

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

Environment Agency reference:	EPR/EP3305MZ/A001 (file reference Application bespoke Rfl and payment letter 07062024.pdf)	Date:	21 June 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 (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>The stated £13,984 in the Not Duly Made letter is in reference to 2024 Charging Scheme charging reference for S5.4 1) (b) (i) activity for a new activity.</p> <p>Southern Water acknowledge that the Emissions Management Plan fee is to be paid.</p> <p>The difference is therefore:</p> <p>Fee paid in 2021 (£13,984 + £1,246 + £779) = £16,009</p> <p>Revised application fee (£13,984 + £1,246 + £1,241 + £779) = £17,250</p> <p>Plus the fee for the waste activity = £3,965 (50% of charge reference 1.16.12)</p> <p>Remaining fee of £1,241 + £3,965= £5,206 will be paid via BACS, details to be provided by the week commencing 01 July 2024.</p>

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Form C2.5	1	Provide a completed C2.5 form.	As agreed with Sarah Raymond on 20 June 2024, the form is to be provided, if required, by 4 July 2024, once confirmation on whether the five generators are Directly Associated Activities (DAAs) or not is provided.
Site Condition Report	2	<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>c) Confirm that you will not operate exemptions on site once the permit is issued.</p>	<p>a) The SCR (doc ref 790101_MSD_SCR_SAN June 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.</p> <p>b) The Landmark Envirocheck Report and any other supporting document has been provided (doc ref 790101_MSD_SCR_SAN_AppB_Envirocheck).</p> <p>c) Southern Water confirm that they will not operate exemptions within the permit boundary once the permit is issued.</p>
Emission points to air	3	Provide the correct NGR for the flare	The NGR for the flare is SZ 60331 85398 and updated Table 6.2 in the main supporting document (doc ref 790101_MSD_Main_SAN June 2024) and site layout plan doc ref 790101_SiteLayoutPlan_SAN June 2024. We have cross-referenced other NGRs and confirm these are correct.
Emission to water	4	Provide the correct NGRs for all point source emissions to sewer	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_SAN June 2024).
Site layout plan	5	<p>a) Provide a full list of all emission points for all indirect emissions to water and point source emissions to air.</p> <p>b) Provide a site layout plan that includes all emission points</p>	<p>a) A full list of emission points is provided in Table 6.2 and Table 6.3 of the main supporting document (doc ref 790101_MSD_Main_SAN June 2024).</p> <p>b) The site layout plan has been updated to include all emission points (doc ref 790101_SiteLayoutPlan_SAN June 2024).</p>
Missing documents	6	<p>Provide a copy of</p> <ul style="list-style-type: none"> 790101-MMD-IED-SAN-CA-C-001 – IED Risk Register-Sandown, and 790101_MSD_DrainagePlan_SAN 	<p>790101-MMD-IED-SAN-CA-C-001 – IED Risk Register Sandown June 2024 has been superseded by 790101-MMD-IED-SAN-CA-C-001 - P02 IED Risk Register Sandown June 2024 (see Question no 9).</p> <p>790101_MSD_DrainagePlan_SAN (provided previously to Justin Orme on 28/09/2021 - drawing no IWJS-148445 rev 2 dated 28/08/21).</p>
Acceptance of waste to the head of the works	7	Remove the reference to chemical toilet waste from your application and all relevant documents. (i.e. Non-Technical Summary, Odour Management plan etc.)	<p>Southern Water are wishing to apply for a waste activity to discharge to the head of the works, therefore, a Part B4 form has been provided (document reference 790101_App_PartB4_SAN June 2024).</p> <p>The wastes to be discharged to the head of the works are cess, chemical toilet waste and portable shower waste, under the EWC code 16 10 02. This activity has been undertaken by Southern Water previously, under a T21 exemption.</p> <p>The main supporting document has been amended to include sub headings for B4 waste operations to differentiate this activity to the scheduled activity for anaerobic digestion (document reference 790101_MSD_Main_SAN June 2024).</p> <p>No other supporting documents have been amended, as this activity is addressed accordingly.</p>

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Odour control unit and the use of dispersion stacks	8	<p>a) Confirm the point source emission point for the above release.</p> <p>b) Explain how this emission point meets the requirements of BAT 34 and 53.</p> <p>c) If the emission point does not meet the requirements of BAT 34 and BAT 53 explain what measures you will take to meet BAT by confirming the OCU type that will be implemented to meet BAT.</p>	<p>a) The emission point for the OCU stack is listed as A09 - Odour Control Unit (NGR SZ 60241 85226) in the Site Layout Plan (doc ref 790101_SiteLayoutPlan_SAN June 2024).</p> <p>b) Sandown has a single odour control unit, consisting of an acid scrubber followed by an alkaline scrubber. A carbon filter is installed for polishing, but this has not been in use for a number of years. Given that BAT 34 requires scrubbers to be used in combination with activated carbon adsorption, we do not believe the installed OCU meets BAT 34.</p> <p>c) Southern Water will assess the existing OCU and decommissioned carbon filter with a view to bringing it back into working operation, or implementing measures to ensure carbon adsorption is in place. We believe that the OCU will then meet the wet scrubbing definition of BAT 34 e) (being an acid and alkaline scrubber in combination with activated carbon adsorption).</p>
Secondary containment	9	<p>a) 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.</p> <p>b) Update your permit boundary (and all relevant documents) to include your proposed containment solution</p>	<p>a) The report is provided separately as document reference 790101-MMD-IED-SAN-CA-C-001 - P02 IED Risk Register Sandown June 2024. The previous report doc ref 'IED-Sandown STC Containment Solution Overview (Dec 23)' is therefore replaced by the above. 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 <p>b) The Site Layout Plan (doc ref 790101_MSD_SiteLayoutPlan_SAN June 2024) has been updated and provided separately in response to the Not Duly Made letter. It includes the containment solution within the permit boundary.</p>
Activity Capacity	10	Please confirm that the annual capacity of 189,944(t) per annum is correct by providing the following information:	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_SAN June 2024.

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		<p>a) Total tonnage of indigenous and imported wet tones to be received at the sludge blending tank.</p> <p>b) Digester hydraulic retention time</p>	<p>On reflection, the annual throughput provided in the application requires adjusting. The annual capacity is 211,067 tonnes (wet).</p> <p>Digester hydraulic retention time varies between 20-35 days at the Site. The minimum retention time for the digesters, as an operational standard, is 14 days.</p> <p>The Main Supporting Document has been updated to reflect the requested annual throughout (document reference 79010_MSD_Main_SAN June 2024).</p>
Waste codes accepted	11	<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 to import under a waste activity permit': It is understood that waste identified in table 'A.3 Wastes to import under a waste activity permit' 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.</p> <p>f) Payment (note this will be dependent on the volume and activities being carried out)</p> <p>g) Non-technical summary, and process flow including how you will keep this activity separate from your installations activity</p> <p>h) Assessment against Non-hazardous and inert waste: appropriate measures for permitted facilities</p> <p>i) Completion of relevant forms – B4 new bespoke waste operation</p> <p>j) Updating and inclusion of this activity in all relevant management plans such as the Odour management plan, accident management plan, residue management plan etc.</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>'Wastes to import under a waste activity permit': A permit is being applied for to accept waste into Sandown under a waste activity.</p> <p>This waste stream is currently accepted under a T21, which will not be available once the site receives an IED permit. Waste Transfer Notes are provided to evidence that this is an existing waste stream accepted under a T21. Evidence of acceptance of septic tank waste (including residual sludge), cesspool waste and chemical toilet is shown in document reference 790101_WasteTransferNotes_SAN June 2024).</p> <p>As addressed in item one of the Request for information letter, Southern Water will pay the additional fee for the waste operation activity. The non-technical summary has been updated to differentiate the import to head of the works from the schedule activity (anaerobic digestion), and the previous process flow diagram remains valid as it show cess imports to within the WTW schematic entering the 'Band Screens' (document reference 790101_MSD_Schematics_SAN).</p> <p>Sandown has two distinct tankered waste reception points. One reception point receives imports bound for the STC, and the other reception point receives WwTW head of works imports. Both are separate and distinct points with separate pipework to their respective end points. Tanker drivers are directed to the appropriate reception point on arrival and both reception points have data loggers which only permit the specific EWC codes to be accepted at their respective reception points.</p>

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			<p>A statement on the commitment to operate the waste operations activity to 'Non-hazardous and inert waste: appropriate measures for permitted facilities' is provided in section 6.3 of the amended Main Supporting Document.</p> <p>A Part B4 form has been provided in document reference 790101_App_PartB4_SAN June 2024.</p> <p>The Main Supporting Document and Odour Management Plan have been amended and provided separately (doc ref 790101_MSD_Main_SAN June 2024 and 790101_ERA_OdourMP_SAN June 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	12	<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>Digestate and effluent from the STC are returned to the process downstream of storm separation. Returns come in downstream overflow and flow cannot physically escape down the storm route. The digestate and effluent must pass through treatment before going out to the environment.</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 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.

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Waste acceptance and pre-acceptance	13	Provide a waste pre-acceptance and acceptance procedure for imported and indigenous sludge that meet the requirements of BAT 2.	The waste pre-acceptance and acceptance procedure for imported and indigenous sludge are provided in doc ref 790101_WasteAcceptance_SAN June 2024, and supersedes 790101_MSD_DutyofCare_SAN December 2023.
Standby generator	14	<ul style="list-style-type: none"> a) For the five specified generator explain using the RGN2 DAA test why the generators meets the criteria of a DAA. 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. c) Confirm the NGR for each of the five generators. d) Confirm the fuel type for each of the five generators. 	As agreed by phone on 20 June 2024, the information is to be provided by 4 July 2024, once confirmed whether the five generators are Directly Associated Activities (DAAs). In the meantime, documents currently remain referencing the generators.
Air dispersion modelling	15	Update your air dispersion modelling report to include all 5 generators if they are DAA's and ensure that emissions for these are assessed in line with relevant guidance	As agreed by phone on 20 June 2024, the information is to be provided by 4 July 2024, once confirmed whether the five generators are Directly Associated Activities (DAAs)
Indirect emission to water	16	<ul style="list-style-type: none"> a) Update your emission point plan to ensure that all indirect emissions to water are included (e.g. liquors returning to the head of works), and clearly explain which emission point includes which waste water stream. b) Provide a written statement with a commitment to undertake the sampling and analysis in line with BAT3. 	<ul style="list-style-type: none"> a) The site layout plan (doc ref 790101_SiteLayoutPlan_SAN June 2024) has been updated to include all indirect emission points for emissions to water and identifies the waste water streams. b) 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_SAN June 2024.
Other amendments			
Emissions to air from odour control units		-	<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 to reflect the above commitments, document reference 790101_ERA_OdourMP_SAN June 2024.</p>
Head of works In-direct emission point		-	<p>Document reference 790101_Sampling proposal_SAN June 2024 is provided to address the following, in relation to the request for import to head of the works (activity requested via the Part B4 form):</p> <ul style="list-style-type: none"> 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' 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.

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			The Site Layout Plan (document reference 790101_MSD_SiteLayoutPlan_SAN June 2024)
Document	Related questions		Document Reference
Site Condition Report	Question 2a		790101_MSD_SCR_SAN June 2024
Envirocheck Report	Question 2b		790101_MSD_SCR_SAN_AppB_Envirocheck
Main Supporting Document	Question 3 Question 4 Question 5a Question 7 Question 11		790101_MSD_Main_SAN June 2024
Site Layout Plan	Question 3 Question 5b Question 8a Question 9b		790101_MSD_SiteLayoutPlan_SAN June 2024
IED Risk Assessment, Secondary containment report	Question 6 Question 9a		790101-MMD-IED-SAN-CA-C-001 – IED Risk Register Sandown June 2024
Drainage Plan	Question 6		790101_MSD_DrainagePlan_SAN
Part B4 form	Question 7 Question 11		790101_App_PartB4_SAN June 2024
Odour Management Plan	Question 8 Question 11		790101_ERA_OdourMP_SAN June 2024
Annual throughput summary	Question 10		790101_AnnualThroughput_SAN June 2024
Waste transfer notes	Question 11		790101_WasteTransferNotes_SAN June 2024
Waste pre-acceptance and acceptance for imported and indigenous sludge	Question 13		790101_WasteAcceptance_SAN June 2024
Sampling proposal	Question 16		790101_Sampling proposal_SAN June 2024