it and reference the updated plan.	790101_SiteLayoutPlan_ASH December 2024' to include your full permit boundary. The site layout plan has been removed from the OMP but does refer to the updated plan.

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National Grid references (NGR)	3	Your national grid reference TR 0213 4330 is outside of your permit boundary. Update 'Main Supporting Document 790101_MSD_Main_ASH' and any other relevant documents to include a NGR that is inside your permit boundary.	National Grid Reference: approx. to centre of site TR 02107 43407. All relevant documents have been updated to include this updated NGR.
Sludge Drying plant	4	You have advised within your application that "The sludge drying plant and digested sludge import facility on-site have been mothballed" and state that "The variation application is to modernise the conditions of the existing physical treatment activity (A16) as authorised under the permit reference EPR/BP3296SB, where required, and to add the scheduled activity for Anaerobic Digestion to the same permit". On initial review of your application you have not included emission points within your emission point plan, you have not demonstrated how this activity will interact with your existing permitted processes. 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. b) Explain using guidance 'Understanding the meaning of regulated facility' (RGN2) Regulatory Guidance Note No. 2 Understanding the meaning of regulated facility - Appendices 1 and 2 c) If this is a DAA provide an assessment against BAT, and update all relevant documents, site plans, emission points etc to include the activity. d) If this is not a DAA update all relevant documents and site plans (Odour, BRA, LDAR, waste acceptance, site plans, etc to include the drying plant waste activity).	Southern Water confirm that it is their intention to surrender the dryer activity from the permit. Therefore, the questions below are not required and no further response is required for this query. Form Part E2 has been completed, see doc ref 790101_APP_PartE2_ASH November 2024, and submitted as part of this response and associated payment has been made (see response to 'payment details' query).
Combined heat and power MWth input	5	Table 1.1: Combustion Plant Details of document '790101_MSD_Main_ASH December 2023' provides the MWth output and not input. Update table 1.1 and re-submit document '790101_MSD_Main_ASH December 2023' to include the MWth input.	The MWth rating is confirmed as 0.94MWth. The boiler was installed in 1998 The MSD (790101_MSD_Main_ASH December 2024) has been updated to include this.
Liquor Treatment Plant	6	You have identified a Sequencing Batch Reactor for treatment of liquor within your application, but not provided information on how this operates, what equipment is included, treatment capacity etc. If this plant treats over 50 tonnes per day it could be an section 5.4	The SBR has been replaced by the AMTREAT® LTP. The LTP description below has been included in the MSD (790101_MSD_Main_ASH December 2024)

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		installation activity. We do not have enough information to be able to assess this as part of your application. a) Update your main supporting document to include a non-technical summary of how the Sequencing Batch Reactor for treatment is operated, what it includes, expected throughput, will be an installation. b) Provide a BAT assessment if it meets the requirements of an installation activity, and ensure that it is included in all relevant plans and documents. c) Pay the relevant fee as identified above.	The ACWA Amtreat® sludge liquor treatment plant, was installed in 2008. The LTP replaced an existing sequential batch reactor (SBR) plant. The plant is an above ground installation using glass coated steel process tanks. The tanks are accessed via stairs and associated walkways. It is designed to treat liquors from the following source arising from the sludge treatment process: • Dewatering centrate • Thickener liquors • Centrifuge and thickener wash down • Cake storage area The LTP is designed to treat the flows and loads arising from the number of different processes within the STC. The LTP consists of the following process units: • 1 No. Balance tank with mixing system (2,800m^3) - covered • 1 No. Liquor blending tube for 'hot' and 'cold' liquors Amtreat liquor plant includes: • 2 No. Anoxic tanks for denitrification (140m^3 each) – covered • 2 No. Amtreat reactors for nitrification (1,275m^3 each) – covered • 2 No. Stilling tubes • 2 No. Final settlement tanks for solids removal (230m^3 each) • Associated pumps, air blowers, and instrumentation • 1 No. Sodium hydroxide storage and dosing system (40m3) covered in a concrete bund. The LTP is configured for nitrification, partial denitrification and alkalinity recovery. The plant includes an internal nitrate recycle and RAS recycle to optimise denitrification and alkalinity recovery, which in turn minimises the sodium hydroxide dosing. The LTP is located adjacent to the STC. Treated effluent is discharged to the adjacent Ashford WtW, with solids drawn from the tanks regularly. RAS is returned back to the anoxic tanks and SAS is directed to the head of the works for further. Throughput of the LTP ~1200 wet tonnes/day
Air quality impact assessment	7	The letter from the Environment Agency does not contain any information under the title of 'Air Quality Impact Assessment'.	Sarah Raymond confirmed that this was to be ignored.

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Flare operation	8	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: a) Provide your solution for compliance with BAT 15. b) Explain if your current flare is monitored and how many hours on average it is operating. c) If it is operating over then update your air quality impact assessment to include the flare.	The available data shows the flare is used for 9.5% of the time (from measured run hours). The planned replacement of the CHP engine will be sized to ensure the flare is operated for maintenance and emergency situations only (once the work is completed). The flare has been tested and the emissions are compliant. The flare is not planned for replacement. Additional work is required to ensure all BAT requirements are covered (e.g. access platforms for testing, the required testing is fully adopted into BAU and related processes). The collation and use of flare use data forms part of wider data collation and reporting (IT) system improvements planned to meet BAT 2c for inventory, BAT 11 energy and has an influence on BATs 15b, 16b and 21c for incident reporting (re. PVRVs and gas system management). Further information is being collated in line with discussions with the SSD LIA (KS) on 3/12/24 and will be provided in due course (regarding asset replacement plans and timescales). The current flare is monitored for runtime on SCADA. Southern Water confirm that the flare does not operate over the 10% allowance for downtime and maintenance, therefore, the AQRA does not require updating.
Open tanks	9	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.	All tank volumes have been provided in the ADBA tool, previously only the above ground volumes were shown. All relevant volumes have now been included, along with whether they are open or closed. This is also replicated in a table below this response. Only the Final Settlement tanks (FST) (as part of the LTP) that are open; all tanks are enclosed. The odour management plan (790101_ERA_OdourMP_ASH December 2024.) has been updated to reflect this. All documents have been updated to ensure that tanks are consistently named and have the same volumes throughout. Below this table is an additional table which has been provided to confirm the tank volumes. The MSD and OMP have also been amended accordingly.

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		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.	We confirm that if digestate is still biologically active and combustible biogas is produced we will take steps to collect the biogas and direct this to our gas collection system in line with BAT 14. Also for open tanks that do not produce an explosive environment but have been determined to require abatement for other purposes we will enclose, collect and direct the waste gas emissions to an appropriate abatement system in line with BAT 14 and 34.
Process flow	10	The process flow provided in '790101_MSD_Schematics_ASH 25062021.pdf' includes the WwTW which does not form part of your applied for activity, references 'new processes', does not include the waste activities that you have applied for, and includes tanks such as the TSST that are not referenced within your main document. For new processes these must be BAT from the point of permit issue. a) Update and resubmit 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, ensuring that it includes all processes that you have applied for with tanks names being consistent with your main supporting document. b) Confirm when the processes that you have identified as 'new' were implemented, if these are new update your application to demonstrate how they will meet BAT from point of permit issue.	Updated process flow diagram is provided as 790101_MSD_Schematics_ASH December 2024 References to 'new' have been removed as the date on the original PFD used pre-dated 2018.
Form C2.5	11	We cannot locate form C2.5 and you have applied to add medium combustion plant to your site. Guidance on how to complete this form can be found here: Application for an environmental permit: part C2.5 vary to add MCP or SG or change an existing MCP or SG permit - GOV.UK. Provide a completed C2.5 form.	Form C2.5 is provided as 790101_APP_FormC2.5_ASH December 2024 And associated combustion data on 790101_CombustionPlant_ASH_December 2024
Site Condition report (SCR)	12	On review of your site condition report this includes activities in the wider WwTW which do not form part of your permit boundary or the	The SCR (doc ref 790101_MSD_SCR_ASH December 2024) has been updated to amend reference to activities in the wider WtW, which do not form part of the permit boundary, and remove any identified exemptions. Reference

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		activities you have applied for. We can also not located 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, or clearly identifying activities that that are not part of the permit being applied for. b) Provide 'Appendix B. Landmark Envirocheck Report', and all supporting information identified in section 'supporting information'.	to the sludge dryer has been amended to reflect this activity is to be surrendered. The Landmark Envirocheck Report ad any other supporting document has been provided (doc ref 790101_MSD_SCR_ASH_AppB Envirocheck).
Missing documents	13	On review of your application we cannot locate the following documents. (Note your application will not be duly made until these have been checked) • 790101_MSD_DrainagePlan_ASH • 790101_MSD_Directors_ASH December 2023 • 790101-MMD-IED-ASH-CA-C-001 –IED Risk Register Ashford • 790101-MMD-IED-ASH-SIM-M-101 Do Nothing (Rainfall Included) • 790101-MMD-IED-ASH-SIM-M-102 Do Nothing (Tank Failure Only) • 790101-MMD-IED-ASH-SIM-M-103 Option1(Rainfall Included) • 790101-MMD-IED-ASH-SIM-M-104 Option1(Tank Failure Only) • 790101-MMD-IED-ASH-SIM-M-105 Option2(Rainfall Included) • 790101-MMD-IED-ASH-SIM-M-106 Option2(Tank Failure Only) Provide a copy of the above re-submitted/updated documents.	Drainage plan is provided as 790101_DRAINAGE PLAN_ASH July 2021 Directors will be sent as a separate email from Southern Water The updated ADBA Tool (790101-MMD-IED-ASH-CA-C-001 P03 December 2024) supersedes the previously submitted model files.
Odour Control unit	14	You have identified that your OCU is a 'wet scrubber'. BAT 34 requires that "Water, acid or alkaline scrubbers are used in combination with a biofilter, thermal oxidation or adsorption on activated carbon." Explain how you will meet BAT 34 for the wet scrubber.	Southern Water is progressing detailed survey and assessment of the existing OCUs to understand any additional measures that may be required to meet BAT 34 and 53.

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Emissions to air from odour control unit	15	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 H2S and NH3, however we can see no mention of parameters for the 'Treatment of water-based liquid waste' (TVOC and HCI), or evidence that TVOC and HCI 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 HCI are present in the waste gas stream. b) Confirm that if TVOC and HCI are identified as relevant in the waste gas streams that you will monitor these emission in line with BAT requirements.	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 HCI are present in the waste gas stream. If TVOC and HCI are identified as relevant in the waste gas streams Southern Water will monitor these emissions in line with BAT requirements. The Odour Management Plan has been updated Table 8 of the OMP to reflect the above commitments, document reference 790101_ERA_OdourMP_ASH December 2024.
Secondary containment	16	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, you must prevent leaks or accidental release of liquids that could cause pollution from tanks, sumps, containers bunds. You have provided '790101_MSD_ContainmentPlan_ASH December 2023' with no written explanation, and '790101_MSD_PermeabilityPlan_ASH December 2023'. We cannot locate your secondary containment solution within your application. Provide an update secondary containment report that clearly identifies the containment solution proposed, the containment volumes, an explanation of how your proposals meet BAT and CIRIA C736.	The ADBA tool has been reviewed and has been amended. The ADBA tool is provided as 790101-MMD-IED-ASH-CA-C-001 P03 December 2024. This is to supersede both 790101_MSD_ContainmentPlan_ASH December 2023' and '790101_MSD_PermeabilityPlan_ASH December 2023, which were produced from feedback received for the T1 sites. All tank volumes have been provided in the ADBA tool, previously only the above ground volumes were shown. All relevant volumes have now been included, along with whether they are open or closed. This is also replicated in a table below this response. All documents have been updated to ensure that tanks are consistently named and have the same volumes throughout. Below this table is an additional table which has been provided to confirm the tank volumes. The

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		Please note that a failure to clearly address this key risk will result in this application being returned.	790101_MSD_Main_ASH December 2024 and 790101_ERA_OdourMP_ASH December 2024 have also been amended accordingly. The Environmental Risk Assessment (790101_ERA_ASH December 2024) Appendix B has also been updated to include the management of firewater. Updated site layout plan is submitted as 790101_MSD_SiteLayoutPlan_ASH December 2024
Anaerobic digestion activity capacity	17	Table 6.1 of your main supporting document advises that you are applying for an annual capacity of 297,031m3 per annum, or 700m3 per day for the AD. This volume seems low in relation to the dewatering process and we require further confirmation that this volume is correct. Also, your volume must be provided in tonnes not meters cubed. Provide the following information: a) Total tonnage of indigenous and imported wet tonnes to be received at the sludge treatment centre. b) Total tonnage per annum to be accepted at the anaerobic digesters. c) Digester hydraulic retention time.	This has been added into the 790101_MSD_Main ASH December 2024. a) Total tonnage of indigenous and imported wet tones to be received at the sludge treatment centre per annum. 608,034 wet tonnes b) Total tonnage per annum to be accepted at the anaerobic digesters is 261,211 wet tonnes c) Digester hydraulic retention time minimum standard is 14 days – average measured for the site is 17.4days.
Waste codes accepted	18	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. e) Confirm your acceptance of the above.	'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. 'Wastes received under the Controlled Waste Regulations 2012': Southern Water acknowledge these waste codes will not be included in a permit . The Main Supporting Document and Odour Management Plan have been amended and provided separately (doc ref 790101_MSD_Main_ASH December 2024 and 790101_ERA_OdourMP_ASH December 2024 respectively). The latest version removes the applicable 16 10 02, and caveats that controlled waste will not feature on the permit.
Import of grit and	19	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	

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screenings from sewer cleaning and the temporary storage of digested sludge cake		skips on-site, and 19 02 06 for raw/digested cake import. (Note: 19 06 06 is digested, 19 02 06 is raw). 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	Southern Water confirm that Ashford STC does not accept the import of grit and screenings into the Site. Therefore, no further response is required for this query. Southern Water confirm that Ashford STC does not accept digested cake for temporary storage. Therefore, no further response is required for this query.
Dewatering activity	20	You have identified EWC code 19 06 06 which you have stated is accepted for 'inter site 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 'Using waste codes for sludge materials: RPS 231 - GOV.UK'. 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.	Southern Water confirm that Ashford STC does not accept digestate for dewatering into the Site. Therefore, no further response is required for this query.

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		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	
Waste water emissions during storm overflow conditions at the WwTW.	21	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.*	The returns from the STC process enter the WTW process either via the liquor treatment plant which discharges to the inlet channel downstream of the storm overflow/storm control penstock, or via the works return which discharges to the PST distribution chamber which is also downstream of the storm overflow. The returns from the STC cannot enter the WTW process upstream of the storm overflow point so they cannot be discharged from site via that route. The site will treat incoming crude up to PFR plus the returns from the STC process and returns from the WTW processes. 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 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: • 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.

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			• 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.
Waste acceptance and pre-acceptance	22	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 Biological waste treatment: appropriate measures for permitted facilities - 1. When appropriate measures apply - Guidance - GOV.UK.	The waste acceptance and pre-acceptance procedure is provided as 790101_WasteAcceptance_ASH December 2024.
Indirect emission to water	23	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 plant • Uncontaminated roof water from buildings. • Run off from impervious surfaces • Domestic facilities (note this would not be permitted as part of the installation) • 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. a) Update Table 6.3 in '709101_MSD_Main_CAN' to include all emissions.	The site layout plan 790101_MSD_SiteLayoutPlan_ASH December 2024 has been updated to include the following:

Topic of relevancy	Question no.	Question	Response
		b) 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. c) Provide a written statement with a commitment to undertake the sampling and analysis in line with BAT 3.	
Existing head of works activity	24	You have provided table A.3 'wastes to import under a waste activity'. This includes new EWC codes in the form of 16 10 02 and 19 09 06. For existing wastes we would consider these wastes as existing operations and would look to implement an improvement condition to assess the fate of impact of the substances emitted to water. The IC would also be in line with the requirements of ''Non-hazardous and inert waste: appropriate measures for permitted facilities - Guidance - GOV.UK' section 6.4. 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: a) Evidence that you are currently accepting 16 10 02 and 19 09 06. (Note: This can be a single waste transfer note demonstrating that this waste stream has been accepted at site.) b) 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. c) Confirm the EWC codes to be accepted at the head of works and the total volume to be accepted per year.	Evidence that Southern Water currently accepts 16 10 02 into the Head of he Works as an existing activity is provided in 790101_WasteTransferNotes_ASH December 2024. Southern Water do not accept 19 09 06 into Ashford. The total volume to be accepted under this activity is 150,000 wet tonnes/annum. The MSD has been updated to reflect these changes as 790101_MSD_Main ASH December 2024.
Head of works In-direct emission point	25	The head of works waste activity is 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	Document reference 790101_Sampling proposal_ASH December 2024 is provided to address the following, in relation to the request for import at post digestion (activity requested via the Part B4 form): a) Summary of the sampling and analysis methodology of the effluent discharged and specify the likely pollutants in the effluent. b) 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.

Topic of relevancy	Question no.	Question	Response
		existing discharges. For this application provide the following information: a) 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 - Surface water pollution risk assessment for your environmental permit - GOV.UK. b) 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'. c) 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. d) Provide a revised site plan which identifies the effluent sampling point and emission point for the effluent discharge from the head of works activity.	c) Written statement with a commitment that those undertaking the sampling and analysis will be by accredited to MCERTs or provide evidence of equivalent standards. d) The Site Layout Plan (document reference 790101_MSD_SiteLayoutPlan_ASH December 2024) has been updated to indicate the monitoring locations.

Adopted Name (for all docs)	Volume (m3)	Volume Above Ground	Tank Covered	Bund
Anaerobic Digester 1	2880	Full volume above ground	Covered	Main
Anaerobic Digester 2	1550	Full volume above ground	Covered	Main
Anaerobic Digester 3	1550	Full volume above ground	Covered	Main
Anaerobic Digester 4	4119	Full volume above ground	Covered	Main
Post screened sludge tank 1	1300	Full volume above ground	Covered	Main
Post screened sludge tank 2	1300	Full volume above ground	Covered	Main

Post digested sludge tank 1	766	Full volume above ground	Covered	Main
Post digested sludge tank 2	766	Full volume above ground	Covered	Main
Thickened sludge storage tank 1	420	Full volume above ground	Covered	Main
Thickened sludge storage tank 2	1500	Full volume above ground	Covered	Main
Sludge reception tank 1	100	Full volume above ground	Covered	Main
Sludge reception tank 2	100	Full volume above ground	Covered	Main
Sludge reception tank 3	100	Full volume above ground	Covered	Main
Cake Blending Tank	50	Full volume above ground	Covered	Main
Liquor Balance Tank	2800	Full volume above ground	Covered	Liquor Treatment
Anoxic Tank 1	140	Full volume above ground	Covered	Liquor Treatment
Anoxic Tank 2	140	Full volume above ground	Covered	Liquor Treatment
Amtreat Reactor 1	1275	Full volume above ground	Covered	Liquor Treatment
Amtreat Reactor 2	1275	Full volume above ground	Covered	Liquor Treatment
Final Settlement Tank 1	230	Full volume above ground	Not Covered	Liquor Treatment
Final Settlement Tank 2	230	Full volume above ground	Not Covered	Liquor Treatment