South West Water

Hayle Waste Water Treatment Works

Environmental Management System Summary

September 2021

Revision	Date	Description	Author	Checked by	Reviewed by
01	10/09/2021	EMS Summary	Jenny Lundh	Jo Pope 15/09/2021	Peter Duncan

CONTENTS

Appendices

1 INTRODUCTION

A summary of the EMS is required by Environment Agency (EA) application form Part C2, Question 3d. SWW operate their own EMS, which meets the requirements outlined in EA Guidance, Develop a Management System: Environmental Permits[1] (EMS Guidance).

South West Water's EMS is a consolidated management system made up of around 5,000 documents, stored in an electronic library and easily accessed by all staff via the company intranet. Some of these documents are site-specific and others are generic.

The system is a combined Environmental Management and Quality Management System and is both ISO 14001 and 9001 accredited.

Documents are published via a dedicated Document Controller and are reviewed regularly to ensure that the EMS is always up to date.

Management Plan documents submitted as part of this application will eventually be part of the EMS. Version 1 of each management plan document is an application document, and then Version 2 onwards will be a procedure in our EMS with a different format but the same content. For this reason, some EMS documents are referred to here in the future tense.

A hard copy of the Environmental Permit (EP) is kept on Site.

SWW have an Environmental Policy which outlines how the company aims to protect and improve the environment and its commitment to becoming a truly sustainable company. The Environmental Policy is in Appendix A.

In addition to the information provided in the following sections, the EMS includes a Waste Permit Procedure document for Hayle WWTW which includes information on how SWW meets the conditions of the current Waste Permit (permit no. EPR/NP3696HH), as well as an Environmental Risk Assessment. A copy of the Waste Permit Procedure is included in Appendix B. Upon issue of the installation permit, this will be replaced by an Installation Permit Procedure, including details of regular internal reviews, notifications and procedures for operations and monitoring / inspections.

The site is also a waste water treatment works and has a discharge permit, no. NRA-SW-0782, permitting discharges of treated effluent, storm overflows and emergency overflows to St. Ives Bay. These activities are also managed under the EMS.

Training, communication and management of operations are carried out in accordance with EMS.

This section outlines the main documents which make up the current SWW EMS. The following sections mirror the headings of prevailing EMS Guidance and include documents that will be added to the EMS. SWW has associated procedures and records, which aim to ensure compliance with Condition 1.1.1 of their EP.

[1] https://www.gov.uk/guidance/develop-a-management-system-environmental-permits

Hayle EMS Summary

The main SWW documents forming relevant parts of the current EMS are:

Hayle WWTW site-specific documents:

Title	Date published
Hayle HACCP Plan: anaerobic digestion	22/07/2020
Hayle STW Waste Permit Management (including Environmental Risk Assessment)	30/03/2021
Odour Management Plan	02/10/2020
Odour Control Log	29/01/2020
Spill Prevention Plan	19/02/2020
Site Drainage Plan	29/01/2020
Contingency Plan	29/01/2020
Sludge Treatment log: anaerobic digestion	22/07/2020
Fire emergency plan	24/08/2021
Biogas Schematic	14/01/2021
Waste Permit Treatment Process	28/10/2020
Work instruction: Reception of tankered waste	28/10/2020
Work instruction: Stacking of biosolids	29/01/2020

SWW company-wide documents:

Title	Date Published
Anaerobic Digestion Management	29/04/2021
Anaerobic Digestion Policy	29/04/2021
Wastewater procedure: Sludge Treatment	11/02/2021
Sludge Procedure: Winter Resilience	01/02/2021
Environmental Permitting Procedure: Waste Permit Management	04/11/2020
Biosolids Procedure: Crisis Management Plan	28/05/2020
Biosolids Procedure: Biosolids Recycling	25/11/2020
Environmental Permitting Procedure: Technically Competent Management	05/08/2021
Environmental Permitting Form: Quarterly site inspection	04/11/2020
Sludge and biosolids: Operations signposting	25/11/2020
Current ISO 14001 certificate	21/02/2021

Existing documents are listed above, and new documents as required by IED and prevailing EA guidance will be added by the time of permit issue, as listed in Section 2.

The consolidated management system is audited annually by external auditors to renew the company's ISO 9001 and ISO 14001 accreditation. The next external audit is October 2022.

Risks identified during operation at the site, either from maintenance, changes, incidents will be recorded and actioned using the existing systems listed above as well as new systems listed below.

2 EMS DOCUMENTS

2.1 Site infrastructure plan

The SWW EMS will include an EP Boundary Plan, Infrastructure, Drainage and Site Layout Plans. All site plans will be to scale and will highlight where activities are located. The SWW EMS will also include a Sensitive Receptor Plan, which will be referenced in the ERA and other management plans.

The site infrastructure plan will show any:

- Buildings, and other main constructions, like treatment plants, incinerators/boilers, storage facilities and security fences;
- Storage facilities for hazardous materials like oil and fuel tanks, chemical stores, waste materials;
- Location of items for use in accidents and emergencies e.g. spill kits;
- Entrances and exits that can be used by emergency services;
- Points designed to control pollution, for example inspection or monitoring points;
- Trade effluent or sewage effluent treatment plants;
- Effluent discharge points;
- Mains water stop tap and isolating valves, switches and cut-offs for gas and electricity;
- Routes for gas, electricity and water supplies on the site;
- Any land that is considered or known to be contaminated, for example areas that have previously been used for industrial purposes.

2.2 Site Operations

An Environmental Risk Assessment (ERA) has been produced as part of this EP application. This ERA has been prepared in accordance with EA H1 Environmental Risk Assessment for Permits

Guidance[2] and assesses the mitigation measures SWW will take to reduce impact to the environment. This ERA will form the basis for procedures outlining the following:

- Procedures will include waste acceptance, waste classification, waste rejection, waste storage, handling and labelling. These procedures will include the following information:
    - The longest amount of time that each type of waste will be stored on site;
    - Controls in place to ensure these time limits are not exceeded;
    - The maximum amount of each type of waste stored in terms of volume;
    - Controls to identify the specific types of waste stored on site; and
    - Waste acceptance criteria and rejection procedures to ensure only permitted waste types are accepted on to the site.

The SWW EMS will include an overview of site operations, including a process flowchart showing the operations and resulting waste streams.

2.3 Site and equipment maintenance plan

The SWW EMS includes a system for maintaining plant & infrastructure on the site. This system will include preventative maintenance schedules and routine checks. Machinery will be maintained in accordance with manufacturers specifications. Records will be kept and made available on request to demonstrate compliance. The site has maintenance task sheets which details the task and frequency (i.e. daily, weekly). These are completed on site and available both in paper format for reference and electronically. They are available for recording and reporting for maintenance performance assessment.

SWW also operate a continuous monitoring system which monitors key plant on the site and is remotely viewable by key staff. This system enables the operator to remotely view key metrics with regard to the functioning of plant and will alert the operator in the event of malfunction. Any malfunctions are dealt with and recorded.

2.4 Contingency plans

The SWW EMS includes a series of contingency plans which minimise the impacts to the environment in the event of any unforeseen and foreseen circumstances e.g. breakdowns, enforced shutdowns and any other changes in normal operations (flooding, extreme weather etc.).

[2] https://SWWw.gov.uk/government/publications/h1-environmental-risk-assessment-for-permits-overview

2.5 Accident prevention and management plan

The SWW EMS includes an Environmental Accident Management Plan (EAMP), which will contain information on how SWW will deal with any incidents or events that could cause pollution. The EAMP is centred around a risk assessment for potential incidents (likelihood, consequence and mitigation measures to avoid and/or minimise the impact of an incident). The SWW EAMP will include a list of emergency contacts, contact details for a site sign (for the public), substances stored on site and forms to record accidents or incidents. The EAMP will also consider the risks posed by online security.

The SWW EAMP will also include how accidents and incidents (including near misses) are recorded, investigated and responded to. The review of incident records will inform any amendments that may be required to the SWW EAMP. The SWW EAMP will also include a document review table, including dates for next review.

2.6 A Changing Climate

The SWW EAMP and Contingency Plans will include risks posed by climate change and actions to be taken in an event influenced by climate change e.g. flooding or extreme weather (higher temperatures, storms etc.). In addition, SWW have a climate change adaption plan which sets out how SWW will adapt to climate related hazards; looks at what level of risk each poses and details what adaptation options are in place or are proposed.

2.7 Complaints Procedure

A site notice board is present on site, which includes contact details and relevant information to allow the public to make a complaint. The SWW EMS will include details on how SWW will deal with complaints, how each complaint will be investigated, tracked and the recording of any actions taken as a result of complaints. SWW have a website which allows the public to lodge complaints, at https://www.southwestwater.co.uk/advice-and-services/useful-information/complaints/

SWW aim to respond to all complaints within 10 working days.

2.8 Managing Staff Competence and Training Records

SWW staff will be trained to ensure they are aware of the requirements of the SWW EMS and their responsibilities under the EMS. Staff will also be trained in relation to site operations and management, to ensure that the site is run effectively.

The SWW EMS will include a register of job roles, associated training requirements and dates when training was last received i.e. a 'training matrix'. The training matrix will include all relevant training, including qualifications or informal training. Training records for staff will be kept alongside relevant certificates.

The Site requires an active Technically Competent Manager (TCM) to be present on the Site. An appropriate TCM, either Paul Stevens or Peter Kelland, will be present and will sign into the Site to provide a record for EA Audit.

Paul Stevens's TCM qualification details:

Hayle EMS Summary

Qualification name:	WAMITAB Level 4 Medium Risk Operator Competence for Non-Hazardous transfer/with or without treatment (not otherwise specified) (4MPTNH6)
Certificate number:	OCC65136
Expiry date:	21/08/2016
Continuing Competence certificate number:	5172592
Continuing Competence expiry date:	14/12/2022

Peter Kelland's TCM qualification details:

Qualification name:	WAMITAB Level 4 Medium Risk Operator Competence for Non-Hazardous transfer/with or without treatment (not otherwise specified) (4MPTNH6)
Certificate number:	OCC63388
Expiry date:	26/10/2012
Continuing Competence certificate number:	5184401
Continuing Competence expiry date:	08/09/2023

2.9 Keeping records

Record keeping is essential for demonstrating compliance with Condition 1.1.1. of the Environmental Permit. The SWW EMS will include records associated with procedures and management plans that make up the EMS. A list of records to be kept is including below, but is not deemed exhaustive:

- Permits issued to the site;
- Other legal requirements;
- Environmental Risk Assessment;
- Management system plans;
- Management plans required by the application or permit e.g. odour management plan, noise & vibration management plan, fugitive emissions management plan;
- All operating procedures;
- Duty of Care records, including waste details for waste imported to and exported from the site (quantity, LoW code, origin, producer of the waste, dates that waste was produced and received on site and quarantined waste);
- Documents relating to staff competence and training (for example qualifications, courses attended);
- Emissions and any other monitoring undertaken (for example water samples);
- Compliance checks, findings of investigation and actions taken;
- Complaints made, findings of investigation and actions taken;

- Audits of management system, findings (reports) and actions taken; and
- EMS reviews and changes made to the EMS.

Records are kept in a wide variety of locations and systems.

Site Condition Report

The Environmental Management System includes Part 1 of a Site Condition Report, that will be completed as part of this EP application in accordance with EA H5 Site Condition Report Guidance[3]. The SCR will be updated through the life of the EP, when required. Records will be kept alongside the SCR, including details of pollution incidents e.g. spills and evidence of effectiveness of pollution prevention control measures. A Surrender SCR will be completed at the time of surrender.

2.10 Review of Management System

The SWW EMS, including management plans and procedures, is reviewed on a regular basis. The SWW EMS will also be reviewed when:

- Changes are made to the site, operations or equipment that affect the activities covered by the Permit;
- When the Permit is varied;
- In the event of any accident, complaint or breach of the Permit conditions; and
- If a new environmental issue is encountered and new mitigation or control measures are implemented.

2.11 Site Closure

As mentioned above, a Surrender SCR will be prepared in the event the Permit is surrendered. This Surrender SCR will draw upon the information from Part 1 of the SCR and Part 2 (during the life of the Permit).

2.12 Make Sure People Understand What to do

A copy of the SWW EMS is available on site via the company intranet and will be available for staff to consult during the operational life of the Permit. Staff are trained on relevant sections of the EMS as part of their training program. A copy of the SWW EMS is available and will be provided to the EA or other bodies if required.

[3] https://www.gov.uk/government/publications/environmental-permitting-h5-site-condition-report

Appendix A: South West Water Environmental Policy

South West Water

Bournemouth Water

Environmental Policy

3 Purpose of this policy

To share and communicate our commitment to be a responsible and sustainable business, complying fully and where possible exceeding the requirements of our customers and ISO 14001. This policy applies to South West Water and all its subsidiary companies and is reviewed and, if necessary, revised and updated annually. The policy compliments the Pennon Group Sustainability Strategy (https://www.pennon-group.co.uk/sustainability).

4 Our commitment

The South West Water Board is responsible for establishing this policy and for monitoring and reviewing the environmental performance of South West Water and its subsidiaries. South West Water Executive Management is responsible for implementing this policy. Line management is responsible for ensuring management systems are clearly defined, documented and fully implemented throughout the organisation. All employees have a responsibility to work to the requirements of the management system.

We are focused on providing water and wastewater services in the most efficient and sustainable way possible and achieving our aims of long term success and sustained improvements, in line with environmental priorities identified by our customers within the relevant outcomes:

5 Achieving our commitment

We are committed to continuously monitor and improve environmental performance across all our activities and to create a sustainable environmental culture by:

- Complying with all the relevant legal requirements and standards including Environmental Permitting Regulations 2016, Operator Self Monitoring, ISO 14001 and MCERTS Self-Monitoring of Flow
- Acting to mitigate climate change and to prevent pollution. We remain committed to quality habitat creation, land restoration and environmental protection as part of a wider sustainability strategy with agreed business targets
- Openly communicating on our environmental performance to internal and external stakeholders through our Annual Performance Reports. This includes progress with our specific environmental performance commitments
- Procuring services through approved suppliers and contractors whose environmental practices correspond with our own, in line with our Sustainable Procurement Policy
- Creating appropriate procedures and internal policies which reflect best environmental practice and are suitable for implementation in all areas of the organisation
- Maintaining sustainable abstraction procedures
- Continuing the Upstream Thinking Scheme promoting and supporting catchment-sensitive farming and land management with restoration of lands to improve water quality and natural water storage, to reduce downstream flood risk, to enhance biodiversity and carbon capture
- Achieving a biodiversity net gain across all relevant sites with biodiversity management plans in place
- Fostering an understanding of key environmental issues amongst our employees, suppliers, contractors, customers and the public in line with priorities identified in our business plan
- Promoting conservation access and recreation at relevant sites.
- Implementing an Energy Policy and complying with ISO 50001.

Louise Rowe, Finance
Director Date: 6
November 2019

Appendix B: Hayle WWTW Waste Permit Procedure

1. PURPOSE

This procedure describes the activities carried out at Hayle STW Hayle ('Hayle STW') for Environmental Permitting Regulations (EPR) waste permit compliance.

It is a requirement of EPR that sites with a waste permit operate in accordance with a written management system. This procedure forms part of this written management system to identify the risks of pollution from the activities covered by the waste permit.

2. SCOPE

The scope of this document is limited to the activities undertaken at Hayle STW under the waste permit, and within the designated permitted area (see 1.3). It does not cover any activities regarding compliance with any other permits held, including those for water discharge activities at Hayle STW.

3. RISK

It is a requirement of EPR that site operations are carried out in accordance with a written management system that identifies and minimises risks of pollution. Failure to have or to follow this procedure may result in permit non-compliance or environmental pollution, both of which can result in prosecution.

4. UPDATES

This procedure is reviewed and updated at least once every five years. Any updates to this document supersede all previous versions. The review of this procedure includes checking that any links to additional documents, websites, applications, or other resources, are up to date, but it does not include checking that those linked items are up to date.

5. CONTENTS

6. RESPONSIBILITIES

The **Technically Competent Manager(s)** (TCMs) and the **Site Manager(s)** are responsible for compliance with this procedure on site and for monitoring its effectiveness.

The **Environmental Permitting Team** are responsible for ensuring this procedure meets regulatory requirements and for assisting the TCMs and Site Managers with document review.

Site staff and the **Commercial Tankered Waste Team** are responsible for record keeping of wastes at site.

7. PROCEDURE

8. General

8.1. Site covered by the management plan

Hayle STW is in Hayle near St Ives, and falls within Cornwall Council's area of responsibility. The site is within an operational waste water treatment works that serves the populations of:

- Angarrack
- Connor Downs
- Crowlas
- Goldsithney
- Gwinear
- Gwithian
- Hayle
- Lelant
- Marazion
- Mousehole
- Newlyn
- Penzance
- Perranuthnoe
- Phillack
- Reawla
- St Erth

The waste operation has been carried out under permit since 2004.

Site address:

Hayle STW Hayle,
Station Approach,
St Erth,
Hayle,
Cornwall.
TR27 6LA

Main gate grid reference: SW 5458 3583

Directions to site:

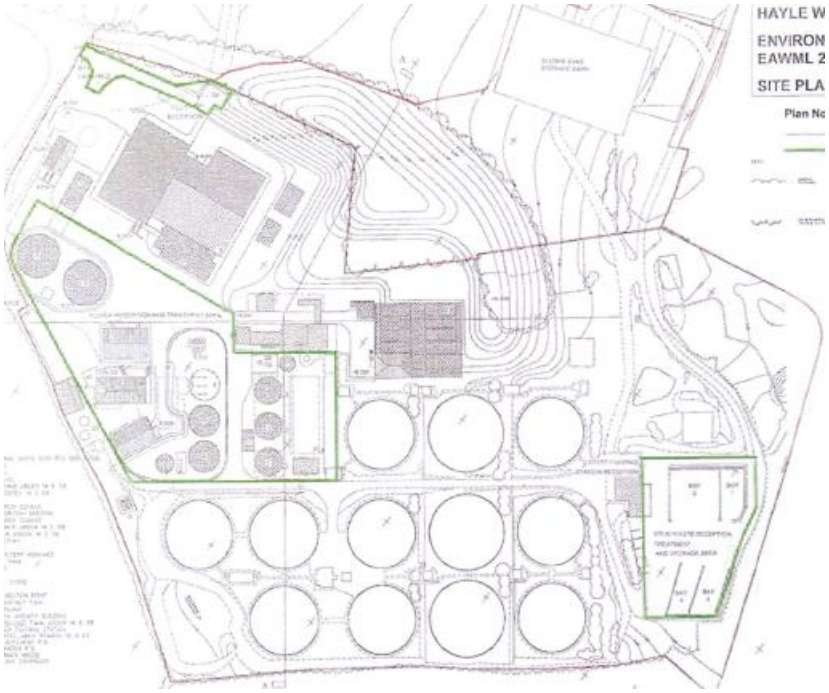
1. From the A30 St Erth Business Park junction with the A3074, take the A30 towards Penzance
2. Take the first turning on the left onto Station Approach, and go under the railway
3. Turn left and follow the road to arrive at the site entrance

Hayle STW
Hayle

8.2. Permit history

DESCRIPTION	DATE	COMMENTS
Original licence issued (EAWML 20704)	2004-08-19	Licence issued by the Environment Agency
Variation determined EPR/NP3696HH V004	2011-09-25	Modifications to area and layout of waste facility, increase in waste types accepted, consolidation of previous licence and variations into modern format
Variation determined EPR/NP3696HH V005	2013-05-21	Additions to EWC list of waste codes

8.3. Permitted area



8.4. Waste types and quantities

The types and quantities of waste to be accepted at the site are conditions of the Environmental Permit issued by the Environment Agency (ref EAWML 20704, also known as EPR/ NP3696HH). Waste inputs are restricted to liquid non-hazardous wastes listed in the permit by European Waste Catalogue (EWC) List of Wastes (LoW) code. The quantities will not exceed those stipulated in these authorisations, with the maximum annual throughput being 86,000 tonnes.

8.5. Operation of the site

Waste management operations at the site are undertaken solely by South West Water, who are the permit holder.

8.6. Authorised activities

The environmental waste permit for the site authorises “the storage, handling, deposit, keeping and treating of pumpable liquid waste”. Site Operations will comply with all applicable legislation (both Environmental and Health & Safety) for the reception, storage, treatment and transfer of material imported at the site.

8.7. Technical competence

The technical competence provision for the site under Regulation 4 of the Waste Management Regulations 1994 is provided by the following South West Water staff who hold the relevant WAMITAB/CIWM qualification:

- Paul Stevens
- Peter Kelland

There is Technically Competent Management attendance at site for a minimum of four hours per week.

8.8. Hours of operation

The waste water treatment process is a continuous 24-hour operation. There are no periods of time specified in the permit for the receipt of tankered waste, however this should be carried out during normal site working hours.

Tankered wastes may be received outside of normal working hours in emergency situations. If any wastes are received outside of normal working hours for any reason the Environment Agency will be informed as soon as practicable.

South West Water sewage sludge may be received outside of normal operating hours in line with procedures agreed with the Environment Agency.

8.9. Availability of waste permit and operational data

The ***Permits Database*** holds the electronic copy of the waste permit for the site, available to all South West Water via the company intranet.

8.10. Contact details

The ***Asset Data and Risk Management Portal*** holds contact details for the Site Manager during operating hours.

8.11. Staffing and management

Whenever the site is open to receive waste, the site is supervised by at least one member of staff who is suitably trained and fully conversant with the requirements of the permit and the management plan with respect to:

- Waste acceptance and control procedures
- Operational controls and monitoring
- Maintenance
- Record keeping
- Emergency action plans

The site operators are responsible for the day-to-day operations at the site, including general housekeeping and maintenance.

Suitable cover is arranged for the Site Manager for annual leave or sickness. All personnel employed at the site will receive training and instruction on the responsibilities and procedures described in this procedure, and the conditions of the permit. This can include professional advice from consultants, external training courses and tool box talks. ***HeRMeS*** holds records of any training received by individuals.

8.12. Emergency or accident situations

For the purposes of this management plan an emergency shall be a situation in which there is an imminent danger of:

- Serious pollution to the environment, or
- Serious harm to human health, or
- The activities authorised become seriously detrimental to the amenities of the locality (i.e. a nuisance)

9. Site infrastructure

9.1. Site layout

The sewage treatment process consists of inlet screening, grit removal, primary settlement, secondary biological treatment, sludge removal, final settlement and then discharge via a long sea outfall to St Ives Bay. The site also has storm treatment. Treatment tanks are above ground in areas of grass and concrete. The site roads are mainly surfaced in concrete, with some tarmac roads. There is one entrance to the site from the lane off Station Approach.

9.2. Site access

South West Water operates a closed gate procedure. During working hours access is obtained by using the call button located at the entrance gate that automatically rings the onsite operator, who then authorises access. Working hours are Monday to Thursday 0800 to 1600, and Friday 0800 to 1530. Out of hours access is via the control room, who will call the standby operator to allow access to the site.

9.3. Site security

The site is surrounded by a security fence and buildings are protected by an intruder alarm system connected by telemetry to the company control room in Peninsula House, Exeter. There is a CCTV system at the site. The gate is inspected regularly and any damage detected is repaired as soon as reasonably practicable.

9.4. Site identification board

A site identification board is prominently displayed at the site entrance. It is maintained to be easily readable in daylight hours, and displays the following information:

- Site name and address
- Permit number
- Operator name
- Emergency contact telephone number (out of hours)
- Statement that the site is licensed by the Environment Agency
- Environment Agency national contact number

In the event of damage or defect, the board is repaired or replaced as soon as reasonably practicable.

9.5. Warning notices

Notices are erected and maintained at the entrance to the site warning persons of the danger of unauthorised access, and the appropriate safety provisions for visitors.

9.6. Site office and welfare facilities

The site office and welfare facilities are permanent buildings and are supplied with power and water. Toilet and welfare facilities are also available. First Aid supplies and PPE for operatives are stored in the main building.

The tankered waste office houses delivery tickets, records of incoming loads and other relevant paperwork. Duty of Care waste transfer notes are stored in the main office. Plant maintenance records are kept electronically.

A notice board is provided in the main office. This displays the Health & Safety Policy and Public Liability Insurance.

9.7. Surfacing and site drainage

All South West Water site roads and impermeable hardstanding areas are constructed in accordance with the National Civil Engineering Specification for the Water Industry (CESWE) applicable at the time of construction. The ***Hayle STW Site Drainage Plan*** shows details of both foul (returning to the works) and surface water drains.

Only foul water drains are found at tankered waste reception points so any spillages return to the works for treatment and do not enter the environment.

9.8. Traffic restriction measures

A vehicle speed restriction of 10mph is in place at the site.

10. Waste reception and storage

10.1. Incoming waste

The authorisations stipulate that Hayle STW will only accept certain categories of liquid waste as listed below:

WASTE DESCRIPTION	EWC LoW CODE	NOTES
Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing	Codes starting 0201	Not acceptable if waste is an animal by-product. If in doubt, waste must not be accepted
Wastes from the preparation and processing of meat, fish and other foods of animal origin	Codes starting 0202	Not acceptable if waste is an animal by-product. If in doubt, waste must not be accepted
Other wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing	Various other codes starting 02	Acceptability with Works Performance Manager must be checked prior to reception
Landfill leachate not containing hazardous substances	190703	
Sludges from treatment of urban waste water	190805	
Sludges from water clarification	190902	
Other wastes from waste management facilities, off site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use	Various other codes starting 19	Acceptability with Works Performance Manager must be checked prior to reception
Septic tank sludge	200304	
Waste from sewage cleaning	200306	

A full list of acceptable wastes is in the permit variation dated 2013-05-21.

10.2. Prohibited wastes

It is illegal to discharge any of the following wastes or for the site to accept them:

- Acid, caustic or toxic wastes
- Animal by-products
- Asbestos waste
- Batteries
- Clinical waste
- Hazardous waste
- Industrial solvents
- Oily sludge
- Pesticides
- Pharmaceutical (medical) compounds
- Photographic waste
- Solid waste
- Tannery sludge
- Tar and paint wastes
- Waste oils, fuels or greases
- Wood preservatives

Incoming materials must have pre-acceptance approval in accordance with the procedure ***Commercial Tankered Waste WWSPR - Management***. Incoming waste is visually checked for compliance at the reception area.

10.3. Non-conforming waste

Upon visual inspection, should any waste fall outside of the permit requirements, the load is rejected from the site. However due to the input sources and pre-acceptance processes, this is a rare occurrence.

10.4. Storage

All waste is deposited straight into the works processes, so there is no discrete tankered waste storage on site.

11. Site operations

11.1. Waste reception

The designated commercial waste tanker reception point is located via a separate entrance within the site curtilage. Tankers reverse into position. Wastes to be treated via the biological waste water treatment plant are accepted through an automated reception logger system. Data including the time and date, vehicle registration number and haulier are interrogated from an electronic key fob, and the origin, waste type and waste transfer note reference number are input by the driver. As the load is discharged the volume and average suspended solids content of the waste is measured, recorded and summarised on the instrument display. All data is transmitted to a remotely hosted database and is interrogated by South West Water via a secure web connection to provide regulatory and performance reporting and billing.

If the automated system is unavailable, loads are discharged as normal and tonnages assume that one cubic metre in volume is equal to one tonne in mass.

Discharged waste combines with the incoming pumped flow from the catchment. Discharges to the inlet cannot be made when the site is running to storm as the discharge is upstream of the storm overflow, with the exception of leachate that can be discharged when the site is running to storm. There is a warning light that flashes when the storm overflow is operating to warn drivers not to discharge. Drains run along the side of the road to capture any spillages and these run back to the treatment works.

Interworks waste reception is carried out in the same manner as for commercial waste reception as above, but must have agreement from the Site Manager prior to any acceptance of interworks sludges. The interworks reception point is within the main site.

11.2. Sewage treatment processes

Incoming flows are pumped into the inlet works from pumping stations within the catchment. These pumped flows are combined with the works drainage liquors. The inlet works comprises of three automatic coarse screens and two manual coarse screens that remove gross solids. The incoming sewage is then degritted by two detritors working on a duty/assist basis. The screenings and grit are washed and dewatered and transferred to a skip on site, where they are then transferred to Tiverton STW Tiverton for further treatment or for disposal at a permitted landfill. The water removed from the screenings and grit returned back to the works inlet channel. The sewage is then screened through five fine screens acting on a duty/standby system. The inlet works is completely covered and kept at negative pressure, with the extracted air passed through an odour control unit before discharging to atmosphere.

After screening, the flow passes through an oxygen contact tank. Here the sewage is injected with oxygen to remove septicity prior to the outdoor stage of the process. Flows up to 675l/s pass to the screened effluent pump sump, which lifts the sewage to the three primary settlement tanks. These tanks are radial flow units that reduce solids and co-settle humus sludge. Raw sludge is drawn off automatically and is pumped to a balancing tank for further treatment.

Flows over 675l/s are directed to a storm water pump sump that has three pumps working on a duty/assist/assist basis. This sump can deliver up to 1401l/s to three storm settlement tanks. After sedimentation the storm water drains to the screened effluent pump sump for return to treatment.

Settled sewage gravitates to three percolating filters, and after filtration the sewage is settled in three humus tanks. The humus tank effluent drains to the outfall pumping station, which lifts the treated effluent into a rising main and out through the sea outfall.

11.3. Sludge treatment processes

Sludges received on site are discharged from the road tanker into the imported sludge reception tank. The tanker discharge point has a non-return valve and a flowmeter, and a warning light system to warn the tanker driver when the tank is full. As a backup, the tanks are fitted with high-level overflows that drains to a filtrate pumping station, which returns any overflows to the works inlet.

Sludge from the sludge reception tank drains to two automatic sludge screens that operate on a duty/standby basis. Rags removed by these screens are deposited in a skip for transfer to Tiverton STW Tiverton for further treatment or for disposal at a permitted landfill. The screens are fully automatic, and in the event of a power failure the inlet valve to both screens close. After screening the sludge drains to the blended sludge tank, where it is blended with sludges produced on site. This tank has a high-level overflow that allows excess sludge to drain to the works liquor pumping station.

Raw sludge produced on-site originates from the primary settlement tanks and the storm tanks. Sludge is drawn off automatically from the settlement tanks and manually from the storm tanks, and is pumped first to the indigenous sludge tank and then on to the blended sludge tank. From the blended sludge tank, the blended sludge is pumped by two duty and one standby sludge transfer pumps to two centrifuges. The centrate from the thickener drains to the works liquor pumping station to be returned to the works inlet for treatment.

The sludge is thickened to 6% dry solids and is then pumped under automatic control by two duty and one standby sludge transfer pumps to two anaerobic sludge digesters. The sludge is heated to 35°C for a minimum of twelve days. Biogas produced by the digesters is used to run the combined heat and power engines to produce power to heat the digesters. Excess biogas is burnt off by a waste gas burner. The sludge digester system has automatic shutdown of systems and alarm generation in the event of a fault occurring.

The incoming sludge displaces an equal amount to one of two digested sludge storage tanks. Supernatant liquors are decanted off and returned to the works inlet for treatment through the waste water treatment process. Digested sludge from the digested sludge storage tanks is then pumped to a sludge press, where the sludge is further dewatered to produce a dry cake. Waste liquors are returned to a liquor balancing tank, and from there returned through the waste water treatment process. A small amount of lime is added to this dry cake to ensure the sludge meets the necessary pathogen levels for recycling. The dry cake is loaded onto trailers and recycled to agricultural land in accordance with the Sludge (Use in Agriculture) Regulations 1989, SI 1989/880, the associated Code of Practice, the ADAS Safe Sludge Matrix and the Biosolids Assurance Scheme (BAS).

11.4. Breakdown of plant and equipment

In the event of a breakdown of any tankered waste reception equipment, arrangements are made immediately to remedy repairs using a retained contractor or South West Water's own maintenance team. The date and time of any such breakdown resulting in the site having to close to imported waste is logged with the Tankered Waste Team at Peninsula House. Should reception capacity be reduced due to such downtime, then customers will be informed and arrangements made to take waste to alternative permitted facilities in the meantime. A programme of preventative maintenance is employed with all plant to prevent such downtime.

11.5. Spillages

The ***Hayle STW Spill Prevention Plan*** details methods of prevention of spills on site, and responses to spillages. Any sizeable spillage or leak, and the subsequent action to clean it up, must be recorded in the site diary. Only foul water drains are found at tankered waste reception points so any spillages return to the waste water treatment works for treatment and do not enter the environment.

11.6. Odours

The ***Hayle STW Odour Management Plan*** document details how the site is managed to minimise the risk of odour nuisance. Complaints regarding odour are dealt with in accordance with the Company complaints processes.

11.7. Vermin

Vermin assessment and control is carried out by suitably trained operational staff.

11.8. Litter

No solid waste is dealt with at the site, and no litter problems have been encountered.

11.9. Fires

There is no burning of waste in any form.

11.10. Dust

Dust does not arise from permitted operations, and no dust problems have been encountered.

12. Record keeping

12.1. Waste movements

Records of loads discharged via a logger are available via a web portal. Any loads not discharged via a logger are recorded on a sheet on site, which is sent to the Commercial Tankered Waste Team on a weekly basis to be added to the electronic record. The record includes:

- Volume and type of waste material(s) comprising each load (including EWC LoW code)
- Registration number of vehicle
- Date and time of discharge at site

Duty of Care (DoC) waste transfer notes (typically season tickets) are retained on site for two years in accordance with regulatory requirements. Copies are made available on request.

12.2. Site diary

A site diary is maintained in the site office. This diary is used to record a daily log of events relating to the operation of the site and includes details of site inspections, complaints received, breakdowns, spillages, fires, rejected loads, emergencies, abnormal events and action taken,

problems with waste received and actions taken, damage to fencing, gates, hard surfaces, reception areas and equipment. The site diary is kept up to date and is made available for inspection by the Regulator.

12.3. Visitors' book

All visitors must report to the site office upon arrival and sign the Visitors' Book. All visitors must sign out in the Visitors' Book upon departure from the site.

12.4. Accident book

All health, safety, security, environmental incidents, near misses, or hazards are reported into the Pennon Incident Management System (PIMS) in accordance with the Pennon Group ***Health, Safety, Security and Environment Incident Reporting Procedure***.

13. RELATED DOCUMENTS AND REFERENCES

TITLE	DOCUMENT TYPE	LOCATION
1. Asset Data and Risk Management Portal	Web application	Intranet
2. Commercial Tankered Waste WWSPR - Management	Document	ISO library
3. Hayle STW Odour Management Plan	Document	ISO library
4. Hayle STW Site Drainage Plan	Document	ISO library
5. Hayle STW Spill Prevention Plan	Document	ISO library
6. Health, Safety, Security and Environment Incident Reporting Procedure	Document	
7. HeRMeS	Web application	Intranet
8. Permits Database	Web application	Intranet

14. APPENDICES

1. Appendix A: emergency procedures

14.1. Introduction

It is not possible to remove completely the possibility of emergencies at the works. In all such cases it is important that corrective action be taken immediately to reduce the danger to site personnel and site visitors. It is not possible to foresee every eventuality but this procedure:

- Lays down the principles to be applied in case of emergency
- Lists immediate actions that should be taken in certain situations
- Lists secondary actions to be considered as soon as immediate actions have been taken

The content of this document is reviewed on a regular basis, considering experiences and as and when further changes are made at the site.

14.2. Emergency fire procedure

- Assess the risk to personnel and site
- Summon the fire and rescue service if there is any doubt about the ability to extinguish fire
- Summon ambulance service if required
- Clear the site of third parties and clear vehicles from site only if it safe to do so
- Arrange for emergency services to be admitted, ensuring an unobstructed route and clear directions to fire
- Ensure full roll-call of all personnel is taken and all personnel on site are accounted for
- Assess actual or potential effect on plant and property and instruct any necessary actions to make safe
- Co-ordinate with Fire Service Senior Officer on arrival ensuring they are aware of special risks (for example electrical supply, chemicals, etc.)
- Evacuate the site if required or asked to do so by emergency services
- Advise Site Manager if they are not present
- Advise Environment Agency to inform of site fire
- Record fire in site diary
- Report event in accordance with PIMS

14.3. Emergency spillage procedure

- Assess extent of spillage, type of material and determine action required
- Direct operations if applicable, without personal risk
- Deal with any leaks and spillages that can be managed with by site personnel; professional services should not be necessary
- Spillages of treatment compatible waste to be washed down any foul drains
- Advise Site Manager if they are not present
- Record spillage in site diary

14.4. Accident procedure (including major injury)

- Go directly to place of accident and assess any further risk to personnel, determine action required
- Summon ambulance service if required
- Arrange for emergency services to be admitted, ensuring an unobstructed route and clear directions to accident
- Direct rescue operations if applicable, without risk to self

- Coordinate with ambulance service upon arrival, give them as much information as possible about the accident, inform them of any special risks (for example electrical supply, gas bottles, etc.)
- Assess actual or potential effect on operations and instruct any necessary actions to make safe
- Advise Site Manager if they are not present
- Record accident in site diary

15. Appendix B: environmental risk assessment

RISK INFORMATION					ASSESSMENT				SITE-SPECIFIC ASSESSMENT AND ACTIONS	
HAZARD	**HAZARD DETAIL**	**RECEPTOR**	**PATHWAY**	**CONSEQUENCES**	**PROBABILITY**	**IMPACT**	**RISK**	**NOTES**	**RISK MANAGEMENT AND JUSTIFICATION**	**RESIDUAL RISK**
Accident or incident	Arson or vandalism causing the release of polluting materials	Local human population, adjacent land	Air Liquids polluting surface water or ground water	Nuisance, loss of amenity, pollution or contamination of nearby land or watercourses	Low	Low	Low		Diesel and oil stored securely No fires permitted on site Site is secure (fence and gate)	Low
	Inlet discharging to storm	Local watercourse and environmentally sensitive sites	Via storm discharge	Discharge of potentially polluting material to watercourse via storm discharge Pollution event	Medium	Medium	Medium		Operator if site storm overflow is operating, and customers are informed by Commercial Team Leachate reception will not need to cease as this is downstream of the site storm overflow	Low
	Blocked site drains	Land and groundwater	If site drains are blocked and a significant waste spillage occurs, the spill may reach land on the site unprotected by impermeable surface	Contamination of land	Low	Low	Low		Site drains are checked as part of routine site maintenance. Sites drains can be cleared by third party contractor if necessary	Low

RISK INFORMATION					ASSESSMENT				SITE-SPECIFIC ASSESSMENT AND ACTIONS	
HAZARD	HAZARD DETAIL	RECEPTOR	PATHWAY	CONSEQUENCES	PROBABILITY	IMPACT	RISK	NOTES	RISK MANAGEMENT AND JUSTIFICATION	RESIDUAL RISK
	Failure of the JRP WaSP system at the inlet works or leachate reception point	Land and groundwater	There is no surface water drainage system and all site drains drain to the waste water treatment works Liquid spills will only reach the receptor if drains become blocked and containment kerbing is overtopped	Contamination of land	Low	Low	Low	Drainage plans are available for all permitted sites	Failure of the system prior to any discharge will not result in any release as the system can be bypassed. If a blockage occurs mid discharge the driver will cease discharge and no spill should occur. Should a spill occur this will be contained by the site drainage system and spill kit is available if required	Low
	Driver connecting to the wrong discharge point	Waste water treatment process and potentially local watercourse	Load could be discharged to an unsuitable part of the process	Impact on site ability to treat incoming sewage. Discharge compliance may be adversely affected	Low	Low	Low		Site signs direct drivers to the correct discharge points and operators show new drivers where to go and what to do on site. Any unused or unsuitable discharge points are capped off when not in use Tanks are labelled to their use and contents to avoid unsuitable discharges All site drainage goes to full waste water treatment process	Low

RISK INFORMATION					ASSESSMENT				SITE-SPECIFIC ASSESSMENT AND ACTIONS	
HAZARD	HAZARD DETAIL	RECEPTOR	PATHWAY	CONSEQUENCES	PROBABILITY	IMPACT	RISK	NOTES	RISK MANAGEMENT AND JUSTIFICATION	RESIDUAL RISK
	Tanker collision on site, tanker catching fire, tanker causing fire or spillage of waste or fuel	Impact on waste water treatment process and potentially local watercourse, land and groundwater Local environmentally sensitive sites and residential areas	Discharge of fuel or firewater to site drainage and treatment plant Smoke may travel to residential area or local amenities in air	Smoke, local nuisance, risk of fire spreading to other areas or premises Contamination of local water course though effect on treatment process Pollution event	Low	Low	Low		Spills will be directed to site drains and retained in drainage sump if unacceptable to the process. Spill kit equipment is available There is a one-way traffic system, 10 mph speed limit and speed ramps to reduce chance of collision. Tankers carry their own fire extinguishers and final effluent is available at the inlet discharge point	Low
	Frozen pipework causing spillage of waste	Land and groundwater Local watercourse	None	Contamination of land, ground water or local water course Pollution event	Low	Low	Low		No routine releases to air or water other than permitted water discharges from site (final effluent, etc.), covered by separate permits	Low
	Any	SSSI within 5km of site Shellfish water and bathing water within 3km of site	Any	Potential deterioration of designated habitat, or impact on designated environment	Low	Low	Low	There is no surface water drainage system and all site drains drain to the waste water treatment works Liquid spills will only reach the receptor if drains become blocked and containment kerbing is overtopped		Low

RISK INFORMATION					ASSESSMENT				SITE-SPECIFIC ASSESSMENT AND ACTIONS	
HAZARD	**HAZARD DETAIL**	**RECEPTOR**	**PATHWAY**	**CONSEQUENCES**	**PROBABILITY**	**IMPACT**	**RISK**	**NOTES**	**RISK MANAGEMENT AND JUSTIFICATION**	**RESIDUAL RISK**
Flooding	Flooding	Local human population, adjacent land	Flood water	May contaminate adjacent land and watercourses if waste is washed off site	Low	Low	Low		Not located in flood zone for fluvial or surface water flooding	Low
Fugitive emission: dust	Airborne dust and particulates from vehicles entering and leaving site	Local human population: residential properties to the south and west	Air transport	Nuisance, loss of amenity	Low	Low	Low	Acceptable waste is liquid only	Vehicles do not leave road surfaces Hire of road sweeper as necessary	Low
Fugitive emission: litter	Fugitive releases: litter	Local human population: residential properties to the south and west	Air transport	Nuisance, loss of amenity	Low	Low	Low	Acceptable waste is liquid only	No solid waste accepted at site No activities should generate litter	Low
Fugitive emission: pests	Scavenging birds and animals	Local human population, adjacent land	Air transport or over land	Nuisance, loss of amenity	Low	Low	Low		All waste is contained, transfers are through sealed pipework. Waste is liquid and enters inlet flows or sludge treatment system directly. Pests do not have access to waste	Low
	Insects and flies	Local human population, adjacent land	Air transport or over land	Nuisance, loss of amenity	Low	Low	Low		All waste is contained, transfers are through sealed pipework. Waste is liquid and enters inlet flows or sludge treatment system directly. Pests do not have access to waste	Low

RISK INFORMATION					ASSESSMENT				SITE-SPECIFIC ASSESSMENT AND ACTIONS	
HAZARD	**HAZARD DETAIL**	**RECEPTOR**	**PATHWAY**	**CONSEQUENCES**	**PROBABILITY**	**IMPACT**	**RISK**	**NOTES**	**RISK MANAGEMENT AND JUSTIFICATION**	**RESIDUAL RISK**
Fugitive emission: runoff	Contaminated runoff from non-hazardous waste	Surface waters adjacent to site	Direct runoff from site, across ground surface, via surface water drains, ditches etc.	Acute effects: oxygen depletion Deterioration in water quality, fish kill, algal blooms	Low	Medium	Low			Low
	Contaminated runoff from non-hazardous waste	Surface waters adjacent to site	Indirect runoff via soil layer	Chronic effects: deterioration of water quality	Low	Low	Low			Low
	Contaminated runoff from non-hazardous waste	Ground water	Soil to ground water	Contamination of ground water	Low	Low	Low			Low
Noise	Noise generated by tanker movements on site, and by discharging loads at inlet works, leachate discharge point and at sludge treatment facility	Local human population: residential properties to the south and west	Air transport	Nuisance, loss of amenity	Low	Medium	Low		Long established site of sewage treatment works Noise abatement fitted where appropriate Duration of each discharge is short: maximum ten minutes. Discharges can be made under gravity, not via pumping	Low

RISK INFORMATION					ASSESSMENT				SITE-SPECIFIC ASSESSMENT AND ACTIONS	
HAZARD	**HAZARD DETAIL**	**RECEPTOR**	**PATHWAY**	**CONSEQUENCES**	**PROBABILITY**	**IMPACT**	**RISK**	**NOTES**	**RISK MANAGEMENT AND JUSTIFICATION**	**RESIDUAL RISK**
Odour	Generated by tankers discharging load at inlet works, leachate discharge point, or sludge treatment facility	Local human population: residential properties to the south and west	Air transport. Prominent winds experienced at site are south westerly or northerly	Nuisance, loss of amenity	Medium	Medium	Medium	Site has a long history of odour contacts and residents are likely to complain	Duration of each discharge is short: maximum ten minutes Site Odour Management Plan Processes or chambers where an unacceptable level of odour could be generated or released to the atmosphere are covered or enclosed. These areas are vented through odour abatement equipment as detailed in the management plan Inlet point where most loads are discharged is surrounded by mature trees acting as a wind break to reduce the transmission of odours from this part of the site Record and respond to any complaints according to the QCS Complaint Handling Procedure Low odour risk from waste permit activities. See annual odour review for site	Low

RISK INFORMATION					ASSESSMENT				SITE-SPECIFIC ASSESSMENT AND ACTIONS	
HAZARD	**HAZARD DETAIL**	**RECEPTOR**	**PATHWAY**	**CONSEQUENCES**	**PROBABILITY**	**IMPACT**	**RISK**	**NOTES**	**RISK MANAGEMENT AND JUSTIFICATION**	**RESIDUAL RISK**
	Generated by tankers discharging load at sludge treatment facility	Local human population: residential properties to the south and west	Air transport. Prevailing winds experienced at site are south westerly or northerly	Nuisance, loss of amenity	Medium	Medium	Medium	Site has a long history of odour contacts and residents are likely to complain	Duration of each discharge is short: maximum 10 minutes Site Odour Management Plan An Odour control unit on site Record and respond to any complaints according to the QCS Complaint Handling Procedure Low odour risk from waste permit activities. See annual odour review for site	Low