

# **Ford Sludge Treatment Centre Environmental Permit Application**

Main Supporting Document  
790101\_MSD\_Main\_FOR

December 2024



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# Issue and Revision Record

Revision	Date	Originator	Checker	Approver	Description
A	September 2021	Natalia Cunningham	Shannon Stone	Anita Manns	Draft Issue
B	October 2021	Natalia Cunningham	Shannon Stone	Anita Manns	Draft Issue
C	December 2021	Natalia Cunningham	Shannon Stone	Anita Manns	Issue for application submission
D	February 2024	Isobel Moss	Shannon Stone	Anita Manns	Revision for client comment.
E	February 2024	Isobel Moss	Shannon Stone	Anita Manns	Resubmission to the Environment Agency
F	September 2024	Claire Cowdrey			Resubmission for NDM
G	December 2024	Claire Cowdrey	Claire Cowdrey	Anita Manns	Resubmission for NDM

**Document reference:** 790101\_MSD\_Main\_FOR December 2024 |

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# 1 Non-technical summary

## 1.1 Overview of the site and activities

Ford is a Sludge Treatment Centre (STC) (also known as the “Site”) and an associated Wastewater Treatment Works (WTW), which is located at Ford Road, Arundel, West Sussex, BN18 0DD (National Grid Reference: SU 9946 0313).

The WTW is operated under the Urban Wastewater Treatment (England and Wales) Regulations 1994 and has a standalone Water Discharge Activity Environmental Permit, this will remain an independent permitted activity.

The waste activity comprises imports, physio-chemical and anaerobic digestion treatment and the storage of waste, all for recovery purposes. The STC handles waste derived from the wastewater treatment process, either indigenously produced on-site or imported from other Southern Water owned assets.

The STC operation is a non-hazardous waste activity which is currently carried out under a registered T21, S1, S2 and U6 exemptions.

The site currently has one Environmental Permit in operation EPR/KP3130KX allowing for the burning of biogas in a sludge dryer from receipt of fuel to emission of exhaust gas to air. Three directly associated activities (DAAs) are also permitted and include back up flare burning of excess biogas from gas holders, storage of biogas and discharge to foul sewer. The drying plant has been mothballed and is to be surrendered.

Southern Water wishes to vary permit EPR/WP3695HW to an installation permit for the Site into a single consolidated permit to include the:

- Anaerobic digestion of sludge
- Acceptance of liquid sludge waste (digestate) at post digestion, for dewatering

### **Anaerobic digestion of sludge**

As advised by the Environment Agency through consultation at WaterUK Waste and Recycling Network and a letter sent to all Water and Sewage Companies at director level in July 2019, Southern Water is applying to vary the above mentioned existing bespoke waste activity permit EPR/KP3130KX into a Bespoke Installation Permit for the anaerobic digestion of sludge following a joint decision made by Environment Agency and Department for Environment, Food and Rural Affairs (DEFRA) that AD treatment facilities at WTW STCs are covered by the Industrial Emissions Directive and can no longer operate under standard environmental permits or exemptions.

The primary permitted installation activity will be the AD treatment facility. The AD facility will treat indigenously produced and imported sludges. Permitted Directly Associated Activities will be the import of waste from other WTW assets; the physio-chemical treatment of imported and indigenously produced sludges; the storage of indigenously produced sludges, imported sludges and the sludge cake from the AD facility; the storage of biogas derived from the AD treatment of waste and the combustion of biogas in an on-site Combined Heat and Power plant (CHP). In the event the CHP cannot run in an emergency or due to operational issues, biogas will be combusted via an on-site flare stack and/or back-up boiler system.

### **Acceptance of liquid sludge waste (digestate) at post digestion, for dewatering**



Southern Water wishes to include in the permit the capability to accept post digested liquid sludge (digestate) in an emergency from other Southern Water sites, to enter into the post digestion tanks, for dewatering at the centrifuges. The activity is a contingency measure, whereby there is limited capacity at other sites to dewater digestate, for example process shutdown. Post digested liquid sludge (digestate) from other Southern Water sites is currently discharged into the post digestion tanks, for dewatering at the centrifuges. The process aligns with the above description of the anaerobic digestion from the post digestion tanks onwards.

Southern Water is currently establishing procedures that will be incorporated into a Sampling Plan for each site. They plan to share the template with the Environment Agency. The document will include characterisation of the results of which will inform pre-acceptance and acceptance procedures for receipt, including related risk management systems, from source sites. Potential solutions currently being investigated include a separate discharge point direct into the centrifuge feed pump from the tanker and a shut off valve to prevent indigenous feed from the PDST during this time.

## 1.2 Overview of the STC process

Currently the Site accepts indigenous sludge, imported liquid sludge and dewatered sludge cake.

On average the Site accepts approximately 11 tankers per day of raw liquid sludge imports arriving at the Site. Up to eight tankers of imported cess, septic and chemical toilet waste per day is accepted at the inlet works.

Imported liquid sludge is screened by 2 No. strain presses and then mixed with indigenous sludge in 2 No. post screening sludge storage tanks. The sludge is then thickened by 2 No. drum thickeners.

Imported sludge cake is blended with surplus activated sludge (SAS) from the enclosed 1 No. SAS buffer tank. Excess SAS is thickened by 4 No. drum thickeners.

Thickened primary sludge, thickened SAS and blended cake are then mixed and stored in 1 No. post thickening sludge storage tank.

Thickened sludge is then fed to 2 No. anaerobic digesters. Digested sludge is stored in 2 No. post digestion storage tanks. To keep the pH above 8 in line with the HACCP, lime is added (injected into the line) of the digested sludge prior to it being dewatered by 2 No. centrifuges.

The digested sludge cake is then transported off-site and recycled to farmland.

Digested sludge cake is subjected to regular quality assurance (QA) sampling in line with the Biosolids Assurance Scheme (BAS). If digested sludge cake is non-compliant and does not meet the correct standards, then the material will need to be quarantined before it can be recycled to land. Non-compliant digested sludge cake is transported off site and held at an alternative Southern Water site located in Lidsey, West Sussex, for 90 days to ensure compliance. Further details on the quarantine procedure are provided in document reference 790101\_MSD\_ResidueMP\_FOR February 2024.

Biogas produced by the digestion process is fed to 1 No. CHP unit. The CHP unit has a thermal rated input of 1.84MWth, the specifications of the combustion plant are presented in Table 1.1.

All sludge storage tanks are covered or enclosed, but the condition of the thickened sludge storage tank roof is being reviewed and will be replaced if/as required. Gas tightness surveys (using OGI) of the existing roofs are underway across all sites.

**Table 1.1: Combustion plant details**

	CHP1	Boiler 1	Boiler 2
<b>Make/Model Number</b>	MTU STAMFORD PE743A	Ideal Viscount GTS 17	Ideal Viscount GTS 17
<b>Date that MCP became operational/was commissioned</b>	2013	2023	2023
<b>Thermal Input (MWth)</b>	1.84MWth	1.2MWth	1.2MWth
<b>Stack height (m)</b>	6-7	7.5	7.5
<b>Fuel used (biogas, diesel etc)</b>	Biogas	Biogas/natural gas	Biogas/natural gas
<b>Estimated total hours of operation per year</b>	8147	Standby only (when CHP is not operational)	Standby only (when CHP is not operational)
<b>MCPD and SG Regs status</b>	Existing MCP	New MCP	New MCP

The IED permit will include:

- 1 No. Sludge reception tank (100m<sup>3</sup>)
- 3 No. Strain presses
  - 2 No. for screening imported liquid sludge
  - 1 No. used for blending
- 2 No. Post Screening Sludge storage tanks (1732m<sup>3</sup> each)
- 6 No. Drum thickeners;
  - 2 No. for post screened sludge
- 4 No. for excess SAS (surplus activated sludge)
- 1 No. SAS tank
- 1 No. Liquor return tank
- 1 No. Thickened sludge storage tank (700m<sup>3</sup>)
- 3 N. Anaerobic digesters (each 1848m<sup>3</sup>)
- 2 No. Post digestion storage tanks (each 352m<sup>3</sup>)
- Lime plant
- 2 No. Centrifuges.
- 1 No. CHP unit (1.84MWth)
- 1 No. Gasholder (670m<sup>3</sup>)
- 1 No. Biogas burner (flare)
- 1 No Cake Silo (100m<sup>3</sup>)
- Emergency cake bays (two 16tonne ro-ro skips)
- 2 No. Odour control units (OCU) - 1 No. one wet chemical scrubber OCU and 1 No. granular activated carbon (GAC) OCU. F
- 2 No. Boilers (Each 1.2MWth thermal input) (biogas and natural gas)

The following are the outputs from the process;

- Biogas stored in an existed gasholder, then either
  - Burnt in the CHP
  - Flared in the waste biogas burner
- Digested sludge cake – recycled for agriculture

### 1.3 Summary of key technical standards

Table 1.2 lists the technical guidance notes (TGNs) used to inform the techniques and measures proposed to prevent and reduce waste arising and emissions of substances, including during periods of start-up and shut down, momentary stoppage and malfunction, and leaks.

**Table 1.2: Technical guidance notes**

Installation name <b>Goddard's Green STC</b>		
<b>C3 – Installation</b>		
Description of the schedule 1 activity or directly associated activity	Best available technique (BATC, BREF or TGN reference)	Document reference
Section 5.4 non-hazardous waste installation - anaerobic digestion installation regulated under the Industrial Emissions Directive, utilisation biogas for energy	<ul style="list-style-type: none"> <li>● Biological waste treatment: appropriate measures for permitted facilities</li> <li>● Non-hazardous and inert waste: appropriate measures for permitted facilities</li> </ul>	<ul style="list-style-type: none"> <li>● <a href="https://www.gov.uk/guidance/biological-waste-treatment-appropriate-measures-for-permitted-facilities/1-when-appropriate-measures-apply">https://www.gov.uk/guidance/biological-waste-treatment-appropriate-measures-for-permitted-facilities/1-when-appropriate-measures-apply</a></li> <li>● <a href="https://www.gov.uk/guidance/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</a></li> </ul>
Section 5.4 non-hazardous waste installation – liquor treatment.		
<b>B4 – Waste activities</b>		
Description of the waste operation	Appropriate measure (TGN reference)	Document reference
Acceptance of waste to the head of works (Cess)	<ul style="list-style-type: none"> <li>● Non-hazardous and inert waste: appropriate measures for permitted facilities</li> <li>● Biological waste treatment: appropriate measures for permitted facilities</li> </ul>	<ul style="list-style-type: none"> <li>● <a href="https://www.gov.uk/guidance/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</a></li> <li>● <a href="https://www.gov.uk/guidance/biological-waste-treatment-appropriate-measures-for-permitted-facilities/1-when-appropriate-measures-apply">https://www.gov.uk/guidance/biological-waste-treatment-appropriate-measures-for-permitted-facilities/1-when-appropriate-measures-apply</a></li> </ul>
<b>General</b>		
All activities	Guidance	Document reference
	<ul style="list-style-type: none"> <li>● Monitoring stack emissions: technical guidance for selecting a monitoring approach</li> <li>● M1 sampling requirements for stack emission monitoring</li> <li>● Environment Agency environmental permitting guidance, including:</li> <li>● Risk assessments for your environmental permit</li> <li>● Energy efficiency (Energy efficiency for combustion and energy from waste power plants)</li> <li>● Noise assessment and control</li> <li>● H4 Odour management</li> <li>● H5 Site condition report</li> <li>● Control and monitor emissions for your environmental permit</li> </ul>	<ul style="list-style-type: none"> <li>● <a href="https://www.gov.uk/guidance/monitoring-stack-emissions-technical-guidance-for-selecting-a-monitoring-approach">https://www.gov.uk/guidance/monitoring-stack-emissions-technical-guidance-for-selecting-a-monitoring-approach</a></li> <li>● <a href="https://www.gov.uk/government/publications/m1-sampling-requirements-for-stack-emission-monitoring">https://www.gov.uk/government/publications/m1-sampling-requirements-for-stack-emission-monitoring</a></li> <li>● <a href="https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit">https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit</a></li> <li>● <a href="https://www.gov.uk/guidance/energy-efficiency-standards-for-industrial-plants-to-get-environmental-permits">https://www.gov.uk/guidance/energy-efficiency-standards-for-industrial-plants-to-get-environmental-permits</a></li> <li>● <a href="https://www.gov.uk/government/publications/noise-and-vibration-management-environmental-permits">https://www.gov.uk/government/publications/noise-and-vibration-management-environmental-permits</a></li> <li>● <a href="https://www.gov.uk/government/publications/environmental-permitting-h4-odour-management">https://www.gov.uk/government/publications/environmental-permitting-h4-odour-management</a></li> <li>● <a href="https://www.gov.uk/government/publications/environmental-permitting-h5-site-condition-report">https://www.gov.uk/government/publications/environmental-permitting-h5-site-condition-report</a></li> </ul>

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**Installation name** **Goddard's Green STC**

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- <https://www.gov.uk/guidance/control-and-monitor-emissions-for-your-environmental-permit>
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#### 1.4 Revisions since 2021 application submission

The application was first submitted in 2021. This Main Supporting Document includes details that have been updated following feedback received over the past three years in relation to IED permit applications for the anaerobic digestion of sewage sludge. Table 1.3 provides a summary of the stand-alone documents included as part of this application, and the amendments where applicable. Where a document has not been amended due to it being remaining applicable, the original reference number remains unchanged. Where a document has been updated this document will supersede any previous versions.

**Table 1.3: Summary of revisions**

Document name	Latest document reference	Summary of amendments
Main supporting document	790101_MSD_Main_FOR December 2024	Resubmitted – updated to include wider feedback from the Environment Agency from NDM Rfl Nov 24.
Environmental Risk Assessment	790101_ERA_ FOR February 2024	Resubmitted – updated to include complaints recorded since 2020 and completion of air quality risk assessment.
Environmental Constraints Maps	790101_ERA_Maps_ FOR February 2024	Resubmitted. Human receptor map screening distance increased to 2km
Bio-aerosol Risk Assessment	790101_ERA_BioaRA_ FOR February 2024	Resubmitted – updated to include bio-aerosol monitoring proposals and new windrose.
Odour Management Plan	790101_ERA_OdourMP_ FOR December 2024	Resubmitted – to include the wider feedback from the Environment Agency from NDM Rfl Nov 24.
Climate Change Risk Assessment	790101_ERA_CCRA_ FOR	No change. To be included as part of the management system for the site.
Site Condition Report	790101_MSD_SCR_ FOR 2024	Resubmitted – Updated NGR
BAT analysis	790101_MSD_BAT_ FOR February 2024	Resubmitted – updated to include changes by Southern Water and wider feedback from the Environment Agency.
Site Layout and Location Plan	790101_MSD_SiteLayoutPlan_ FOR September 2024	Resubmitted – To add monitoring point M1 which was 'hidden'.
Drainage Plan	790101_MSD_DrainagePlan_ FOR	No change
Schematics	790101_MSD_Schematics_ FOR September 2024	Resubmitted – Updated using latest Southern Water process flow diagram
Environmental Management System Certificate	790101_MSD_EMS_ FOR December 2023	Resubmitted. Certificate has been renewed.
Relevant Offences	790101_MSD_RelevantOffences December 2023	Updated to 2023.
Details of Directors	790101_MSD_Directors February 2024	Updated to time of resubmission
Competency assessment certificates	790101_MSD_CompetencyAssessm entCertificates_ FOR	Retracted, and replaced with Competency Management System.
Competency Management System	790101_MSD_CMS December 2023	Substitutes CoTC assessment certificates
Material Safety Data Sheets	790101_MSD_MSDS_ FOR February 2024	Raw materials added
Leak Detection and Repair Plan	790101_MSD_LDAR_ FOR February 2024	Additional document.
Duty of Care	790101_MSD_DutyofCare_ FOR February 2024	Additional document.

**Table 1.3: Summary of revisions**

Document name	Latest document reference	Summary of amendments
CIRIA assessment and modelling	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)	No changes from September 2022 submission
Updated containment overview	790101_IED- STC Containment Solution Overview_FOR (Feb.24)	Additional document – to be read in conjunction with the original CIRIA assessment and modelling above
Residue Management Plan	790101_MSD_ResidueMP_FOR February 2024	Additional document.
H1 assessment	790101_H1 Tool v8_FOR February 2024	Additional document
Air Quality Risk Assessment	790101_AQRA_FOR February 2024	Additional document.  The AQRA is accompanied by the models included in the folder, Ford Models.
Accident Management Plan	790101_MSD_AMP_FOR February 2024	Additional document.
Implementation Plan	790101_MSD_ImplementationPlan December 2023	Additional document.
Form Part A	790101_App_PartA_FOR	No change
Form Part C2	790101_App_PartC2_FOR	No change
Form Part C3	790101_App_PartC3_FOR	No change
Form Part B6	790101_App_PartB6_FOR February 2024	Additional document (not previously required).
Form Part F1	790101_App_PartF1_FOR	No change
Form Part E2	790101_App_PartE2_FOR Sept 24	Additional document in response to NDM Sept 2024.
Form Part B4	790101_App_PartB4_FOR_V1.0	No change

## 2 Introduction

### 2.1 Overview

This document has been prepared to support the application to vary the existing bespoke waste activity permit into a bespoke installation Environmental Permit (hereafter referred to as 'the Permit'), reference EPR/KP3130KX for the Ford Sludge Treatment Centre (STC) ('the Site') on behalf of Southern Water Services Limited ('Southern Water' or 'the Operator').

Following the joint Environment Agency and Department for Environment, Food and Rural Affairs (DEFRA) decisions that AD treatment facilities at WTWs and STCs are covered by the Industrial Emissions Directive (IED) the intent of the application is to ensure the Site is permitted in line with the IED and the EPR 2016, as amended.

This document contains a description of the Site, the proposed permitted activities and Directly Associated Activities (DAAs), an assessment of the possible effects of these activities and responses to questions in Part A, C2, C3, B6, E2 and F1 of the application documentation (plus supporting information where required). Completed forms Part A, C2, C3, B6, E2 and F1 are included as separate documents.

### 2.2 Document content and structure

The following application forms have been complete to support the application and have been submitted as stand-alone documents:

- Part A: About You (Document reference 790101\_App\_PartA\_FOR)
- Part B4: New bespoke waste operation permit (Document reference 790101\_App\_PartB4\_FOR)
- Part B6: New bespoke water discharge activity or groundwater activity (point source discharge) or point source emission to water from an installation (Document reference 790101\_App\_PartB6\_FOR February 2024)
- Part C2: Varying a bespoke permit (Document reference 790101\_App\_PartC2\_FOR)
- Part C3: Variation to bespoke installation permit (Document reference 790101\_App\_PartC3\_FOR)
- Part E2 Surrender application (Document reference 790101\_App\_PartE2\_For Sept 24)
- Part F1: Charges and declarations (Document reference 790101\_App\_PartF1\_FOR)

The main body of the Permit application document ('the Main Supporting Document') includes all the supplementary information required in response to relevant questions within the Part A, Part B4, Part B6, Part C2, Part C3, Part E2 and Part F1 application forms for which there was insufficient space on the forms to answer the questions in full.

The Environmental Permit variation application document ('the Main Supporting Document') consists of two main parts:

- Chapter 5 provides the general information required to inform Part C2 relating to the variation of bespoke permit; and
- Chapter 6 provides the more detailed information required to inform Part C3 and Part B4 relating to the variation of a bespoke installation permit.
- Chapter 7 provides the more detailed information required to inform Part B6.

Part F1 covers the required financial information required for payment of the application fee. Additional information included as part of this submission and not as stand-alone documents, are found in the following appendix:

- Appendix A – European Waste Catalogue (EWC) Codes



## 3 Process Description

### 3.1 Wastewater Treatment Works

This subsection has been provided for context only.

The Ford catchment serves a population equivalent of 138,587 consists of two large sub-catchments, Bognor Regis, and Littlehampton plus several small local pumped discharges.

Sewage from various rising mains enters the treatment works in the sealed, covered inlet chamber. All flows pass 2 No duty, assist, 25 mm mechanical rated bar screens with 1 No mechanical rated bypass, followed by 2 No. duty, standby 6 mm, 2D band screens with a 10 mm 1D bypass. Screened sewage is dosed with ferric chloride to control septicity and then passes 2 No. duty standby detritors.

Screened and de-gritted sewage gravitates to 3 No. circular primary settlement tanks, which are covered for odour control. The primary tanks are automatically desludged by 2 No. duty, standby PC pumps.

Settled sewage gravitates to the anoxic zone of the activated sludge plant mixing with return activated sludge (RAS). Return liquors and cess could also returned to this point but are currently discharged upstream of the primary tanks.

Following the anoxic zone, mixed liquor is aerated in 4 No. aeration lanes (only three lanes run at any one time). The aeration lanes provide carbonaceous treatment only. Mixed liquor is aerated by 4 No blowers as duty, duty/assist and standby units through fine bubble diffusers, then settled in 4 No. final settlement tanks. RAS is removed from the final tanks by 3 No. RAS pumps and returned to the selector zone. Surplus activated sludge (SAS) is removed by 2 No SAS pumps and transferred to the enclosed SAS buffer tank. Final effluent enters the onsite outfall pumping station and is pumped via a 6.8 km rising main to Sea Road Littlehampton WPS from where it is discharged to the sea via a long sea outfall (1.9 miles long).

### 3.2 Overview of the STC process

#### 3.2.1 Anaerobic digestion of sludge

Ford also serves as an STC receiving both liquid sludge and dewatered sludge cake. Imported liquid sludge is screened by 2 No. strain presses and then mixed with indigenous sludge in 2 No. post screening sludge storage tanks.

The sludge is then thickened by 2 No. drum thickeners. Imported sludge cake is blended with SAS from the SAS buffer tank. Excess SAS is thickened by 4 No. drum thickeners. Thickened primary sludge, thickened SAS and blended cake are mixed and stored in 2 No post thickening sludge storage tanks. Thickened sludge is fed to 3 No. anaerobic digesters. Digested sludge is stored in 2 No. post digestion storage tanks and then dewatered by 2 No. centrifuges. Compliant digested sludge cake is transported off site and recycled to farmland.

Digested sludge cake is subjected to regular quality assurance (QA) sampling in line with the Biosolids Assurance Scheme (BAS). If digested sludge cake is non-compliant and does not meet the correct standards, then the material will need to be quarantined before it can be recycled to land. Non-compliant digested sludge cake is transported off site and held at an alternative Southern Water site located in Lidsey, West Sussex, to ensure compliance. Further details on the quarantine procedure are provided in document reference 790101\_MSD\_ResidueMP\_FOR February 2024.

Biogas produced by the digesters and post digestion storage tanks are fed to 1 No. CHP unit. In the event the CHP cannot run in an emergency or due to operational issues, biogas will be combusted via an on-site flare stack. Southern Water confirms that they plan to replace the existing CHP and flare at Ford as outlined in the BAT assessment document 790101\_MSD\_BAT\_FOR\_December 2024.

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.

### **3.2.2 Acceptance of liquid sludge waste (digestate) at post digestion, for dewatering**

Post digested liquid sludge (digestate) from other Southern Water sites enters at the post digestion tanks, for dewatering at the centrifuges. The process aligns with the above description of the anaerobic digestion from the post digestion tanks onwards.

## 4 Part A – About you

### 4.1 Question 5c: details of directors

The details of directors at Southern Water Services Limited (Company number: 02366670) are provided in stand-alone document 790101\_MSD\_Directors\_February 2024.

### 4.2 Question 7: Contact details

Whereby the contact disclosed in 7a (Anita Manns, Mott MacDonald) is not available the Environment Agency should contact one of the secondary contacts:

Name: Claire Cowdrey

Address: Mott Macdonald, Mountbatten House, Grosvenor Square, Southampton, S015 2JU

Phone number: 023 8062 8523

Email: Claire.cowdrey@mottmac.com

## 5 Part C2 – General – varying a new bespoke permit

### 5.1 Questions 2 – Table 1: Changes to existing activities

The variation application is to modernise the conditions of the existing 'landfill' gas engine (<3Mw) activity (A29)' (as referred to on the Public Register, the engine utilises biogas) as authorised under permit reference EPR/KP3130KX where required and to add scheduled activity for Anaerobic Digestion and incorporate T21 operations to the same permit.

### 5.2 Questions 3a: Relevant Offences

Details of the relevant convictions are provided in the document reference 790101\_MSD\_RelevantOffences December 2023 (produced by Southern Water).

### 5.3 Question 3b: Technical ability

Operational management is provided by qualified individuals and considered to be technically competent. All staff on-site are trained to manage and operate activities without causing pollution.

Future competency, in terms of the requirements of the environmental permit, will be ensured through the appropriate training of all staff, covering:

- Awareness of the regulatory implications of the Permit for the permitted activity and their own work activities
- Awareness of all potential environmental effects from operation under normal and abnormal circumstances
- Awareness of the need to report any deviation from the Permit
- Prevention of accidental emissions, and action to be taken when accidental emissions occur

All staff are aware of the implications of activities undertaken including the operation of the Site. Skills and competencies necessary to work on-site are documented and records of training needs and training received for these posts are maintained.

Southern Water is currently working on an accredited Competency Management System under the Competent Operator Scheme, based on the Anglian Water Services developed technical competency course to demonstrate that personnel have the appropriate technical skills and knowledge to manage the activities undertaken. This will be independently certificated and audited, through a third-party certification body (yet to be determined) to ensure it meets the requirements of the Competence Management System Standard, developed by Energy & Utility Skills<sup>1</sup>. The Competence Management System (CMS) enables Operators to demonstrate technically competent management on the basis of corporate competence and employees' individual competence. Individual competence remains a key component with each employee having the relevant technical competences required to carry out their role.

An e-learning course is being developed and certification is due to be undertaken by LRQA (see document 790101\_MSD\_CMS December 2023). The CMS is to be certified within the first 12 months from issue of a permit for the STC.

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<sup>1</sup> Energy and Utility Skills (2021) Competence Management System. Available online at: <https://www.euskills.co.uk/about/our-industries/waste-management/competence-management-system/>

## 5.4 Questions 3c: Finances

No relevant persons within Southern Water have current or past bankruptcy or insolvency proceedings against them.

## 5.5 Question 3d: Management System

The Site operates under the company-wide Environmental Management System (EMS 684981), which is certified to ISO 14001:2015 and is applicable to water supply and wastewater treatment assets at operational sites (wastewater treatment works, water supply works and water booster stations). The EMS is effective for three years from July 2023, until July 2026. The EMS is accredited by the British Standards Institution (BSI).

Demonstrable procedures are outlined in the Site Process Activity Manual (SPAM) and Operating Plan. Where suitable and available, any monitoring of emissions to air, land and water is undertaken according to Monitoring Certification Scheme (MCERTS) Standards where the permit requires it.

As a part of the EMS the Operator has an internal audit programme that takes place every 12 months. During this annual programme operational sites are selected as a subsample and audited. Suppliers and business areas are also audited. An annual report is produced as part of the management review, and this is signed off by Senior Management. In addition, the EMS is subject to audit by the inspection and certification company BSI (for accreditation purposes) each year, and a full certification audit is conducted every three years.

The EMS addresses the following to ensure staff understand their roles and responsibilities to comply with environmental legislation and protect the environment and human health:

- Resources, roles, responsibility and authority
- Legal and other requirements in protecting the environment and human health
- Competence, training and awareness requirements
- Explanation of the Non-conformance, Corrective and Preventative Action Procedures
- Details of the significance of Environmental Aspects and Impacts
- EMS Review and auditing procedure and requirements
- Monitoring and measurement requirements
- Record keeping procedures

To accompany the Permit the Site will have its own Management System in line with the Environment Agency guidance. This identifies all the applicable procedures under the accredited EMS but includes additional site-specific information and procedures.

One of the key tasks for Southern Water during the permit determination process is the development of the management system arrangements to cover additional requirements in relation to the permitted operations. This may include the Climate Change Risk Assessment (CCRA) document reference 790101\_ERA\_CCRA\_FOR to address measures to adapt to predicted additional pressure from changes in external operational conditions (such as weather and flooding), if required. Climate change and climate resilience will be included in the ongoing future updates to the EMS.

In addition to the environmental elements of the management system, Southern Water also has a health and safety management system which includes relevant procedures to follow with regards to accidents and the reporting of incidents and near misses. The health and safety

manual is designed to comply with the Health and Safety Executive's (HSE) Managing for health and safety guide (HSG65)<sup>2</sup>.

The EMS certification can be found in Document reference 790101\_MSD\_EMS December 2023.

### 5.5.1 Accident Management Plan

In addition to the environmental elements of the management system, Southern Water also has a health and safety management system which includes relevant procedures to follow with regards to accidents and the reporting of incidents and near misses. The health and safety manual is designed to comply with the Health and Safety Executive's (HSE) Managing for health and safety guide (HSG65)<sup>3</sup>.

The Site operates under an Incident Management Plan which is incorporated into Southern Water's Environmental Management System to prevent and manage environmental related accidents. The IMP includes an inventory of substances stored at the site, details on storage facilities, inventory of pollution prevention equipment (spill kits and fire extinguishers), inventory of waste and storage capacities, contact details of internal contacts (Site manager, Environmental Governance Manager and key HSE staff), national and regional (where appropriate) contact details of emergency services and environmental regulators. The IMP is distributed to key staff, to supervise the implementation of the Plan, and shared with external contacts (emergency services and the Environment Agency). The IMP is accompanied by a site plan that identifies the locations of designated storage areas (and their maximum storage capacity), location of spill kits and fire extinguisher and storage locations and hazards posed by chemical substances.

The IMP references procedures to comply with environmental legislation and protect the environment and human health in regard to potential accidents:

- Spill prevention and management, and operation of safety valves
- Procedure for recovering spilled product
- Procedures for the prevention of overfilling vessels, management of plant and equipment failures
- Fire prevention and responses to fires, including fire water containment procedures
- Security measures to prevent unauthorised access, arson and vandalism
- Competence, training and awareness requirements
- Monitoring and measurement requirements
- Record keeping procedures for the recording of incidents, accidents and near misses
- Emergency procedures to notify relevant authorities, emergency services and neighbours

There are several different document types referenced in the IMP. These have been listed below:

- EMS – Environmental Management System
- FEC – Field Event Co-ordinator's Manual
- IMP – Incident Management Plan
- BCP – Business Continuity Plan
- CCM – Control Centre Manual

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<sup>2</sup> Health and Safety Executive (2013), Managing for health and safety (HSG65). Available online at: <https://www.hse.gov.uk/pubns/books/hsg65.htm>.

<sup>3</sup> Health and Safety Executive (2013), Managing for health and safety (HSG65). Available online at: <https://www.hse.gov.uk/pubns/books/hsg65.htm>.

- SIB – Safety Instruction Book
- CAT – Catastrophe Plans

Table 5.1 below provides a list along with a brief description of each of the procedures which form part of the IMP.

**Table 5.1: Incident Management Plan procedures**

<b>SUPPORTING EMERGENCY PROCEDURES – IMP</b>	
<b>Procedure Reference</b>	<b>Brief summary</b>
EMS 234 Chemical and Oil Storage	Specifies the standard for storage of chemicals and oils. Outlines the amounts of substances that can be stored on site without consent from the Local Authority, and details how these substances should be safely stored. Also includes Information on the auditing, training requirements and any associated documents.
EMS 260 Pollution Prevention (standard)	Specifies the standard for managing and reducing the risk of land contamination. Outlines the tasks a manager should complete i.e., ensuring spill kits are available, and who to contact in the event of an incident. The document also lists the measures that Southern Water should take to prevent pollution incidents. Also includes Information on the auditing, training requirements and any associated documents.
EMS 265 Discharges (Standard)	Sets the minimum standard of operation in managing effluent and potable water process discharges. Details definitions which relate to the procedure and outlines the standard. Also includes Information on the auditing, training requirements and any associated documents.
EMS 360 Pollution Prevention Procedure	Outlines the responsibilities of staff in relation to the procedure. The Procedure includes details on items such as site drainage, working on or near watercourses and excavations. As well as addressing different spill types; chemical, oil and sludge/sewage. Information on the auditing, training requirements, reporting forms and any associated documents.
EMS 361 Chemical Risk Assessment (Procedure)	Defines the procedure for assessing the environmental risk from bulk chemicals. Outlines the procedure for undertaking a risk assessment, and where required which EMS procedures need to be followed. Also addresses risk mitigation and employee awareness as well as the auditing, training requirements, reporting forms and any associated documents.
EMS 362 Environmental Fire Risk Assessment Procedure	Specifies the procedure for minimising the environmental consequence of a fire. Outlines the responsibilities of staff in relation to the procedure and provides a procedure for an Environmental Fire Risk Assessment. Information on the auditing, training requirements, reporting forms and any associated documents.
EMS 363 Procedure for Managing oil spills on sites	Outlines the responsibilities of staff in relation to the procedure. The procedure details how to determine the severity of the spill for different scenarios; land, inland waters and coastal waters/beaches, and how to prevent, control and remediate the environmental damage caused by spillages from the site. Information on the auditing, training requirements, reporting forms and any associated documents.
EMS 364 Lime Spill Management Procedure	Outlines the procedure for managing lime chemical spills at STCs. Defines the responsibilities of staff, and the procedure for managing the spill including the spill assessment and notification and escalation. Information on the auditing, training requirements, reporting forms and any associated documents.
EMS 365 Discharges Procedure	Defines the procedure that must be adopted when managing intermittent discharges. Outlines the responsibilities of staff in relation to the procedure and

## SUPPORTING EMERGENCY PROCEDURES – IMP

Procedure Reference	Brief summary
	outlines the procedure where an emergency discharge is foreseeable for both emergency and stormwater and potable water. Information on the auditing, training requirements, reporting forms and any associated documents.
EMS 381 Operational Waste Procedures	Specifies the procedure for managing wastes. The procedure addresses the definitions of different waste types and outlines a general procedure for managing waste. Identifies where further procedures should also be followed for specific waste types e.g., asbestos, WEEE and waste oils. Information on the auditing, training requirements, reporting forms and any associated documents.
EMS 382 Hazardous Waste Procedures	Specifies the procedure for moving hazardous waste between different sites. The procedure addresses identifying hazardous waste, storage of hazardous waste, consignment notes and record keeping. Information on the auditing, training requirements, reporting forms and any associated documents.
EMS 461 Chemical Risk Assessment (Form)	<p>A template for a chemical risk assessment including the following:</p> <ul style="list-style-type: none"> <li>• Site details</li> <li>• Chemical details</li> <li>• Chemical classification</li> <li>• Risk activity</li> <li>• Risks for health, fire/dsear and environment</li> <li>• Handling, usage and storage requirements</li> <li>• Management of spills</li> <li>• Disposal</li> <li>• Safety data sheet.</li> </ul>
EMS 480 Waste Descriptions	<p>Provides written descriptions of different waste types covering the following:</p> <ul style="list-style-type: none"> <li>• Process giving rise to the waste,</li> <li>• Waste characteristics,</li> <li>• Handling advice,</li> <li>• Containment</li> <li>• Disposal.</li> <li>• Name of waste</li> <li>• Waste classification</li> <li>• Producer and registered office details</li> <li>• EWC</li> <li>• Controlled Waste Regulations 2012 description</li> <li>• Waste type</li> <li>• Form</li> <li>• Temperature; and</li> <li>• SIC code.</li> <li>• Information on the auditing, training requirements, reporting forms and any associated documents.</li> </ul>
FEC 307 Reporting of Unauthorised Access, Including Loss, Theft and Vandalism	Outlines the responsibilities of staff in relations to the reporting these incidents, and the procedure to be followed. Also includes Information on the auditing, training requirements and any associated documents.
FEC 320 Process Related Incidents	Specifies the procedures to follow in responding to process-related pollution incidents. Responsibilities of staff are outlined in the procedure, as well as contacting the FEC, FEC actions and reporting procedures. Information on the auditing, training requirements, reporting forms and any associated documents.



## SUPPORTING EMERGENCY PROCEDURES – IMP

Procedure Reference	Brief summary
FEC 322 – Spillage Procedure	<p>Outlines the responsibilities of staff in relation to the procedure. The procedure outlines the process for handling spillages on site including:</p> <ul style="list-style-type: none"> <li>• Spillage assessment</li> <li>• Notifications and Escalation</li> <li>• Containment</li> <li>• Awareness and Training</li> <li>• Information on the auditing, training requirements, reporting forms and any associated documents.</li> </ul>
IMPO_101 – Overview of the Incident Management Plan	<p>This document sets out the overall structure of the Incident Management Plans and provides a short overview of each of the main plans.</p>
IMP 217 and IMP 218 Team Roles – Objectives and Responsibilities	<p>Sets out the Objectives and Responsibilities for roles within the Incident Management Team and provides guidance for the ELT Representative. IMP 217 identifies when Southern Water should contact the Environment Agency, and IMP 218 identifies the process for contacting other authorities.</p>
BCP 415 Guidance on Reporting Potential Media Interest	<p>Sets out the types of incidents to be reported back by Field Operations Staff &amp; Contract staff working on behalf of Southern Water that will potentially attract media interest, including contact numbers.</p>
CCM 302 Procedure Following the Receipt of a Fire Alarm	<p>Provides a consistent regional approach to dealing with any formal notification of a fire alarm within the Company. Outlines the responsibilities of staff, the procedure for when a fire alarm notification is received, inspections/audits, training and any associated documents.</p>
SIB 603 Risk Assessment and Safety Instructions for Fire Awareness	<p>Covers the following:</p> <ul style="list-style-type: none"> <li>• Training needs of staff and fire wardens</li> <li>• What Managers must provide (i.e. fire safety meetings, plans)</li> <li>• Inspections</li> <li>• Safety instructions for occupied sites, unoccupied sites, and company vehicles</li> <li>• Firefighting procedure</li> <li>• Records to be completed</li> </ul>
CAT 303 Actions Following Severe Weather or Flood Warnings	<p>Outlines the plan of actions that should be undertaken following severe weather or flood warnings and the responsibilities of the staff under these circumstances. The procedure details checklists for the following scenarios: impending severe weather, flood watch, flood warning, severe flood warning, and an all clear checklist. Also includes Information on the auditing, training requirements and any associated documents.</p>
Environmental Emergencies Poster (EMS)	<p>A poster which should be displayed on all sites. The poster lists the type of emergency (fires, spills etc) and both the action which should be undertaken the contact phone number which should be called. The poster also highlights a list of things which should be checked prior to work starting such as the H&amp;S notice boards, environmental notice boards and continuity plans.</p>
Pollution 30 Minute Plan	<p>Outlines a five-step plan for responding to a pollution incident in 30 minutes and outlines what should be done at each of the five stages.</p>
Site Chemical Risk Register	<p>Southern Water electronic database containing an inventory of hazardous substances used and stored by Southern Water and those relevant to individual sites, helping Southern Water to control substance use and comply with the COSHH regulations.</p>

## SUPPORTING EMERGENCY PROCEDURES – IMP

Procedure Reference	Brief summary
Alternative Response Coordinators Booklet	These documents provide flowcharts and a step-by-step guide for completing the Alternative Response tasks.

The EMS certification can be found in Document reference 790101\_MSD\_EMS December 2023.

### 5.6 Question 5a: Site layout plan and process diagram

Plans provided, to satisfy question 5a, can be found in the following stand-alone documents:

- Site Layout and Location Plan - Document reference 790101\_MSD\_SiteLayoutPlan\_FOR September 2024
- Drainage Plan - Document reference 790101\_MSD\_DrainagePlan\_FOR
- Schematics - Document reference 790101\_MSD\_Schematics\_FOR Sept 2024

### 5.7 Question 5b: Site condition report

In accordance with Environment Agency requirements, a Site Condition Report (SCR) has been produced to demonstrate the condition of the land and groundwater at the Site on issue of the proposed permit. The SCR included the following details (section 1 to 4 of the Environment Agency template<sup>4</sup>).

- Site details
- Condition of the land at permit issue
- Permitted activities and
- Changes to the activity

A copy of the SCR can be found as document reference 790101\_MSD\_SCR\_FOR Sept 2024.

### 5.8 Question 6: Environmental risk assessment

As part of the application for an environmental permit, operators must assess the risk to the environment and human health from the activities that they propose to undertake, using the methodology outlined in the Environment Agency's 'Risk assessments for your environmental permit'<sup>5</sup>.

The Environmental Risk Assessment (ERA) sets the requirements for the management of the permitted area, emission control measures etc. It assesses the risks to the environment, amenity and human health. All control measures within the rules must be adhered to in order to obtain the permit.

The ERA assesses the impacts from the following environmental concerns:

- Point source and fugitive emissions to air;
- Point source and fugitive emissions to water and land;
- Noise and vibration;
- Odour;
- Litter, mud and debris;

<sup>4</sup> Environment Agency (2013). Environmental permitting: H5 Site condition report. Available online at: <https://www.gov.uk/government/publications/environmental-permitting-h5-site-condition-report>

<sup>5</sup> Environment Agency (2020) Risk assessments for your environmental permit. Available online at: <https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit>

- Vermin and insects (pests);
- Human health and environment safety (i.e. visual impacts, site security, flood risk); and
- Natural habitats and ecology.

Where emissions result in insignificant effects these have been screened out and where further detailed assessments of potential environmental impacts are required this is noted.

A copy of the ERA can be found as document reference 790101\_ERA\_FOR February 2024. Constraints maps have been updated to demonstrate human receptors to a radius of 2km, as shown in document reference 790101\_ERA\_Maps\_FOR February 2024.

## 6 Part C3 – Variation to a bespoke installation permit

### 6.1 Question 1: Table 1a: Activities applied for

Table 6.1: Question 1, Table 1a: Activities applied for

Installation name	Schedule 1 or other references	Description of the Activity	Activity capacity	Annex I (D codes) and Annex II (R codes) and descriptions	Hazardous waste treatment capacity	Non-hazardous waste treatment capacity
Ford STC	S5.4, Part A (1), (b) and (i)	Anaerobic digestion	Annual: 144,610	Recovery or a mix of recovery and disposal of non-hazardous waste with a biological treatment capacity exceeding 100 tonnes per day if the only waste treatment is anaerobic digestions. R3 – Recycling/reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes) R13 – Storage of waste pending any of the operations numbered R 1 to R 12.	0	Annual: 144,610
			Daily: 396			Daily: 396
		Use principally as a fuel or others means to generate electricity (dryer, as per EPR/KP3130 KX)		R1		
<b>Directly associated activities</b>						
	Physical treatment of waste	Recycling/reclamation of organic substances which are not		R3		

Installation name	Schedule 1 or other references	Description of the Activity	Activity capacity	Annex I (D codes) and Annex II (R codes) and descriptions	Hazardous waste treatment capacity	Non-hazardous waste treatment capacity
		used as solvents				
	Waste reception	Import of liquid sludge and cake		R3 D9		
	Use of biogas	Use principally as a fuel or other means to generate energy		R1		
	Use of auxiliary standby flares	Incineration on land		D10		
	Standby boilers	Used for emergency only		R1		
	Diesel Generators	Used for emergency only		R1		
	Use of pressure release valves	Used for emergency only				
	Storage	Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced).		R13		
	Raw material storage	Storage of raw materials including chemicals, lubrication oil, antifreeze, diesel, activated carbon		R05		
	Discharge of condensate	Condensate from the CHP exhaust, flare gas pipelines, gas storage bag from collection to				

Installation name	Schedule 1 or other references	Description of the Activity	Activity capacity	Annex I (D codes) and Annex II (R codes) and descriptions	Hazardous waste treatment capacity	Non-hazardous waste treatment capacity
		the point of discharge at the adjacent WTW.				
	Storage of biogas	From receipt of gas from AD plant to dispatch for use (as per EPR/KP3130 KX)				
	Discharge to foul sewer	Discharge of liquid from general site drainage, condensate knock out pots and cooling water system to head of treatment works (as per EPR/KP3130 KX)				
<b>For installations that take waste</b>	Total storage capacity	5328m <sup>3</sup> + two 16tonne ro-ro skips for back-up cake storage				
	Annual throughput	Anaerobic digestion 144,610 Indigenous sludge, imported liquid sludge and imported sludge cake 431,098 (to be accepted) Cess imports 70,586m <sup>3</sup>				

**Table 6.2: B4 Table 1a: Activities applied for (waste operation activity)**

Name of waste operation	Description of the waste operation	Annex I (D codes) and Annex II (R codes) and descriptions	Hazardous waste treatment capacity	Non-hazardous waste treatment capacity
Acceptance of liquid sludge waste (digestate) at post digestion	Physical treatment of waste. Recycling/ reclamation of organic substances which are not used as solvents.	R3	N/A	Daily: <50 tonnes
For all waste operations	Total storage capacity	Acceptance of liquid sludge waste (digestate) at post digestion: N/A, as it is fed through the remaining process after digestion to the centrifuge for dewatering		
	Annual throughput (tonnes each year)	Acceptance of liquid sludge (digestate) at post digestion for dewatering: 18,000 wet tonnes.		

The variation application is to modernise the conditions of the existing 'landfill' gas engine (<3Mw) activity (A29)' (as referred to on the Public Register, the engine utilises biogas) as authorised under permit reference EPR/KP3130KX and to add the scheduled activity for Anaerobic Digestion and the DAAs to the same permit.

### 6.1.1 Question 1: Table 1b: Types of waste accepted

Southern Water requires the permit for the Ford STC to be authorised to accept sludge waste to undergo anaerobic digestion to comply with the Industrial Emissions Directive. It is requested the annual quantity of indigenous sludge, imported liquid sludge and imported sludge cake to be accepted is 431,098 None of the requested wastes are hazardous. The types of waste accepted are shown in Appendix A.

## 6.2 Question 2: Point of source emissions to air, water and land

### 6.2.1 Emissions to air

**Table 6.3: Part C3, Question 2, Table: Point source emissions to air**

Installation name Ford STC				
Point source emissions to air				
Emissions point and reference location	Source	Parameter	Quantity	Unit
Stack 1 SU 99462 03155 (A06)	CHP engine exhaust stack burning biogas	Oxides of Nitrogen (as NO <sup>2</sup> )	500	Mg/m <sup>3</sup>
		Carbon Monoxide	1400	Mg/m <sup>3</sup>
		Sulphur Dioxide	350	Mg/m <sup>3</sup>
		Total VOCs	1000	Mg/m <sup>3</sup>
Stack 2 SU 99451 03077 (A05)	Waste gas burner (flare stack)	Operating hours	No limit set	
Boiler 1 SU 99459 03140 (A07)	Dual fuel stand by boiler exhaust stack – operating on biogas or natural gas	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	250	Mg/m <sup>3</sup>
		Sulphur Dioxide (if burning biogas)	200	Mg/m <sup>3</sup>
Boiler 2 SU 99465 03143 (A13)	Dual fuel stand by boiler exhaust stack – operating on biogas or natural gas	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	250	Mg/m <sup>3</sup>
		Sulphur Dioxide (if burning biogas)	200	Mg/m <sup>3</sup>
Gas holder SU 99442 03121 (A04)	Gasholder pressure relief valves	Biogas release and operational events	No limit set	
Pressure relief valves on Digester 1 SU 99457 03108 (A01)	Biogas release and operational events	Biogas release and operational events	No limit set	
Pressure relief valves on Digester 2 SU 99471 03119 (A02)	Biogas release and operational events	Biogas release and operational events	No limit set	
Pressure relief valves on Digester 3 SU 99486 03129 (A03)	Biogas release and operational events	Biogas release and operational events	No limit set	
Odour control units		Ammonia	20	Mg/m <sup>3</sup>

Wet Scrubber OCU SU 99438 03094 (A09) GAC OCU SU 99401 03058 (A10)	Channelled emissions to air as identified on-site plan including tank vents biofilter and/or scrubbing system	H <sub>2</sub> S  Odour concentration	No limited specified  1000	Que/Nm <sup>3</sup>

The emission points are shown in drawing reference 790101\_MSD\_SiteLayoutPlan\_FOR September 2024.

### 6.2.2 Emissions to water (other than sewer)

Drainage from the central areas of the Site sends water to the head of the works for treatment. Road run off drains to a soakaway.

There will be no point sources emissions from the Site. There are no direct potentially contaminated discharges to controlled surface waters.

Accidental releases of materials to the environment are controlled through adequate containment measures and working procedures in accordance with the EMS. Spill procedures are in place under EMS363 and 364 as well as pollution prevention procedure EMS360. All spillages are recorded in the site diary including actions taken.

### 6.2.3 Emissions to sewers, effluent treatment plants or other transfer off-site

The release of liquors from the sludge treatment process is considered to be a point source emissions or direct discharges to controlled waters or public sewers, as part of the permit operation. The site layout plan, drawing reference 790101\_MSD\_SiteLayoutPlan\_FOR September 2024, identifies the point at which liquors leave the site to enter the WTW at the inlet. A sampling location has also been identified on the site layout plan, although sampling will be undertaken as part of a wider implementation plan under BAT and IED. An implementation plan is shown in document reference 790101\_MSD\_ImplementationPlan December 2023. It is therefore, considered that this will be added as Improvement Conditions to the permit.

Drainage from the central areas of the Site sends water to the head of the works for treatment. There are also some unknown drainage connections near the liming plant.

Discharges will be minimal, typically arising from periodic maintenance/cleaning operations. As such, there are no direct potentially contaminated discharges to controlled surface waters and no significant impacts. All drainage (surface water or foul water) will be captured by the on-site drainage system and returned to the head of the WTW. A drainage plan of the Site is presented in document reference 790101\_MSD\_DrainagePlan\_FOR.

The stormwater drainage of potentially contaminated areas from within the Site boundary will be routed into the sewage treatment process with no discharge outside of the Site.

Any areas of the Site, where there is a risk of contamination of surface water, groundwater or discharge of process waters are located on impermeable concrete surface.

A list of the point source emissions to sewers, effluent treatment plants and other transfers off-site is included as Table 6.3.



**Table 6.4: Part C3, Question 2, Table 2: Point source emissions to sewers, effluent treatment plants or other transfers off-site**

Emission point reference and location	Source	Characteristics	Monitoring/mitigation measures prior to final discharge and emission point discharge
Discharged to Ford WTW via inlet works SU 99443 03120	Condensate from the gas pipelines and gas storage bag	Condensate with slightly elevated levels of H <sub>2</sub> S dissolved from the biogas, resulting in a low level of acidity.	Negligible  Rerouted to adjacent WTW. Sampling point S5 on the site layout plan.
Boiler Maintenance SU 99405 03030	Boiler blow down to minimise damage from high mineral content water	High purity with traces of chemicals (used for boiler dosing)	Infrequent and negligible  Rerouted to adjacent WTW. Sampling point reference S4 on the site layout plan.
Drain down of plant SU 99405 03030	Occurs during maintenance when it is necessary to drain down the feed water, hot well or boiler shell	High purity water with traces of chemicals (used for boiler dosing)	Infrequent  Rerouted to adjacent WTW
Rainwater SU 99405 03030	Uncontaminated roof water from buildings	Clean rainwater from building roofs only	Negligible  Rerouted to adjacent WTW
Surface water drainage SU 99418 03091	Run off from impervious surfaces	Clean rainwater from runoff	Routed to head of works via site drainage system. Sampling point reference S3 on site layout plan.
Thickener liquor returns SU 99413 03099	Thickener liquor returns	Variable	Rerouted to adjacent WTW. Sampling point reference S1 on the site layout plan.
Wash water SU 99405 03030	From the washing down of mechanical equipment during maintenance activities	Variable	Negligible  Rerouted to adjacent WTW
Dewatering Liquors SU 99416 03099	Process liquors from the STC	Variable from processes	Discharged to adjacent WTW. Sampling point reference S2 on the site layout plan.

Please refer to the ERA (document reference 790101\_ERA\_FOR December 2024) on the environmental risk the water emissions pose and how these are mitigated, where relevant.

#### 6.2.4 Emissions to land

There will be one point source emissions to land as part of the activities carried out on-site. Perimeter drains capturing road run-off go to a soakaway. However, these will be diverted to the site drainage as part of the works required to construct the secondary containment solution as part of BAT19.

**Table 6.2: Part C3, Question 2, Table 2: Point source emissions to land**

Emission point reference and location	Source	Characteristics	Monitoring/mitigation measures prior to final discharge and emission point discharge	
Soakaways NGR SU 99480 03158 (A11) and SU 99492 03166 (A12)	Run off from road	Clean rainwater from roads only	Negligible	Discharged to the ground

Discharges will be minimal, typically arising from periodic maintenance/cleaning operations, and is captured in spill trays. The condensate from the CHP exhaust, gas bag and digester is collected in a sump and returned to the head of the works.

Indigenous sewer grit and screenings are collected in separate skips and removed off-site by road vehicle and transported to a suitably permitted facility.

Releases of raw materials to land are considered to be negligible due to adequate containment of the materials within suitable storage vessels, the provision of bunding and the presence of a contained drainage system.

Please refer to the ERA (document reference 790101\_ERA\_FOR February 2024) on the environmental risk the water emissions pose and how these are mitigated, where relevant.

### 6.3 Question 3a: Operating techniques

This section provides a technical overview of the components, the proposed techniques and measures to prevent and reduce waste arising and emissions of substances and heat, including during periods of start-up or shut-down, momentary stoppage and malfunction, and leaks. Specifically, consideration is made of:

- The technology to be used;
- The process, in terms of how it will be operated and controlled;
- In-process controls and Best Available Techniques (BAT) Assessment; and
- Measures implemented to control emissions to air, water, sewer and land.

Table 6.5 lists the technical guidance notes (TGNs) used to inform the techniques and measures proposed to prevent and reduce waste arising and emissions of substances, including during periods of start-up and shut down, momentary stoppage and malfunction, and leaks.

The technical guidance and BAT requirements will also be addressed within Southern Water's Ford Management Plan, as part of the EMS, to be made available to staff to ensure compliance with a permit, which covers the following:

- Management of activities, including security and staffing
- Emissions and monitoring, including:
  - Point sources to air, water and land
  - Fugitive emissions
  - Site drainage
  - Storage of waste

- Odour, noise and vibration
- Site record keeping

**Table 6.3: Part C3, Question 3a, Table 3: Technical standards**

Installation name		
<b>Goddard's Green STC</b>		
<b>C3 – Installation</b>		
Description of the schedule 1 activity or directly associated activity	Best available technique (BATC, BREF or TGN reference)	Document reference
Section 5.4 non-hazardous waste installation - anaerobic digestion installation regulated under the Industrial Emissions Directive, utilisation biogas for energy	<ul style="list-style-type: none"> <li>• Biological waste treatment: appropriate measures for permitted facilities</li> <li>• Non-hazardous and inert waste: appropriate measures for permitted facilities</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="https://www.gov.uk/guidance/biological-waste-treatment-appropriate-measures-for-permitted-facilities/1-when-appropriate-measures-apply">https://www.gov.uk/guidance/biological-waste-treatment-appropriate-measures-for-permitted-facilities/1-when-appropriate-measures-apply</a></li> <li>• <a href="https://www.gov.uk/guidance/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</a></li> </ul>
<b>B4 – Waste activities</b>		
Description of the waste operation	Appropriate measure (TGN reference)	Document reference
Temporary storage of imported cake (raw or digested)	<ul style="list-style-type: none"> <li>• Non-hazardous and inert waste: appropriate measures for permitted facilities</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="https://www.gov.uk/guidance/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</a></li> </ul>
Acceptance of liquid sludge waste (digestate) at post digestion, for dewatering	<ul style="list-style-type: none"> <li>• Biological waste treatment: appropriate measures for permitted facilities</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="https://www.gov.uk/guidance/biological-waste-treatment-appropriate-measures-for-permitted-facilities/1-when-appropriate-measures-apply">https://www.gov.uk/guidance/biological-waste-treatment-appropriate-measures-for-permitted-facilities/1-when-appropriate-measures-apply</a></li> </ul>
<b>General</b>		
All activities	Guidance	Document reference
	<ul style="list-style-type: none"> <li>• Monitoring stack emissions: technical guidance for selecting a monitoring approach</li> <li>• M1 sampling requirements for stack emission monitoring</li> <li>• Environment Agency environmental permitting guidance, including:</li> <li>• Risk assessments for your environmental permit</li> <li>• Energy efficiency (Energy efficiency for combustion and energy from waste power plants)</li> <li>• Noise assessment and control</li> <li>• H4 Odour management</li> <li>• H5 Site condition report</li> <li>• Control and monitor emissions for your environmental permit</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="https://www.gov.uk/guidance/monitoring-stack-emissions-technical-guidance-for-selecting-a-monitoring-approach">https://www.gov.uk/guidance/monitoring-stack-emissions-technical-guidance-for-selecting-a-monitoring-approach</a></li> <li>• <a href="https://www.gov.uk/government/publications/m1-sampling-requirements-for-stack-emission-monitoring">https://www.gov.uk/government/publications/m1-sampling-requirements-for-stack-emission-monitoring</a></li> <li>• <a href="https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit">https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit</a></li> <li>• <a href="https://www.gov.uk/guidance/energy-efficiency-standards-for-industrial-plants-to-get-environmental-permits">https://www.gov.uk/guidance/energy-efficiency-standards-for-industrial-plants-to-get-environmental-permits</a></li> <li>• <a href="https://www.gov.uk/government/publications/noise-and-vibration-management-environmental-permits">https://www.gov.uk/government/publications/noise-and-vibration-management-environmental-permits</a></li> <li>• <a href="https://www.gov.uk/government/publications/environmental-permitting-h4-odour-management">https://www.gov.uk/government/publications/environmental-permitting-h4-odour-management</a></li> <li>• <a href="https://www.gov.uk/government/publications/environmental-permitting-h5-site-condition-report">https://www.gov.uk/government/publications/environmental-permitting-h5-site-condition-report</a></li> <li>• <a href="https://www.gov.uk/guidance/control-and-monitor-emissions-for-your-environmental-permit">https://www.gov.uk/guidance/control-and-monitor-emissions-for-your-environmental-permit</a></li> </ul>

Source: Mott MacDonald

A copy of the schematics describing the operation and process can be found in document reference 790101\_MSD\_Schematics\_FOR February 2024.

### 6.3.1 BAT Assessment

An assessment against the BAT Conclusions set out in the 2014/738/EU: Commission Implementing Decision of 9 October 2014 establishing best available techniques (BAT)

conclusions, under the Industrial Emissions Directive 2010/75/EU has been undertaken for all the 16 sites, as a whole, and the outcome of these conclusions can be found in document reference 790101\_MSD\_BAT\_FOR February 2024. This document reflects the existing arrangement at site and any commitments Southern Water has already made during the ongoing application process. It is acknowledged that it does not fully meet BAT in some instances. Changes to site will be undertaken and completed to meet BAT, where applicable. The changes required will be submitted to the Environment Agency, in plans to be submitted as part of Improvement Conditions within the permit, for their agreement and Southern Water's subsequent implementation. An implementation plan has shown in document reference 790101\_MSD\_ImplementationPlan December 2023.

Included in the Implementation Plan is for the wastewater inventory monitoring to be undertaken as per BAT 2, and further information is addressed in section 6.4.3. On-going monitoring is proposed to be in line with BAT AELs and monitoring frequencies are applicable to treatment of water-based liquid waste and biological treatment of waste, these are outlined in Table 6.1 and Table 6.2 of the BAT assessment.

The Odour Management Plan (document reference 790101\_ERA\_OdourMP\_FOR September 2024) has also been prepared in accordance with the following BAT conclusions, in addition to the H4 guidance:

Supplementary documents for the BAT assessment are provided:

- BAT 1, 21 and 38: Accident Management Plan (AMP) is provided in 790101\_MSD\_AMP\_FOR November 2024. Catastrophic failures, of tanks for example, will be included in the AMP once final designs are agreed based on the findings in CIRA/ABDA assessment.
- BAT 1, 11, 22 and 35: Residues Management Plan (RMP) is provided in 790101\_MSD\_ResidueMP\_FOR September 2024.
- BAT 1, 8, 10, 12, 13, 14, 33, 34 and 52: Odour Management Plan (OMP) is provided in 790101\_ERA\_OdourMP\_FOR December 2024.
- BAT 1: Environmental Management System is provided in 790101\_EMS Certificate December 2023.
- BAT 2 and 52: Description of the waste acceptance and pre-acceptance procedures provided in 790101\_WasteAcceptance\_FOR September 2024.
- BAT 3, 6, 7 and 20: Sampling commitment and proposal for characterisation is provided in 790101\_Sampling proposal\_FOR December 2024.
- BAT 14: Leak Detection and Repair Plans (LDAR) are provided in 790101\_MSD\_LDAR\_FOR February 2024.
- BAT 14: Bio-aerosols Risk Assessment (BRA) is provided in 790101\_ERA\_BioRA\_FOR February 2024.
- BAT 17: Environmental Risk Assessment (ERA) is provided in 790101\_ERA\_FOR September 2024.
- BAT 19 and 38: ABDA Tool and proposed containment solution is provided in 790101-MMD-IED-GOD-CA-C-001 - IED Goddard's Green ADBA Tool P04 and the site layout plan 790101\_MSD\_SitelayoutPlan\_FOR September 2024.
- BAT 19: Covering of tanks is provided in the Implementation Plan, 790101\_MSD\_Implementation Plan December 2023.
- BAT 19: Drainage is provided in 790101\_ERA\_Drainage Plan\_FOR July 2021.
- BAT 23: Energy Efficiency is provided in 790101\_MSD\_Main\_FOR December 2024

- BAT 34: Reducing channelled emissions, addressed in the Odour Management Plan (OMP), provided in 790101\_ERA\_OdourMP\_FOR December 2024.
- BAT 53: Reducing emission of hydrochloric acid (HCl), ammonia (NH<sub>3</sub>) and organic compounds to air addressed in the Odour Management Plan (OMP), provided in 790101\_ERA\_OdourMP\_FOR December 2024.

### 6.3.2 Appropriate measures assessment

In addition to the Bref and associated BATc, the appropriate measures will form part of the technical standards the Site operates:

- Non-hazardous and inert waste: appropriate measures for permitted facilities
- Biological waste treatment: appropriate measures for permitted facilities

As the Site is existing some aspects of the Appropriate Measures do not apply, as the Site was built and operated prior to the issue of the guidance. Southern Water are committed to develop the application of the key principles from the guidance into Site operation and associated management plans as soon as practicable, to ensure the following:

- Reducing or preventing contamination
- Preventing cross contamination by segregation
- Maintaining appropriate primary and secondary containment
- Ensure the Site does not exceed site capacity (design and permitting constraints)
- General management:
  - Operate with a Management System
  - Operate with applicable specific management plans (odour, accident and residue plans)
  - Inspection, maintenance and monitoring regimes
  - Maintaining and reviewing staff competency requirements
  - Maintaining appropriate security measures across the Site
  - Record keeping procedures
  - Contingency plans
- Maintaining appropriate waste storage and suitable segregation, to prevent environmental impacts. Includes tank inspection and maintenance regimes
- Operate and calibrate process monitoring systems
- Record keeping of process outputs, and appropriate handling of residues
- Emissions controls, including prepare an emissions inventory
- Apply process efficiency measures for energy, raw materials, water use and waste minimisation.

As per document reference 790101\_Sampling proposal\_FOR September 2024, sampling and analysis in relation to permitted waste operations, other than those related to Scheduled Activities, will be undertaken in line with 'Non-hazardous and inert waste: appropriate measures for permitted facilities' guidance text, using an MCERTS accredited, or equivalent, laboratory, where available. This commitment is related to the acceptance of imported wastes to the post digestion at the Site.

## 6.4 Question 3b: General requirements

### 6.4.1 Overview

The section provides an overview of the measures in place at the Site for controlling fugitive emissions, noise and odour. An ERA has been completed and is provided with the application

(Document reference 790101\_ERA\_FOR February 2024). The response to this question relates to Table 4 in the Part C3 form.

#### 6.4.2 Control of fugitive emissions to air

There are no significant fugitive emissions to air of gases, vapours, or particulates as part of normal Site operation.

Details of the procedures Southern Water follow with regards to the control of mud and debris and potentially polluting leaks and spillages are addressed in the EMS.

An updated H1 assessment has been completed and can be found in 790101\_H1 Tool v8\_FOR February 2024.

An Air Quality Risk Assessment has been undertaken to assess the impacts from point sources emissions at the site, and the results are presented in 790101\_AQRA\_FOR February 2024.

The existing approaches and relevant procedures presented in the EMS and operational procedures are considered to adequately address the emissions that may present a risk, and, therefore, an Emission Management Plan is not considered be required.

##### 6.4.2.1 CHP and flare

Southern Water confirms that they plan to replace the existing CHP and flare at Ford as it does not meet the requirements for biogas combustion. In addition, work will be undertaken to ensure full BAT compliance including for access, ports and measuring/monitoring devices.

Gas modelling shows the site is expected to flare for 11.4% of the time for the current equipment. The planned replacement of the CHP engine will ensure the flare is operated less frequently once the work is completed. The meter at Ford is of an older (mechanical) type and is not able to directly provide flare run hours data.

This meter will be replaced as part of flare replacement and ensure all required signals for data collation and reporting are provided, along with additional considerations regarding monitoring and access for testing.

Air Quality Risk Assessment (AQRA) will be updated for the new CHP and flare once the appropriate design has been completed.

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).

##### 6.4.2.2 Odour

The Site is located to the west of the hamlet of Ford, approximately 7km northeast of Bognor Regis. The area surrounding the site is mixed industrial and agricultural usage. To the north is a waste management centre with agricultural fields elsewhere. To the west and south, agricultural fields surround the Site with areas of residential housing. To the southeast is HMP Ford, a large prison, with further agricultural fields surrounding.

There are no sensitive receptors found within 500m of a potential emission source downwind of the prevailing wind direction; the receptor closest to a potential emission source is a sports recreational facility, which is located approximately 65m west of the post screening storage tanks.

The site odour control comprises of a single stage dual-tower wet chemical scrubber, using alkaline scrubbing liquor to treat odorous air, and a dedicated granular activated carbon (GAC) unit for the sludge building.

The wet chemical scrubber odour control unit (OCU) treats odorous air extracted from the PSTs, inlet works, sludge reception, lime silo and centrifuges. A GAC OCU is installed to treat odorous air from the sludge building. Odorous air passes through a layer of chemically impregnated GAC which absorbs odours, the treated air is then discharged via stack. The concentrations of H<sub>2</sub>S in the discharge air are measured using a tape monitor with the results being recorded on SCADA.

Carbon filters are fitted on the CHPs to filter gas prior to use, and H<sub>2</sub>S monitors are present around the Site.

There is also a single stage wet chemical scrubber OCU, which utilises an alkaline scrubbing liquor to treat odorous air from the dryer building, however, as the dryer has been mothballed it has been assumed that this system is not currently running. If the dryer was to become operational again, these systems would need to be re-implemented.

Three odour complaints have been received between 2018 and 2023.

The Site has an OMP, reviewed and updated February 2024 which identifies potential odour emissions from site operations and procedures to manage, control and minimise odour impacts. It sets out the procedures for engaging with neighbours and how the Operator will manage complaints, and the actions to be taken in the case of pollution events. The OMP also describes the monitoring and maintenance procedures to maintain the control measures. The EMS 341 air quality and odour management also sets out the process for responding to odour complaints arising from customer contact.

The OMP was written in accordance with the Environment Agency's H4 Odour Management guidance (2011). The level of odour risk from the Site is considered to be Medium as shown in Appendix B of the ERA (document reference 790101\_ERA\_FOR February 2024) and the OMP provides significant mitigation.

The odour management plan can be found in document reference 790101\_ERA\_OdourMP\_FOR September 2024.

#### 6.4.2.3 Noise

Initial screening has been carried out for the Site. Since the Site is not undergoing changes to equipment and vehicle movements prior to application submission, a Noise Impact Assessment (NIA) is not considered to be required. Appropriate mitigation for noise and vibration impacts are provided by the ERA.

A Noise and Vibration Management Plan would be required whereby the NIA concludes that noise and vibration requires management, such as monitoring and maintaining abatement measures. Since noise and vibration impacts are considered to be appropriately mitigated in the ERA, a Noise and Vibration Management Plan is also not considered to be required.

There have not been any noise complaints recorded at the Site in the past five years.

#### 6.4.2.4 Dust and particulates

There are not considered to be any significant dust or particulate sources from the site as identified in the ERA document reference 790101\_ERA\_FOR February 2024.

#### 6.4.2.5 Bio-aerosols

A bioaerosols risk assessment has been undertaken for the Site and considers the risk to be low to medium.

The bioaerosols risk assessment can be found in 790101\_ERA\_BioRA\_FOR February 2024.

### 6.4.3 Control of fugitive emissions to surface water, sewer and groundwater

There are not considered to be any fugitive emissions to surface water, sewers or groundwater. There is appropriate containment for the control of liquid wastes put in place to minimise any potential releases, as identified in the EMS.

### 6.4.4 Control of fugitive emissions to land

Details of waste generated at the site is demonstrated in document reference 790101\_MSD\_ResidueMP\_FOR February 2024.

To reduce volumes of waste:

- All materials and consumables delivered to Site are inspected to ensure that they are fit-for-purpose. Damaged items are refused and returned to the supplier.
- The sludge from the post digestion sludge storage tank is dewatered by two centrifuges to reduce its volume. Dewatered digested cake is stored one 100m<sup>3</sup> silo prior to being transported off-site for recycling to agricultural land as a soil conditioner.
- Sewage sludge is de-watered from the works to be treated at the Site. Treated sludge is then recycled to agricultural land as a soil fertiliser. The treated sludge meets the Biosolids Assurance Scheme Quality Standards. The volume of sludge recycled to agricultural land is monitored by the waste services team.
- The biogas from the AD process is burned in a CHP engine and is used to provide power for the Site processes.
- Polymer intermediate bulk containers (IBCs) are sent back to the supplier for re-use.
- Grit is collected for composting and used as a soil conditioner. This process is licenced and controlled via the Environment Agency.
- WEEE, batteries, waste oils and oil contaminated items such as oily rags are treated as waste hazardous waste in accordance with legislation, these are removed from Site by an approved supplier, using approved waste carriers.

## 6.5 Site security

Activities are managed and operated in accordance with the management system.

Access to site and waste is restricted by a 2.8m high chain link security fence. An 8ft high steel palisade gate secures the main access and is automatically operated. The Site is staffed 24 hours a day, 7 days a week. For visitors and unauthorised personnel an intercom system at the Site entrance is used. The Site also benefits from a CCTV system.

Regular inspections of the boundary fencing, and buildings are undertaken to ensure that these have not been compromised and continue to prevent easy access to site. Repairs are undertaken in accordance with the EMS requirements.

Other risks relating to human health and the environment are presented in Appendix B of the ERA in document reference 790101\_ERA\_FOR December 2024.

## 6.6 Complaints procedure

All complaints received relating to any aspect of the Site and its activities will be recorded and acted upon. Complaints, and actions taken, will be either recorded in the Site Diary or on a complaints record form. If a Site receives a complaint, this form should be completed and shown to the Environment Agency when they next inspect the Site. The forms will be used as evidence that any complaints received have been taken seriously and that actions have been taken to rectify any problems identified.



Complaints will be investigated promptly and any appropriate remedial action taken. The complainant and anyone else likely to have been affected, should be informed about what has been found and actions taken in a timely manner. The details of the complaint and the actions taken will be recorded in the Site Diary or log.

The aim will be to undertake measures to prevent complaints from being raised. However, where this is not possible, proactive measures will be taken to prevent further complaints from being made. For example, if a complaint is made with respect to dust, the Site Manager will arrange for dust suppression equipment to be used. The Site Manager will assess whether further control measures will be required to ensure that the risk of recurrence is minimised. The details of the complaint will be recorded in the Site Diary and the complaints register. If a complaint is received Southern Water will be informed as soon as is practicable and the complaints procedure will be followed. Confirmation will be recorded in the Site Diary or inspection log. The Site Manager will inform the Environment Agency of the complaint, if appropriate.

Any drivers who regularly cause a dust or mud and debris nuisance as a result of mismanagement of their vehicles will be discussed and advice will be sought from the Site Manager, if relevant.

If a complaint is made with respect to insects the Site Manager will investigate whether any of the activities at the Site could be the source of the nuisance.

If a complaint is made with respect to litter the Site Manager will arrange for litter pickers to clear up as appropriate and will assess whether further control measures will be required to ensure that the risk of recurrence is minimised. The details of the complaint will be recorded in the Site Diary and the complaints register.

Any complaints relating to fugitive emissions and the actions taken will also be recorded in the Site Diary and copies of the incident reports (including those provided to the Environment Agency) retained on-Site.

If a complaint is made with respect to vermin or an infestation is suspected, where normal treatment activities appear to be unsuccessful, the Site Manager will discuss and agree any further measures required with the pest control firm. The complaint reporting procedure will be followed as described below.

If a complaint is made with respect to noise or vibration the Site Manager will assess the cause of the complaint and will report the findings. If the noise or vibration leading to the complaint has been caused by a continuing operation, additional noise or vibration surveys may be required to confirm the degree of impact upon the receptor. The Site Manager will make any recommendations for further noise or vibration control to the Management Team and shall inform the Environment Agency of the complaint as soon as it is practicable to do so.

In the unlikely event that a complaint is made with respect to odour the Site Manager will investigate the source of the odour and take steps to reduce its impact. If the source appears to come from the Site, then appropriate actions to reduce the odour will be taken.

### 6.6.1 Complaints investigation procedure

In the event of any complaint, this section deals with the complaint assessment procedures. The primary role of this assessment will be to ascertain whether the complaint is associated with any Site operations and what action should be taken to prevent or minimise the probability of a recurrence.

It is important that any person acting on behalf of Southern Water is appropriately trained and that all steps and decisions are documented.

### **Step 1 – Complaint received**

The Site operator or Environment Agency receives a complaint regarding the STC. Details logged within the Customer Services Management System (CSMS).

### **Step 2 – How to respond**

Complainant is contacted to inform them the complaint has been received and request further information, where required.

The primary reasons for investigation of complaints are to identify the likely cause and source for the complaint and it is important to gather as much information about the complaint as possible. At the outset of any investigation, the Site Manager is to determine the priority for responding to the complaint.

If possible, someone from the Environment Agency will attend after a complaint has been made so that they can carry out an effective and subjective appraisal of the complaints and note any results into the CSMS.

### **Step 3 – Determine what to record and how**

The complaint details and the investigation outcomes and actions taken are to be recorded in the CSMS. This information must be filled in on-site at the time of notification of the complaint.

### **Step 4 – Follow-up investigation**

In order to resolve any problems successfully, it is essential to understand fully the source, reason and the operational conditions that led to the complaint. The first step in the investigation will be to select the most appropriate methodology for assessment. All the information collected should be filled in on the internal complaints form and a note made referencing this in the CSMS.

### **Step 5 – Communication with the complainant**

The Site Manager or contractor tasked with addressing the complaint is responsible for collecting all the information and providing feedback to the complainant, or the Customer Contact Centre will contact the complainant. Wherever possible an explanation of the actions taken and the reasons for the decision should be made to the complainant.

If it is decided that there was no ground for the complaint this should be clearly explained to the complainant, along with information about what they should do if they are unhappy with the response.

### **Step 6 – Monthly complaints records**

A full report of the complaints logged within the CSMS is produced to present to the relevant Technician to allow a review of potential trends.

## **6.7 Question 3c: Types and amounts of raw materials**

Details of raw materials is demonstrated in document reference 790101\_MSD\_ResidueMP\_FOR February 2024.

## **6.8 Question 4: Monitoring**

This section provides a summary of the proposed monitoring at the Site.

### 6.8.1 Emissions to air

Stack emissions monitoring will be undertaken for each stack in accordance with M5 monitoring guidance, MCERTs BS EN 14792 and the requirements of the environmental permit issued for the Site, where suitable and available.

Periodic monitoring will be undertaken on an annual basis as part of the routine maintenance programme. No abatement technology is required, and continuous monitoring is not considered necessary. Sample monitoring will be carried out after each maintenance period on the CHP and boilers, in order to ensure compliance with ELVs as required in the Environmental Permit.

Once permitted monitoring will be undertaken in accordance with the relevant standards. It is anticipated the monitoring standards required are as follows:

**Table 6.4: Monitoring of air emissions**

Emission point type	Parameter	Reference period	Monitoring frequency	Monitoring standard or method
Stacks on engines Burning biogas	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	periodic over minimum 1-hour period	Annual	In accordance with TGN M5 – Monitoring of stack emissions to air
	Carbon monoxide			
	Sulphur dioxide			
	Total volatile organic compounds including methane			
Boilers (biogas and natural gas)	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	periodic over minimum 1-hour period	Annual	In accordance with TGN M5 – Monitoring of stack emissions to air
Channelled missions to air (scrubbing system)	Ammonia	periodic over minimum 1-hour period	Once every 6 months, or more frequent if stated in the permit	Emissions of pollutants into the environment through any kind of duct, pipe, stack, etc
	H <sub>2</sub> S			
	Odour concentration		Once every 6 months, or more frequent if stated in the permit	BS EN 13725
Flare	Operational hours	Recorded duration and frequency.	Continuous	Operational record including date, time and duration of use shall be recorded
Pressure relief valves	Biogas release and operational events	Recorded duration and frequency.	Daily inspection	Operational record including date, time duration of pressure relief events and calculated annual mass release

### 6.8.1.1 Assessment of sampling locations

Version 13 of the Application Form C3 was made available on 7 December 2021, which includes a new question 4b point source emissions to air, that requires details of the design of the sampling locations. The application to vary the permit has been prepared to meet the deadline set by the Environment Agency, however, the gathering of information to respond to Form C3 Qu4b was not feasible. Southern Water will respond to the list of queries in Form C3 Qu4b as soon as practicable following the submission.

Southern Water will, where suitable and available, undertake any monitoring, sampling and analysis of emissions to air or water in accordance with MCERTS, or equivalent agreed standards, by relevant and appropriately accredited contractors. An assessment of sampling locations is not appropriate as this will be the responsibility of the sub-contractors.

### 6.8.2 Emissions to water (other than sewers)

There will be no point sources emissions from the Site. There are no direct potentially contaminated discharges to controlled surface waters. As such no monitoring or reporting is required.

### 6.8.3 Emissions to sewers, effluent treatment plants or other transfers off site

The release of liquors from the sludge treatment process is considered to be a point source emissions or direct discharges to sewers, as part of the permit operation. The site layout plan, drawing reference 790101\_MSD\_SiteLayoutPlan\_FOR September 2024, identifies the point at which liquors leave the site to enter the WTW at the inlet. A sampling location has also been identified on the site layout plan, although sampling will be undertaken as part of a wider implementation plan under BAT and IED.

Southern Water confirm that they will undertake a chemical analysis of their wastewater, from the STC entering the adjacent WTW, which tests all pollutants they expect to find in the discharge to fully characterise the emissions to water. They propose a minimum of 12 sampling runs over a 12-month period (1 full sampling spec per month) initially to establish a baseline, in accordance with the surface water pollution risk assessment guidance or other applicable guidance such as MCERTS or ISO standards, where appropriate. Southern Water will then take an informed viewpoint of the determinants the samples contain demonstrating those that are not in the sample. An H1 assessment to screen out any that are not applicable or relevant will be completed. Sampling and analysis will be undertaken using a UKAS accredited, or equivalent, laboratory. This commitment falls within the Implementation Plan for meeting BAT and IED compliance. An implementation plan is shown in document reference 790101\_MSD\_ImplementationPlan December 2023. It is therefore, considered that this will be added as Improvement Conditions to the permit.

Drainage from the central areas of the Site sends water to the head of the works for treatment. There are also some unknown drainage connections near the liming plant (thought to lead to soakaways, but surveying will be undertaken during containment solution works).

The condensate from the CHP exhaust, gas bag and digester is collected in a sump and returned to the head of the works and will undergo treatment through the works before being discharged under an existing environmental permit for discharge to water. This condensate is clean, uncontaminated water and occurs in small volumes. As such, no monitoring or reporting is required. There are no direct releases to public sewers, effluent treatment plants or other transfer off-site of emissions arising from the STC.

#### 6.8.4 Emissions to land

There will be one point source emissions to land as part of the activities carried out on-site, perimeter drains go to a soakaway, and discharges will be minimal.

The condensate from the CHP exhaust, gas bag and digester is collected in a sump and returned to the head of the works.

As required by the Southern Water EMS various housekeeping and waste management practices are in place to monitor waste emissions. These include segregation of wastes according to their classification and nature, labelling waste and using designated storage containers.

In accordance with the Southern Water EMS Policy solid waste is disposed of in accordance with 'Duty of Care' Regulations. The composition of the waste, its hazard characteristics and any relevant precautions are clearly stated on the transfer notes provided to licensed waste contractors removing waste from Site for recycling and/or disposal. Records are maintained on-site and reported to the regulator as required by the Permit.

### 6.9 Environmental impact assessment

The proposal is not subject to an environmental impact assessment under Council Directive 85/337/EEC of 27 June 1985 [Environmental Impact Assessment] (EIS).

### 6.10 Question 6: Resource efficiency and climate change

#### 6.10.1 Basic energy requirements

Biogas is a renewable gas, produced from organic waste and is reused on-site to power its energy requirements. A key objective of the Southern Water EMS is to reduce energy consumption from the grid. Southern Water have a specific Energy and Carbon Manual which contains objectives for the energy consumption. Southern Water recognise that target setting for, and measurement of, energy and carbon reduction is pivotal to reducing energy use and carbon emissions in new and existing installations. Southern Water is currently in the process of better understanding economic levels of energy efficiency, renewable energy generation and carbon reduction (embodied and operational), which will help the company develop and set company and project level reduction targets.

Southern Water aims to maximise the efficiency of the energy flows from its processes ensuring that, where possible, heat is recovered, and energy is not wasted.

There are a number of pieces of infrastructure and equipment that use electrical energy supply including:

- Fans, coolers and heating;
- Motors and motor drivers and drive systems;
- Aeration;
- Pumps/boosters/conveyors;
- Facilities - heating and lighting;
- Sludge handling and management e.g. AD, dewatering and polymer dosing equipment; and
- Ventilation and odour control/abatement systems.

Biogas is used to provide energy, produced by burning in a CHP engine, for the Site's processes. Biogas and natural gas is used for heating or running the boilers, and diesel is used for primary generators where required.

### 6.10.2 Question 6a: Basic measures for improving energy efficiency

Southern Water deals with the measurement and reporting of operational carbon emissions for existing installations through:

- Monitoring of energy use from electricity meters
- Annual estimation and reporting of operational carbon emissions for regulatory reporting (Southern Water Annual Report, Ofwat and SECR (Streamlined Energy & Carbon Reporting))
- ESOS audit reporting - the Energy Savings Opportunity Scheme (ESOS) is a regulatory requirement to undertake a company-wide audit of energy efficiency opportunities. This is approved by a Lead Assessor and completion is subsequently registered with the Environment Agency. Reporting is every four years. The last report was December 2019. The next is due June 2024.

Energy efficiency measures implemented at the Site include (but not limited to) the following:

- The combustion temperature is optimised for reduced NOx emissions and increased efficiency.
- CHP engine is equipped with turbocharger, further increasing energy efficiency.
- Consideration of energy recovery and the deployment of renewable energy systems - review of opportunities relating to CHP, wind and solar power generation opportunities for the site.
- The Field Performance Manager can request advice from the Optimisation Team to improve efficiency of plant if required.
- There are monthly efficiency hubs that look at energy efficiency. Key energy consuming assets are monitored through a suite of dashboards and actions are raised to resolve highlighted issues.
- Activated sludge plants (ASP) are audited for efficiency and actions raised accordingly. Outputs from the audits are used to inform future investment such as blower replacement.
- ASP blowers replaced with more energy efficient models to improve ASP efficiency.
- Switchgear upgraded to prevent simultaneous import and export of grid energy and to ensure utilisation of CHP output to power site.

Biogas is a renewable gas, produced from organic waste. Heat generated from the CHP is used in the AD process. The energy created by burning of biogas in the CHP engine is used to supply the Site to reduce the need to import electricity from the grid.

The development of an energy efficiency plan will be considered once the Site is permitted; this will determine areas of improvement and will be developed under SWS Environmental Policy and EMS.

Southern Water carries out planned maintenance as a means to ensure operations are energy efficient. Overall, the energy use is relatively low and the purpose of the installation is to produce energy by supplying biogas, no further measures are identified at this stage to improve upon energy efficiency. Nevertheless, Southern Water will regularly review energy use and disclose potential opportunities to reduce energy consumption from the four-yearly (or more frequent) energy reviews as required by a varied permit. In addition, Southern Water implements optimisation measures across all its sites in a proactive approach to ensuring efficiency measures across all its Site operations meets optimal and efficient operating requirements.

### 6.10.3 Question 6b: Changes to the energy the permitted activities use up and create

There will not be any changes to the energy that the permitted activities use or create.

### 6.10.4 Question 6c: Climate change levy agreement

Southern Water is not a participant to the Climate Change Levy (CCL) agreement.

### 6.10.5 Question 6d: Raw and other materials, other substances and water use

Details of raw materials is demonstrated in document reference 790101\_MSD\_ResidueMP\_FOR February 2024.

All materials will be handled and stored in such a way as to ensure containment. Fugitive emissions to the environment are therefore negligible.

Biogas is the primary raw material. Its consumption will be monitored. The use of biogas as the fuel source offers the best environmental option and there is therefore no environmental incentive to reduce biogas consumption and consider an alternative source of fuel.

Biogas is stored within 1 No. double membrane inflatable bag type holder, constructed of a Type IV fabric, which is resistant to UV and microbial degradation. The base of the holders are constructed from reinforced concrete treated to withstand the potentially acidic conditions within the holder. The gas bag is completely enclosed so the gas is not in contact with the concrete.

Secondary raw materials include chemicals used in processes such as water treatment, polymer and diesel for the boilers and generators. Their consumption will be monitored, based on purchase records.

The Southern Water purchasing procedures are included in EMS. The procedures ensure purchased items conform to specified requirements, including quality parameters, and review suitability for use, including efficiency and minimisation of use of raw materials.

All substances are assessed for COSHH (Control of Substances Hazardous to Health) compliance, where relevant. Material safety data sheets for all materials used and kept on-site will be maintained on the Site.

All raw materials are handled and stored within the confines of the buildings on-site, or in IBCs in banded areas, with the exception of biogas which is contained within the gas handling system.

Potable water usage on-site include:

- Polymer make up - concerns over the impact of using final effluent for this purpose
- Heat exchanger system water - concerns over the impact of using final effluent for this purpose
- Eye baths and safety showers - potable water essential
- Limited wash-down points where it would be uneconomic to extend the final effluent wash-water system
- Office mess facilities - kitchen, washing and welfare facilities etc
- Odour control units
- Boilers

To ensure appropriate use of raw materials to prevent releases of substances to the environment and limit environmental impact Southern Water will follow quality assurance procedures for the purchasing of materials. The raw materials will be selected from specialist suppliers determined by pre-established material specifications, and will include environmental

considerations. Priority choice of purchased raw material will be given to those with the least environmentally harmful chemicals compared to their alternatives, wherever practicable.

Resource efficiency will be achieved through the minimum use of raw materials and water (where possible), and Southern Water will undertake the following:

- Maintain records of raw materials and water used;
- Routine resource efficiency audits;
- Review the feasibility of alternative materials that could reduce environmental impact or provide further opportunities to improve resources efficiency at least once every four years; and
- Implement further appropriate measures identified from a review.

#### 6.10.6 Question 6e: Reducing production of waste

Southern Water manages its waste in accordance with the Council Directive 2008/98/EC on waste (the Waste Framework Directive), legal requirements and the EMS (ISO 14001:2015), by maximising materials re-use, prevent waste, minimise waste generation and maximise recycling and recovery of waste generated from the operation of the Site. There are procedures in the EMS which includes details of the types of waste produced on-site, how wastes are segregated, stored and removed from Site. Only minimal volumes of waste shall be generated at the STC, with waste streams segregated and recovered for recycling where possible. All waste streams shall be managed in accordance with existing EMS', with any final off-site disposal to be carried out by licensed waste contractors in accordance with Duty of Care requirements, and the application of the waste hierarchy is central to any decision-making process.

Implementation of EMS procedures and the current Environmental Policy ensures optimum disposal of the wastes produced. Submission of a detailed assessment is not considered necessary due to the minimal quantity of waste produced.

Further consultation with waste contractors will ensure that all waste streams have been considered. The sampling and characterisation of wastes will be covered under the requirements of Duty of Care. The wastes are handled to a minimum and are stored in suitably designed containers prior to being removed from Site, to minimise releases of pollutants to the environment.

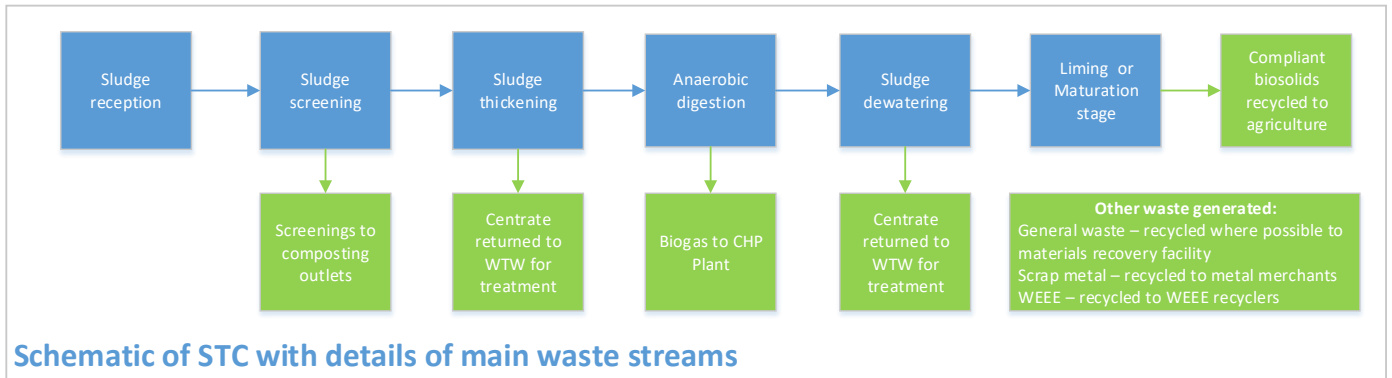
The main wastes produced by the installation are waste oils and filters associated with the operation and maintenance of the engines. Other wastes include from Site office (paper, packaging etc), waste collected from general housekeeping across the Site (debris, litter), scrap metals and waste electronic and electrical equipment (WEEE), such as computer equipment, printers etc.

Waste generation from the operation of the plant is minimal and limited only to essential maintenance fluids and materials. Waste streams are segregated and recovered for recycling where possible, as shown in document reference 790101\_MSD\_ResidueMP\_FOR February 2024 for different Site activities. General waste is sent for recycling, where possible, scrap metal is sent to metal merchants for recycling and WEEE sent to specialist WEEE recycling facilities. Southern Water apply a Duty of Care by ensuring waste is removed by a suitable licenced waster carrier.

The sampling and characterisation of wastes and the final off-site transport of waste is carried out by licensed waste contractors in accordance with Duty of Care requirements. The implementation of EMS procedures and the current Environmental Policy ensures optimum disposal of the wastes produced.

A schematic of the main waste streams from the STC is shown below.





## 7 Part B6 – New bespoke water discharge activity or groundwater activity (point source discharge) or point source emission to water from an installation

The form responds to question listed in Table 1 of the B6 application form for the last listed option 'Effluent and/or contaminated surface water run-off arising from the operation of an installation.

Therefore, only the following questions have been responded to:

Type of effluent	Charge band	Please tick box	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Effluent and/or contaminated surface water run-off arising from the operation of an installation	No additional charge, as already included as part of the installation permit application charge	<input checked="" type="checkbox"/>	a, b, d	c	b, c, d, f	--	a, b2	a, b, c	b, c, d, e, f, g	b, d, e, f	a, b, d, e, f, h, i	a, b, c

\* Check the relevant question and our guidance notes on part B6 to see if you need to give an answer.

Note Question 6c is not within the application, despite being listed as being required by Table 1 of the application form.

### 7.1 Question 1 About the variation you are applying for

Effluent description: Return liquors from the STC process and condensate from the gas pipelines and gas storage bag.

Effluent name: STC return liquors.

### 7.2 Question 2 How long will you need the discharge for?

The discharge will not be time limited, will take place all year and continuously (e.g. for more than six days in any year).

### 7.3 Question 3 How much do you want to discharge?

Southern Water is not aware of the quantity of water sent to the inlet works from the STC because it is not currently monitored, therefore no details have been provided for Question 3. An implementation plan (document reference 790101\_MSD\_ImplementationPlan December 2023) has been developed as part of the accompanying IED permit application.

### 7.4 Question 5 Should your discharge be made to the foul sewer?

The discharge point (inlet works, W1 (document reference 790101\_MSD\_SiteLayoutPlan\_FOR February 2024) is located within the operator's own wastewater treatment works, therefore, the distance to the nearest foul sewer is 0m and response to Question 5b2 is not applicable.

### 7.5 Question 6 How will the effluent be treated?

Effluent is not treated before reaching the inlet work because once leaving the inlet work the effluent will be treated through the Wastewater Treatment Works. The process description is

provided in Section 3. An implementation plan has been developed as part of the accompanying IED permit application.

### 7.6 Question 7 What will be in the effluent?

Southern Water is not aware of the composition of the effluent discharged to the inlet works from the STC because it is not currently monitored, therefore, no details have been provided for Question 7.

The temperature of effluent is not known but since the water is not direct from processes it is expected to be ambient.

An implementation plan has been developed as part of the accompanying IED permit application. It is expected that Improvement Conditions in the IED permit will be provided and Southern Water will identify how it will monitor and characterise the liquors returning to the head of the adjacent Ford WTW.

Where suitable and available, any monitoring, sampling and analysis of emissions to water is undertaken according to MCERTS, or equivalent standards, by MCERTS accredited contractors, as set out in Southern Water's commitment in section 6.8.3.

### 7.7 Question 8 Environmental risk assessments and modelling

#### Discharges to tidal river, tidal stream, estuary or coastal waters

Southern Water is not aware of the composition of the effluent discharged to the inlet works from the STC because it is not currently monitored, therefore, screening cannot be undertaken at this time.

An implementation plan has been developed as part of the accompanying IED permit application. It is expected that Improvement Conditions in the IED permit will be provided and Southern Water will identify how it will monitor and characterise the liquors returning to the head of the adjacent Ford WTW.

Where suitable and available, any monitoring, sampling and analysis of emissions to water is undertaken according to MCERTS, or equivalent standards, by MCERTS accredited contractors, as set out in Southern Water's commitment in section 6.8.3.

### 7.8 Question 9 Monitoring arrangements

Effluent monitoring will be in line with permit conditions. An implementation plan has been developed as part of the accompanying IED permit application. It is expected that Improvement Conditions in the IED permit will be provided and Southern Water will identify how, and the final locations of where, it will monitor and how it characterise the liquors returning to the head of the adjacent Ford WTW.

Where suitable and available, any monitoring, sampling and analysis of emissions to water is undertaken according to MCERTS, or equivalent standards, by MCERTS accredited contractors, as set out in Southern Water's commitment in section 6.8.3.

### 7.9 Appendix 4 Discharges to tidal river, tidal stream, estuary or coastal waters

The discharge of final effluent from the WTW is permitted under the consent number A787/S/CH/97 via a long sea outfall within the English Channel at National Grid Reference TV 0511 9844. The permit authorises the discharge of secondary treated sewage effluent only.

## 8 Part F1 – Charges and declarations

### 8.1 Question 1: Working out charges

Table 1, Table 2 and Table 3 are completed on the Part F1 form.

### 8.2 Question 2: Payment

Payment will be made by BACS.

### 8.3 Question 4: Confidentiality and National Security

Southern Water do not wish to claim confidentiality with this application.

### 8.4 Question 6: Applicant checklist

Table 8.1 provides a list of section/document references included in the application.

**Table 8.1: Part F1, Question 6, Table 4: Application checklist**

Question reference	Document title	Documents reference
Part A – Q5c Part A – Appendix 1 Part C2 – Appendix 2	Details of Directors	790101_MSD_Directors February 2024
Part C2 – Q3a Part C2 – Appendix 2	List of Relevant Offences	790101_MSD_RelevantOffences December 2023
Part C2 – Q3b	Competency Management System Agreement	790101_MSD_CMS December 2023
Part C2 – Q3d	Environmental Management System Certificate	790101_MSD_EMS December 2023
Part C2 – Q5a	Site Location Plan	790101_MSDS_SiteLayoutPlan_FOR September 2024
	Site Layout Plan	
	Drainage Plan	790101_MSD_DrainagePlan_FOR
Part C2 – Q5b	Site Condition Report	790101_SCR_FOR February 2024
Part C2 – Q6	Environmental Risk Assessment	790101_MSD_ERA_FOR February 2024 790101_MSD_Maps_FOR February 2024
	Climate Change Risk Assessment	790101_ERA_CCRA_FOR
	Air Quality Risk Assessment and model files (within folder)	790101_AQRA_FOR February 2024 Model files folder: 'Ford Models'
	H1 assessment tool	790101_H1 Tool v8_FOR February 2024
Part C3 – Q1b Part C4 – Q1b	Waste Codes	Appendix A of 790101_MSD_FOR February 2024
Part C3 – Q3a	Schematics	790101_MSD_Schematics_FOR Sept 2024
Part C3 – Q3c	BAT Analysis	790101_MSD_BAT_FOR February 2024
Part C4 – Q3a	Implementation Plan	790101_MSD_Implementation Plan December 2023
	Leak detection and repair Plan	790101_MSD_LDAR_FOR February 2024
	Residues Management Plan	790101_MSD_ResidueMP_FOR February 2024
	Accident Management Plan	790101_MSD_AMP_FOR February 2024
	Duty of care (waste acceptance)	790101_MSD_DutyofCare_FOR February 2024
	Part C3 – Q3b	Odour Management Plan

Question reference	Document title	Documents reference
Part C4 – Q3b	Bioaerosol Risk Assessment	790101_ERA_BioRA_FOR February 2024
Part C3 – Q3c, Table 5	Materials Safety Data Sheets	790101_MSD_MSDS_FOR February 2024
Part B6	Discharges	Section 7 – 790101_MSD_Main_FOR September 2024
Part A – Q7	Main Supporting Document	790101_MSD_Main_FOR September 2024
Part C2 – Q2,3,5,6		
Part C3 – Q1,2,3,4,6		
Part C4 – Q1,2,3,4		
Part F1 – Q1,2,6		

# A. Waste Codes

## A.1 Wastes imported for Anaerobic Digestion

It is requested that the annual quantity of sludge to be anaerobically digested is 144,610 wet tonnes

EWC Code	Description	Where accepted	Indigenous or imported	Justification for use
<b>19 02</b>	<b>wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)</b>			
19 02 06	sludges from physico/chemical treatment other than those mentioned in 19 02 05 (raw sewage sludge only)	AD	Indigenous/ Imported	Pre-AD
<b>19 08</b>	<b>wastes from waste water treatment plants not otherwise specified</b>			
19 08 05	sludges from treating urban wastewater	AD	Indigenous/ Imported	Pre-AD

## A.2 Part B4: Wastes to import for dewatering

It is requested that the annual quantity of imported liquid sludge to be accepted for dewatering is 2,000 wet tonnes per year.

EWC Code	Description	Where accepted	Indigenous or imported	Justification for use
<b>19 06</b>	<b>wastes from anaerobic treatment of waste</b>			
19 06 06	digestate from anaerobic treatment of animal and vegetable waste - digested sludge only	Post digestion (PDST) for dewatering	Imported	Used for intersite transfers of post digested liquid sludge as per EMS480. Common example of this is if centrifuges are offline which necessitates exports of digested liquid. Definition is with reference to RPS231. <a href="https://www.gov.uk/government/publications/waste-codes-for-sewage-sludge-and-sludge-containing-other-materials-rps-231/waste-codes-for-sewage-sludge-and-sludge">https://www.gov.uk/government/publications/waste-codes-for-sewage-sludge-and-sludge-containing-other-materials-rps-231/waste-codes-for-sewage-sludge-and-sludge</a>