



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

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Approved by:		Document reference:	790101_NDM Response_FOR Sept 2024

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Table 1: Response to Environment Agency

Topic of relevancy	Question no.	Question	Response
Payment details	N/A	<p>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 £22,801.</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. 	<p>In the original application Southern Water have paid £25,972.00. We believe the correct application fee based on below is £22,004</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. • Surrender of dryer plant – charge £3961



Topic of relevance	Question no.	Question	Response
		<ul style="list-style-type: none"> Potential surrender of dryer plant – charge/payment to be confirmed subject to agreed way forward. 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 acceptance of waste to the head of works – 1.16.12 - £793 Application fee for the dewatering activity – 1.16.12 - £793 <p>Additional Assessments (see below for further details)</p> <ul style="list-style-type: none"> Odour management plan – a fixed charge of £1,246 Habitats assessment – a fixed charge of £779 Emissions management plan – a fixed charge of £1,241 	<ul style="list-style-type: none"> Application fee for the dewatering activity – 1.16.12 - £793 <p>Additional Assessments (see below for further details)</p> <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> SWS have confirmed they do not require temporary storage of cake or other wastes (grit and screenings). SWS had confirmed there is no acceptance of wastes to the head of works.
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 etc 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, etc 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.</p> <p>However, Form Part E2 has been completed, see doc ref 790101_APP_PartE2_FOR Sept 24.</p>
Import of grit and screenings from sewer cleaning and the temporary storage of digested sludge cake	2	<p>Additional payment required a) Payment as identified above</p> <p>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)</p> <p>c) Assessment against Non-hazardous and inert waste: appropriate measures for permitted facilities https://www.gov.uk/guidance/non-hazardous-and-inertwaste-appropriate-measures-for-permitted-facilities</p> <p>d) Completion of relevant forms – B4 new bespoke waste operation - https://www.gov.uk/government/publications/application-for-an-environmentalpermit-part-b4-new-bespoke-waste-operation</p> <p>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.</p>	<p>Southern Water have confirmed they do not take, or want to take in the future, grit and sewer cleanings.</p> <p>There is no temporary storage of imported digested sludge cake. These EWC codes have been removed from table A.2 in 790101_MSD_Main_FOR Sept 2024</p>

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MOTT MACDONALD Dewatering activity	3	<p>a) Payment as identified above</p> <p>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)</p> <p>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</p> <p>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</p> <p>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.</p>	<p>790101_Appropriate Measures_FOR September 2024 is provided.</p> <p>Application form B4 already submitted.</p>
Acceptance of waste to the head of works (HoW)	4	<p>a) Payment as identified above</p> <p>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)</p> <p>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</p> <p>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</p> <p>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.</p> <p>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.</p> <p>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:</p> <p>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.)</p>	<p>Southern Water have confirmed they are not accepting wastes to head of works.</p>



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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)).

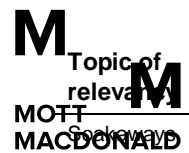
i) Provide a written statement with a commitment to undertake the sampling and analysis in line with the 'Non-hazardous and inert waste: appropriate measures for permitted facilities'

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.

Liming Plant	5	Update your process flow to include the liming process and update '790101_MSD_Main_FOR Sept 2024' to provide a clear explanation of the lime plant process on site.	Added into 1.2 of 790101_MSD_Main_FOR Sept 2024 and 790101_MSD_Schematics_FOR Sept 2024.
Air Quality Modelling files	6	Please re-send your air quality modelling files	Resubmitted as 'Ford Models'
Tanks	7	You have identified a SAS buffer tank in overview section 1.2, however this is not listed in table 1.1. It is unclear if all tanks and processes are enclosed	The SAS buffer tank is enclosed and Table 1.1 in 790101_MSD_Main_FOR Sept 2024 has been updated to reflect this. The SAS buffer tank has been added to the list of assets the IED permit will include below table 1.1.

M Topic of relevant MOTT MACDONALD	Question no.	Question	Response
		<p>a) Confirm if the SAS buffer tank is included as part of this permit and if so update table 1.1 of 790101_MSD_Main_FOR February 2024 to include this tank.</p> <p>b) For each tank/treatment process identified state whether they are enclosed or open processes.</p>	
National Grid References	8	Update 'Main Supporting Document 790101_MSD_Main_FOR' and any other relevant documents to include a NGR that is inside your permit boundary	SU 9946 0313 to be used. Updated MSD, OMP, SCR 790101_ERA_OdourMP_FOR September 2024 790101_MSD_Main_FOR September 2024 790101_MSD_SCR_FOR_Sept 2024
Documents that cannot be located	9	<ul style="list-style-type: none"> • 790101_MSD_MSDS_FOR February 2024 • 790101-MMD-IED-FOR-SIM-M-101 DoNothing (Rainfall Included) • 790101-MMD-IED-FOR-SIM-M-102 DoNothing (Tank Failure Only) • 790101-MMD-IED-FOR-SIM-M-103 Option1 (Rainfall Included) • 790101-MMD-IED-FOR-SIM-M-104 Option1 (Tank Failure Only) • 790101-MMD-IED-FOR-SIM-M-105 Option2 (Rainfall Included) • 790101-MMD-IED-FOR-SIM-M-106 Option2 (Tank Failure Only) • 790101-MMD-IED-FOR-CA-C-001 	790101_MSD_MSDS_FOR_V1.0.pdf resubmitted. 790101-MMD-IED-FOR-SIM-(101 – 106) MP4 file resubmitted. Updated containment plan 790101-MMD-IED-FOR-CA-C001 – ADBA tool P02.xlsm
Application scope	10	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 remove references to the WwTW which do not form part of this application. Some references to the WwTW have been left in to provide context.
Process flow	11	a) 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.	Updated 790101_MSD_Schematic_FOR Sept 2024
Drainage	12	Explain how your discharge to ground from the liming plant will meet the requirements of guidance Groundwater protection position statements, or if it does not explain the steps that you will take to ensure compliance.	Drainage investigations and any required remedial works will be undertaken as part of secondary containment installation to ensure site drainage is compliant with BAT. This includes disconnection and isolation of soakaways from bunded (or site drainage) areas and installation of CIRIA C736 compliant impermeable surfaces. This area is likely to require either expensive new drainage or a new pumped drainage solution to become compliant. Drainage will be provided with a means of isolation. All drainage within the bunded area will be tested before release and returned to the head of works. The soakaways may be utilised for disposal of clean 'roof water' if this can be demonstrated to be compliant, to determine if this is achievable further survey and design is required and it may require testing.

	Question no.	Question	Response
Soakaway	13	Confirm that the soakaways meet the requirements of guidance Groundwater protection position statements, or if they do not explain the steps that you will take to ensure compliance.	<p>Soak aways are not compliant in the current arrangement and modifications will be completed to meet BAT for site and bund area drainage as question number 12 above.</p> <p>Soakaways are detailed on 790101_MSD_SiteLayoutPLan_FOR Sept 24 labelled as:</p> <p>Emissions ref: A11 Emission points: Soakaway 1 Assets Ref: 11 Emissions ref: A12 Emissions points: Soakaway 2 Assets ref: 12</p>
Secondary contain-ment	14	<p>a) Provide an updated secondary containment report and ADDBA assessment that clearly identifies the containment solution proposed, the containment volumes, an explanation of how your proposals meet BAT and CIRIA C736.</p> <p>b) Ensure your permit boundary (and all relevant documents) include your proposed containment solution</p> <ul style="list-style-type: none"> • 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. • You have not clearly evidenced that your volumes meet the requirements of CIRIA C736 in relation to the 110%/25% rule. • We cannot identify how you have considered rainfall 	Resubmitted as 790101-MMD-IED-FOR-CA-C-001 – ADDBA tool P02
Activity capacity	15	<p>a) Total tonnage of indigenous and imported wet tones to be received at the sludge treatment centre per annum.</p> <p>b) Total tonnage per annum to be accepted at the anaerobic digesters</p> <p>c) Digester hydraulic retention time</p>	<p>This has been added into the 790101_MSD_Main FOR Sept 2024</p> <p>a) Total tonnage of indigenous and imported wet tones to be received at the sludge treatment centre per annum. 431,098 wet tonnes</p> <p>b) Total tonnage per annum to be accepted at the anaerobic digesters . 144,610 (wet tonnes)</p> <p>c) Digester hydraulic retention time 14 days</p>
Waste codes accepted	16	<p>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.</p> <p>b) Provide the source of 16 10 02 that you intend to accept for anaerobic digestion.</p> <p>c) Explain why accepting 16 10 02 would not be co-digestion.</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_FOR Sept 2024 and 790101_ERA_OdourMP_FOR Sept 2024 respectively). The latest version removes the applicable 16 10 02, and caveats that controlled waste will not feature on the permit.</p>




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		<p>d) If you are applying for co-digestion, update and re-submit your application to reflect co-digestion.</p> <p>e) If you do not require 16 10 02 for acceptance to the anaerobic digestion process confirm that this code is to be removed.</p>	
Waste water emissions during storm overflow conditions at the WwTW.	17	<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>During storm conditions flows are separated at the pumping station situated before the inlet at the head of works. Therefore, there is no discharge of waste water from the WwTW during storm conditions. All flows received at the site go through the treatment process.</p> <p>790101_MSD_Main_FOR Sept 2024 section 6.1 updated to reflect this.</p>
Site Condition report	18	<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>The SCR (doc ref 790101_MSD_SCR_FOR SEPT 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>The Landmark Envirocheck Report ad any other supporting document has been provided (doc ref 790101_MSD_SCR_FOR_AppB Envirocheck).</p>
Waste acceptance and pre-acceptance	19	<p>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-forpermitted-facilities.</p>	<p>790101_Appropriate Measures_FOR September 2024 and 790101_WasteAcceptance_FOR sept 2024 updated.</p>
Standby generator	20	<p>As such we require:</p> <p>a) For the specified generator explain using the RGN2 DAA test why the generators meets the criteria of a DAA.</p> <p>b) If it meets the criteria of a DAA ensure this is included in form B2.5 and your Air emission risk assessment.</p> <p>c) If it does not meet the requirements of a DAA remove this from your permit application and amend your site plans to reflect this.</p>	<p>Southern Water do not have information available, at present, to confirm whether the generators are directly associated activities. Therefore, supporting documents within application have been amended to remove reference to these generators.</p>
Emissions to air from odour control units	21	<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>

	Question no.	Question	Response
MOTT MACDONALD			The Odour Management Plan has been updated Table 8 of the OMP to reflect the above commitments, document reference 790101_ERA_OdourMP_FOR September 2024.
Cake silo OCU	22	You have identified that “The cake silo is understood to be the most common source of previous odour complaints, Southern Water are planning to install a new Cobra System on the cake silo to reduce odour, however, as of January 2024 installation timeframe is not currently known. Currently the odour is managed through the Odour Management Plan (OMP).” As you have included no further information in your application, or emission points we will not be able to include this as part of your variation and unless you provide the required information in duly making this will need to be submitted as a future variation.	This was stated in error. This has been removed from the 790101_MSD_Main_FOR September 2024 section 6.4.2.1
Indirect emissions to water	23	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) 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. c) Provide a written statement with a commitment to undertake the sampling and analysis in line with BAT3. 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. 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. 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” and ensure these emission point 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.	Drainage investigations and any required remedial works will be undertaken as part of secondary containment installation to ensure site drainage is compliant with BAT. This includes disconnection and isolation of soakaways from bunded (or site drainage) areas and installation of CIRIA C736 compliant impermeable surfaces. This area is likely to require either expensive new drainage or a new pumped drainage solution to become compliant. Drainage will be provided with a means of isolation. All drainage within the bunded area will be tested before release and returned to the head of works. The soakaways may be utilised for disposal of clean ‘roof water’ if this can be demonstrated to be compliant, to determine if this is achievable further survey and design is required and it may require testing
Odour control unit	24	a) Explain how you will meet BAT 34 for the wet scrubber.	Southern Water is progressing detailed survey and assessment of the existing OCU to understand the additional measures required to meet BAT 34.

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Provisionally they believe that to meet the wet scrubbing definition of BAT 34 requires a scrubber in combination with activated carbon adsorption.

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