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# **Fairlee Pumping Station Permit Application**

Odour Management Plan  
419175\_OMP\_FAI

May 2024

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May 2024

# Issue and Revision Record

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# 1 Odour Management Plan

## 1.1 Introduction

The Odour Management Plan (OMP) for Fairlee Transfer Water Pumping Station (PS) ('the Site') has been developed with the assistance of Mott MacDonald on behalf of Southern Water Services ('Southern Water' or 'the Operator'). The OMP is the responsibility of Southern Water Services as the OMP may assume a legal status if it forms part of the planning conditions or other legal agreements with local authorities or other third parties.

The OMP has been designed to be a live working document that forms part of the operational management system of the Site. It is a mitigation and control measure document with which operations shall comply. It demonstrates how odours shall be managed and controlled to prevent odour impacts from activities during normal operation and during abnormal events.

This OMP has been produced in accordance with the Environment Agency's H4 Odour Management guidance<sup>1</sup>, and Appropriate measures for the biological treatment of waste<sup>2</sup>.

## 1.2 Objectives

The OMP identifies potential odour emissions from site operations and identifies procedures to manage, control and minimise odour impacts. The plan provides information about the measures currently implemented to control odour emissions from the Site. It provides sufficient detail to allow operators and maintenance teams to understand the operational conditions.

It is intended to be used as a reference document by operational staff on a day-to-day basis. The OMP includes the following:

- A description of the Site and catchment, including potential sources of odour on the Site, and location of sensitive receptors
- The Site's individual process operation descriptions in order to minimise, manage and control odour
- Characterisation of odours at different points in the process and assessment of risk, particularly during abnormal operating conditions
- Southern Water Operation and Management (O&M) procedures for the Site, including housekeeping measures to minimise odour generation and release
- The mitigation procedures which should be implemented when foreseeable situations, that may compromise the ability to prevent and minimise odorous releases, occur. These can include both breakdowns and external conditions such as extreme weather
- An odour risk assessment identifying any odorous or potentially odorous areas of the works and immediate and longer-term actions required to eliminate odour complaints
- Containment, enclosure, ventilation, abatement of odours and emission standards
- Monitoring of odorous emissions and action plans for investigation, remedial measures and procedural changes in the event of abnormal emissions
- Management of the sludge cake reception and grit and screening dying processes
- Odour control and management procedures during emergencies and maintenance

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<sup>1</sup> Environment Agency (2011), Environmental permitting: H4 odour management. Available online at: <https://www.gov.uk/government/publications/environmental-permitting-h4-odour-management>

<sup>2</sup> Environment Agency (2020) Appropriate measures for the biological treatment of waste- Consultation draft July 2020 Available online at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/898966/Appropriate\\_measures\\_for\\_the\\_biological\\_treatment\\_of\\_waste\\_-\\_consultation\\_document.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/898966/Appropriate_measures_for_the_biological_treatment_of_waste_-_consultation_document.pdf)

- Routine care and maintenance of critical equipment (extraction and odour abatement plant)
- Monitoring, recording and reporting arrangements
- The management and operator training requirements and records with respect to odour
- Staffing, responsibilities, training and procedures
- Communication strategy and complaint management/resolution procedures
- OMP updating, review and development procedures
- An action procedure for complaints

The primary responsibility for implementation of the OMP lies with the operational site management. Other business functions support the implementation of the OMP across their areas of responsibility.

The OMP outlines the potential odour sources and the risks to receptors. It outlines the measures Southern Water will employ on a daily basis and how Southern Water will respond to prevent or minimise odour releases and impacts. The routine assessment of odour and the monitoring and maintenance of plant and equipment at the Site will be carried out according to the schedules given in the Operation & Maintenance (O&M) manual and Environmental Management System (EMS) to ensure that performance is optimised.

The OMP will be reviewed, and amended where necessary, following changes in infrastructure or changes in operation that have an impact on odour at the Site. Otherwise the OMP will be reviewed annually as a minimum, or as requested by the Environment Agency. The OMP is incorporated into the Site's EMS.

### 1.3 Site Location

Fairlee Pumping Station (PS) is situated approximately 2.5 km north of the town of Newport, adjacent to River Medina, in the Isle of Wight..

Activity address: Fairlee Road, Newport, Isle of Wight, PO30 2JU

National grid reference: SZ 5066 9120

A plan showing the boundary of the scheme provided in 419175\_MSD\_SiteLayoutPlan\_FAI.



## 2 Site Operation

### 2.1 Overview of Site Operations

Fairlee Transfer WPS is a small pumping station located outside of Fairlee on the Isle of Wight. Operations at the Site are non-hazardous activities, which are currently carried out under registered S1, S2, D5, and U6 exemptions and a Local Enforcement Position (LEP). The Site pumps flow from two different catchment areas to Sandown Wastewater Treatment Works (WTW) to be treated. Additionally, the Site has five storage bays to store dewatered cake, and one bay for grit and screenings, with a total storage capacity of 4,500tonnes. All cake is imported directly from Sandown WwTW, while grit and screenings are imported from across the Isle of Wight, typically due to sewer or wet well cleans.

All waste is imported and exported in covered/sealed lorries or contained in tankers. Drivers must comply with strict procedures and checks at Sandown before loading cake and leaving site destined for Fairlee WPS.

Once received in the cake bays, the cake does not undergo further treatment and is left undisturbed until Hazard Analysis and Critical Control Point (HACCP) sampling is undertaken.

Southern Water is applying for a new Bespoke Waste Operation Permit, aiming to bring the Site's activities in line with Environmental Permitting Regulations 2016, as amended. This will allow the acceptance of up to 5,700tonnes of tankered waste imports (predominantly wastewater from portable shower units and chemical toilet waste (produced over one week in June by the Isle of Wight festival)), directly into the pumping station, and continued acceptance of dewatered sludge cake, grit and screenings for storage, and bulking up, from other sites and maintenance activities on the Island. The application is to accept up to 10,200 tonnes of tankered waste, dewatered cake, grit and screenings annually. Fairlee WPS transfers wastewater directly into Sandown WTW for treatment. No waste treatment will take place at Fairlee.

The Site is authorised to discharge storm sewage to the River Medina when flows exceed 216 l/s under 'Discharges to water' permit NPSWQD000451. The Site also has a permit to discharge in an emergency in case of electrical or mechanical failure, rising main blockage or failure (under permit A851/IOW/98).

The Site is managed to reduce potential impacts to the environment through actions such as:

- An Environmental Management System accredited to ISO 14001 standard, detailing actions to take in response to incidents
- Visual checks of the site infrastructure by site operations team as part of day-to-day operation. Routine and reactive maintenance of infrastructure to minimise leaks and failures
- Appropriate storage of chemicals with bunding
- All on-site drainage is captured and returned via the storm return well for onward processing. The cake bays have a gully running to two scalloped drains which also flow to storm return well. General good condition of the cake bays
- Control of waste, including both operational site waste and sludge, and its transfer to specific sites and landfill facilities as well as contractor duty of care

### 2.2 Summary of PS components

Currently the site accepts up to 3,750 tonnes dewatered sludge cake from Sandown WTW, 750 tonnes of grit and screenings per year from other sites on the Isle of Wight and up to 5,700

tonnes) of tankered waste (namely wastewater from portable shower units and chemical toilet waste during one week per year (June). All waste is imported and exported in covered/sealed lorries or contained in tankers. Drivers must comply with strict procedures and checks at Sandown before loading cake and leaving site destined for Fairlee WPS.

Below is a brief summary of the components for the Site.

## 2.2.1 Cake sludge processing at the PS

### 2.2.1.1 Reception and screening of tankered waste imports

The Site is a pumping station which has both cess and blue toilet waste and sludge cake reception facilities.

The Site is applying to accept 8,700 tonnes of cess, sludge cake, grit and screenings annually. Cess and blue toilets waste is imported to enter the pumping station to be routed to Sandown WwTW.

Liquid waste imports are transported to the site in enclosed tankers for one week a year. It is received at the tankered waste reception area, before being pumped directly, to Sandown WTW for treatment.

### 2.2.1.2 Reception and storage of dewatered sludge cake

The Site also accepts digested sludge cake from Sandown WTW for storage prior to spreading to land. This is currently a non-permitted activity, (undertaken under a LEP agreed with the Environment Agency), which the application seeks to include in the permit.

Dewatered sludge cake is imported and exported in covered/sealed lorries or contained in tankers. Drivers must comply with strict procedures and checks at Sandown before loading, and leaving the site, with cake destined for Fairlee. Imported cake from Sandown WTW is stored in the five cake bays located at the east of the facility, each with a capacity of 750 tonnes (total capacity 3,750tonnes).

The biosolids do not receive further treatment, and it is left undisturbed, until Hazard Analysis and Critical Control Point (HACCP) sampling is undertaken. This occurs once per bay, per rotation (approximately 10-20 times per year). Dewatered sludge cake is stored in the bays for up to six months, before being recycled to farmland.

### 2.2.1.3 Reception and storage of grit and screenings

The Site accepts grit and screenings, is imported from across the Isle of Wight, typically due to sewer or wet well cleans. The material is deposited directly into one dedicated bay with a capacity of 750 tonnes, for drying and bulking up before being removed from site to be composted by Composting Facility Services (CFS).

### 2.2.1.4 Relevant components

- 5 No. cake storage bays (750 tonnes each)
- 1 No. grit and screening storage bay (750 tonnes)
- Tankered waste reception area

## 3 Potential Odour Sources

### 3.1 Overview of the mechanisms for odour generation

The generation of odour from the storage of dewatered sludge cake and the discharge of tankered waste is primarily associated with the release of odorous Volatile Organic Compounds (VOCs) from the organic matter.

The most intense and offensive odours from the VOCs in the solid organic matter tend to be generated from the operations involving the handling of sludge i.e. the processes applied to dewatering and storing cake. These processes are generally considered to present the greatest risk of odour impact off-site unless adequate controls are put in place. It should be noted that, while these processes do not take place at Fairlee WPS, depending on the quality of the wastes received, the handling of drying cake may also contribute to offensive odours.

The rate of odour release from sludge sources is primarily dependent on the temperature of the material, and the surface area exposed to the atmosphere. As a result, odorous emissions from Fairlee PS operations tend to be highest during the summer months. Furthermore, activities that lead to increases in the surface area of odorous material exposed to the atmosphere (e.g. due to turbulence generated by handling processes and agitation of sludge cake) will inevitably lead to an increase in the magnitude of odour released.

Southern Water acknowledges that high levels of odour arising from sludge cake storage are not acceptable and that reasonable and practicable measures must be taken to minimise any nuisance caused to the general public. Southern Water does not operate under a single defined odour exposure standard. Each site is considered individually taking into account the relevant legislation and the local authority's conditions. Site specific factors such as site history with regard to odour complaints, potential future encroachment by residential or business developments, and the presence of particularly odour sensitive receptors within the vicinity of the Site are also taken into consideration.

### 3.2 Potential odour sources

Table 3.1 identifies the plant, equipment and activities which have the potential to generate odours under normal operational conditions.

Wastes accepted to the PS, under the Environmental Permit, are listed in Appendix B.

Due to the nature of the Site activities, the hedonic tone of odours is neutral at best, whereas most odours generated on Site will have a negative hedonic score (therefore deemed offensive). As the local population has already become sensitised to this, it is prudent to reduce the benchmark of the rating associated with sludge processing. The hedonic score of the material will improve through the sludge cake drying.

**Table 3.1: Identified odour sources**

Process or activity	Plant or equipment (and odour monitoring location)	Potential source of odour	Odour controls in place	Potential for odorous emissions during normal conditions
Tankered waste imports	Reception tanks	Liquid sludge	Imported liquid sludge is delivered to the Site by tanker and sent to Sandown WwTW. The reception tank is enclosed. Hoses are in	Low

Process or activity	Plant or equipment (and odour monitoring location)	Potential source of odour	Odour controls in place	Potential for odorous emissions during normal conditions
			place in case of spills during tanker unloading.	
Dewatered sludge cake import	Cake bays	Sludge cake	Lorries/trailers are covered before transporting or sealed skips are used. Covers only removed unloading of cake is taking place.	Medium
Dewatered sludge cake storage	Cake bays	Sludge cake	Cake is currently stored in five cake bays which are not enclosed, cake is moved around the site via conveyors and removed by telehandlers.  Waste retention time: 6 weeks - 6 months (depending on time of year)	Medium
Cake export	Cake export	Sludge cake	Lorries/trailers are covered before leaving or sealed skips are used. Covers only removed loading of cake is taking place.	Medium

### 3.3 Odour impact

#### 3.3.1 Adjoining land use

The Site is situated approximately 2.5 km north of the town of Newport, adjacent to River Medina, in the Isle of Wight. The Site is bordered by agricultural and rural land use to the North, east and south. The River Medina flows on the west. An industrial area lies within 250m northeast of the Site. The Site is situated in a remote location away from major residential areas, the nearest being approx. 375m to the west of the Site, across the River Medina.

#### 3.3.2 Sensitive receptors

Receptors sensitive to odour include users of the adjacent land, which may vary in their sensitivity to odour. The level of sensitivity will be defined using the Institute of Air Quality Management guidance<sup>3</sup>.

- High sensitivity receptors e.g. residential dwellings, hospitals, schools/education and tourist/cultural.
  - users can reasonably expect enjoyment of a high level of amenity; and
  - people would reasonably be expected to be present here continuously, or at least regularly for extended periods, as part of the normal pattern of use of the land.
- Medium sensitivity receptor e.g. places of work, commercial/retail premises and playing/recreation fields.
  - users would expect to enjoy a reasonable level of amenity, but wouldn't reasonably expect to enjoy the same level of amenity as in their home; or
  - people wouldn't reasonably be expected to be present here continuously or regularly for extended periods as part of the normal pattern of use of the land.
- Low sensitivity receptor e.g. industrial use, farms, footpaths and roads.

<sup>3</sup> Institute of Air Quality Management (2018) Guidance on the assessment of odour for planning V1.1. Available online at: <https://iaqm.co.uk/text/guidance/odour-guidance-2014.pdf>

- the enjoyment of amenity would not reasonably be expected; or
- there is transient exposure, where the people would reasonably be expected to be present only for limited periods of time as part of the normal pattern of use of the land.

The magnitude of risk relates to<sup>4</sup>:

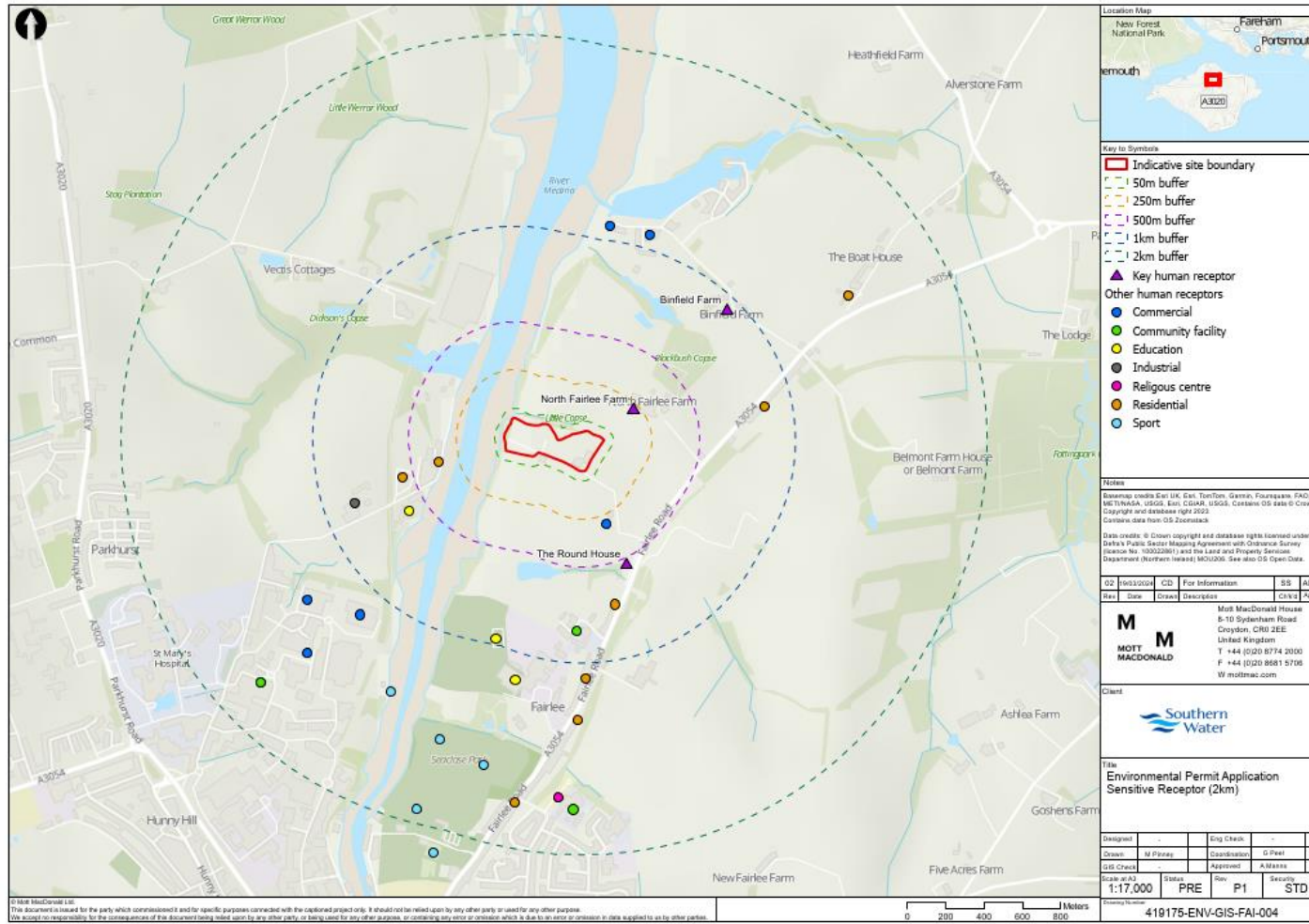
- Frequency: How often an individual is exposed to odour
- Intensity: The individual's perception of the strength of the odour
- Duration: The overall duration that individuals are exposed to an odour over time
- Odour unpleasantness: Odour unpleasantness describes the character of an odour as it relates to the 'hedonic tone' (which may be pleasant, neutral or unpleasant) at a given odour concentration/ intensity. This can be measured in the laboratory as the hedonic tone, and when measured by the standard method and expressed on a standard nine-point scale it is termed the hedonic score.
- Location/Receptor sensitivity: The type of land use and nature of human activities in the vicinity of an odour source. Tolerance and expectation of the receptor. The 'Location' factor can be considered to encompass the receptor characteristics, receptor sensitivity, and socio-economic factors.

One industrial sensitive receptor is located within 250m and is shown in Figure 1. The Site is situated in a remote location away from major residential areas, the nearest being 375m to the west (across the River Medina). Table 3.2 identifies the sensitive receptors within 500m of the Site.

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<sup>4</sup> Institute of Air Quality Management (2018) Guidance on the assessment of odour for planning V1.1. Available online at: <https://iaqm.co.uk/text/guidance/odour-guidance-2014.pdf>

Figure 1: Sensitive receptors within 2 km of the Site



Source: Mott MacDonald 2022

**Table 3.2: Receptors within 500m of potential emission sources at the Site**

Receptor <sup>(a)</sup>	Nearest potential emission source to receptor	Process	Distance (m) from nearest potential emission source <sup>(b)</sup>	Direction of receptor from closest emission source
Residential Properties on Dodnor Lane	Cess and blue toilet waste reception area	Waste reception	<b>220</b>	West
Industrial land use off North Fairlee Road	Grit and screening storage bay	Waste reception and storage	<b>145</b>	Northeast
	Cake bays	Waste reception and storage	165	Northeast

Note: (a) Distance from source to receptor is rounded to the nearest 5m.

(b) Value in bold represents the nearest potential emission source for each process which is closest to a sensitive receptor.

### 3.4 Odour modelling

The effectiveness of the pathway for odour impacts associated Fairlee PS has been assessed using wind data and the locations of the nearest sensitive receptors relative to the Site. Modelled wind data for the years 2019-2023 were derived for the Site from an atmospheric hindcast model (Vortex).

The 2019-2023 wind rose for the nearest meteorological site, St. Catherine’s Point (located approximately 15km south of the Site), is shown in Figure 2. This monitoring site experiences strong prevailing winds from the west, with occasional strong winds from the east. However, this meteorological site is located on a headland while the Site is located within a bay and therefore, addition, an atmospheric hindcast model (Vortex) has also been used to assess the wind conditions at the Site.

Figure 3 presents the wind rose generated for the Site from the Vortex model for the period from 2019-2023. The wind rose demonstrates that historically this location experiences strong prevailing winds from the west and south west, with occasional gusts from the north east. This suggests that sensitive receptors located to the north east and east of the Site would be at the greatest risk from bioaerosol emissions from the Site as they would be downwind of the prevailing wind direction.

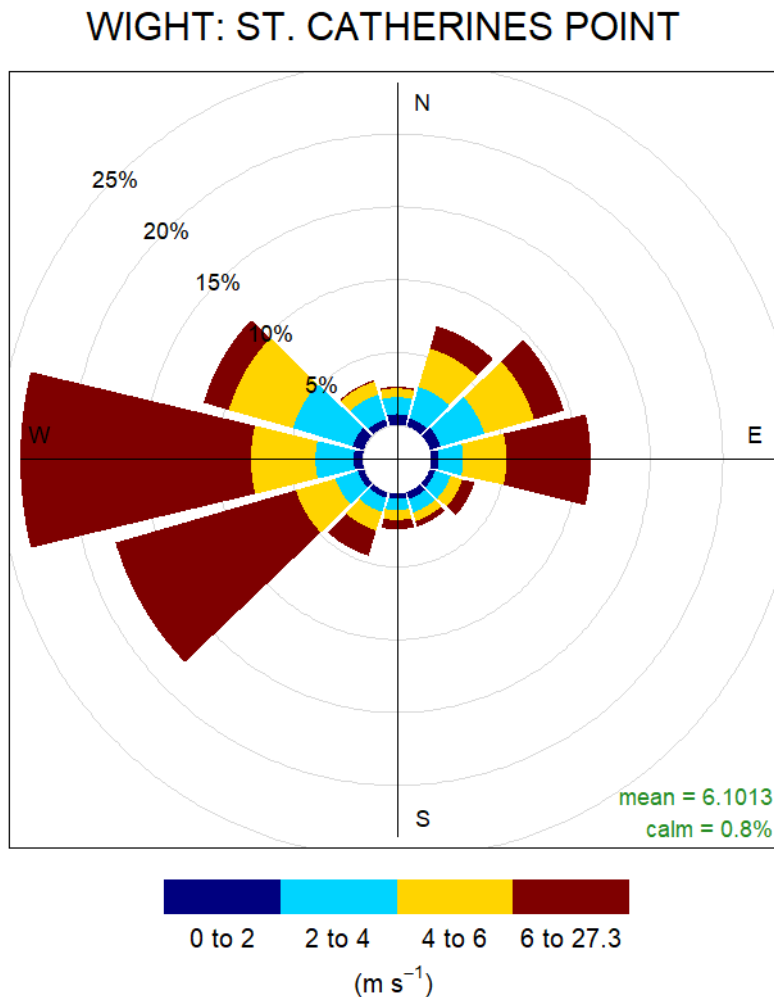
Overall, the two datasets show general agreement with the modelled data indicating the predominant wind originating from a south westerly direction rather than a westerly direction.

No specific odour modelling has been commissioned for this site and modelling has not been undertaken prior to the application for a bespoke waste permit because the OMP consolidates existing odour control measures and will form part of the Operational Techniques. The Site does not meet the criteria for the listed suggestions for odour modelling according to the Environment Agency H4 guidance:

- To predict the impact of a new proposal: The Site is an existing site and structural changes are not proposed as part of the variation application. The sources of odour and their controls are already known.
- To assist in the investigation of the cause of odour complaints: The causes of odour are easily identified and any issues resolved with no requirement for further investigation to establish changes in odour management.

- Compare the cost effectiveness of odour mitigation options: Southern Water are not seeking at the time of the Bespoke Permit application to implement additional odour mitigation measures that require capital investment.
- Work out emission limits for point source emissions: The Site presents a low odour risk to sensitive receptors.
- Indicate how much improvement is needed or size abatement equipment: the need for, or improvements to, odour mitigation, is implemented through the OMP. No odour complaints have been received at the Site in the last five years.
- Calculate a suitable chimney height to provide an acceptable exposure at receptors: there are no OCU's on site, since the Site is low risk of odour it is not justified to install odour control structures.

**Figure 2: Average wind rose for St. Catherine's Point meteorological site, Isle of Wight 2019-2023**

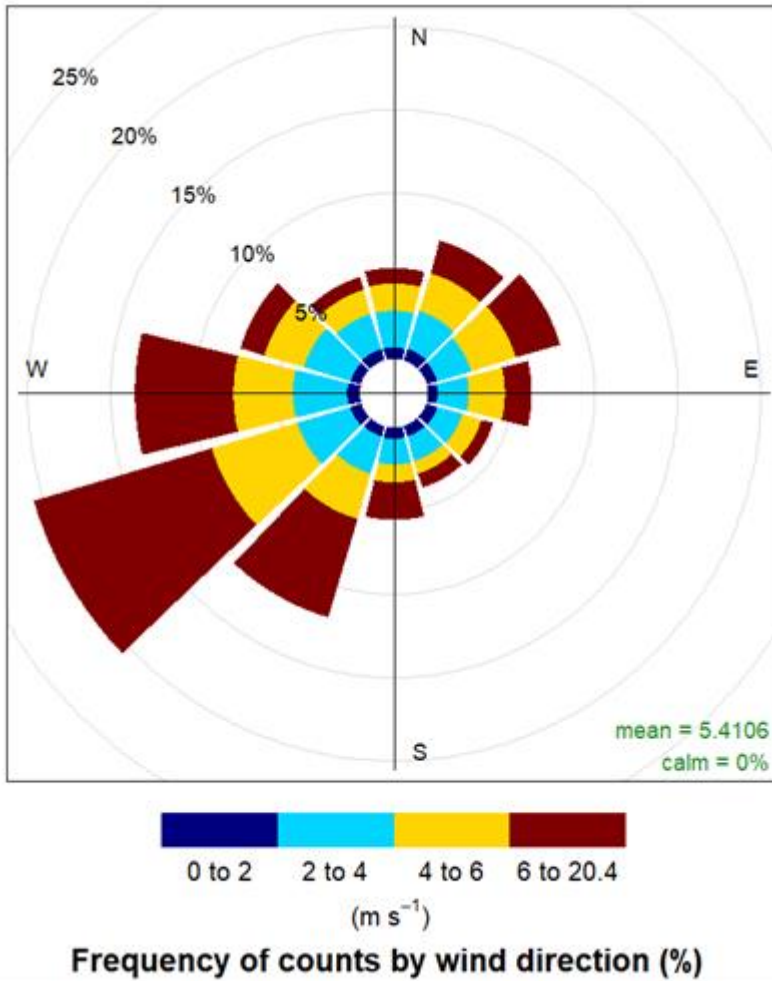


**Frequency of counts by wind direction (%)**

Source: NOAA Integrated Surface Database (ISD) (2023)



**Figure 3: Average wind rose for the Site from the Vortex model, 2019 – 2023**



Source: NOAA ISD (2023)

## 4 Odour Management and Control

### 4.1 Odour control system

The Site does not currently have any odour control units (OCU), as the odorous emissions from its operations are not considered significant enough to warrant such measures.

Odours are likely to be generated and released due to the nature of the cake, grit and screenings waste. Liquid wastes imported to the Site, will arrive in sealed tankers and discharged, via a pipe, in to the tankered waste reception area. Liquid waste is not stored on Site and is discharged directly to Sandown WTW.

All waste is imported and exported in covered/sealed lorries or contained in tankers. Drivers must comply with strict procedures and checks at Sandown before cake, destined for Fairlee WPS leaves the site. No removal of covers is permitted whilst parked waiting to load/unload. Odours are monitored during cake loading/unloading. Use of odour atomisers during loading/unloading could be considered, if necessary.

Sniff tests are performed by staff whilst working on Site. In the event that odour is detected, the source of the odour will be investigated, as appropriate, and remedial action taken, as necessary. The approximate extent of the downwind odour will be established to determine whether there is potential for the odour to leave the wider site boundary.

### 4.2 Odour control in normal and abnormal conditions

All operating practices must be compliant with the Site's O&M manuals, Southern Water company practices and management systems and the OMP. All routine and non-routine activities are reviewed for their impact upon the potential for odour generation in line with Southern Water's EMS.

In order to achieve overall odour containment and thus to minimise unplanned releases of odour to atmosphere, it is essential, and typical (where relevant) that:

- The integrity of all covers over process units is maintained continuously, other than during periods of essential maintenance.
- All doors in buildings ventilated to the odour control system, where applicable, remain closed except when access is required and that the integrity of the buildings fabric is ensured.
- If an alarm is generated within a building monitoring H<sub>2</sub>S levels, all doors in buildings ventilated to the odour control system remain closed until alarm ceases following the treatment and extraction of odour.
- Imports of pre-digested cake, where accepted, are to be offloaded within buildings with closed doors and Odour Control Unit extraction operating.

Where routine, planned and emergency maintenance of plant items has to be carried out and there is a high risk of odour being released to atmosphere in quantities sufficient to result in detection off-site, a detailed risk assessment of the activity is conducted, as part of which issues of odour generation, release and control are considered. Where the risk of an off-site odour event occurring is judged to be high, the Southern Water Customer Services call centre will be informed, together with the Environment Agency.

#### 4.2.1 Normal conditions

There will be regular occasions throughout the year when routine, planned and reactive maintenance are carried out in order to ensure continued optimum operation of the pumping

station. Routine and planned maintenance tasks are divided into different classifications according to the level of complexity, speciality and frequency. The classifications are:

- **Routine Operations:** the daily and weekly routine operations are scheduled regionally through weekly and quarterly programmes of work. Site operators are responsible for carrying out the tasks and the Field Performance Manager (FPM) for checking completion and quality.
- **Planned Maintenance (Ellipse):** the programmes for planned maintenance are generated regionally. Jobs are sent direct to qualified mechanical or electrical technicians via electronic communication. Start and completion of tasks, including work done, are logged direct to Ellipse, which produces records of plant performance. Site and regional mechanical and electrical staff, in conjunction with specialist contractors, are responsible for carrying out the tasks and the FPM for checking completion and quality.
- **Contractor Maintenance (CM):** the programmes for planned maintenance of some categories of specialist equipment (centrifuges, odour control equipment, odour control monitoring equipment, etc.) are generated regionally. Paper records of work carried out, completion and approval are kept on-site and by the Supply Agreement Leader.
- **Local Plant Monitoring (LPS):** Specific monitoring (for example, hydrogen sulphide at some sites) is carried out by online instrumentation. Information is recorded on SCADA. The plant records (daily plant spreadsheet) are created by site operators and process scientists. Site operations staff are responsible for carrying out the tasks and FPMs for checking completion and quality.
- **Contractors Records (CR):** Records of waste deliveries are recorded, manually for the one week of the year the imports currently occur. There is potential for the tankered waste reception area to be linked to an electronic logging system, should the need to import to the site increase and this will allow monthly reporting. Records are available via an online database.
- **Material Delivery and Removal:** Records of dewatered cake deliveries are recorded, manually, through on site logs and waste transfer notes.

Minor repairs and routine maintenance works are carried out continuously throughout the year during the working day, avoiding evenings and weekends, except in emergencies. Where possible, more major maintenance tasks are carried out in a planned manner according to priority and resources. Odour sensitive major maintenance tasks will be aimed to be undertaken during the winter period (between October and April), where appropriate. The emphasis in planning this maintenance is to minimise the time required to carry out the work, ensuring as far as possible, that odours are contained or abated during the work and to deploy alternative odour suppression systems, if required.

Where a maintenance operation is likely to release quantities of odour likely to be detectable off-site, the relevant authorities and the Southern Water Regional Call Centre would be informed in advance.

<b>Process</b>	<b>Period</b>	<b>Typical maintenance activities</b>
Dewatered sludge cake imports	Ad-hoc	Regular checks on deliveries and condition of storage bays.
	Weekly	Routine checks on equipment. Tasks carried out and records maintained under the Site operating and monitoring plan.
	Monthly	Checks by M&E. Tasks carried out and records maintained under regional maintenance schedules.
Tankered waste reception area	Daily	Visual checks carried out and records maintained under the Site operating and monitoring plan.

Process	Period	Typical maintenance activities
	Weekly	Visual inspection of plant & equipment. Tasks carried out and records maintained under the Site operating and monitoring plan.
	Dictated by operational performance	Tasks carried out and records maintained under regional maintenance schedules.

Diffuse emissions from open storage areas, mainly the cake bays, are minimised by:

- Minimising the volume of sludge cake being stored to eliminate the risk of cake overspilling
- The sludge cake not being handled, once in the cake bay, (unless testing is required, however, this requires minimal handling) until it is being removed from site
- All sludge cake being exported is transported in covered lorries

To minimise odour nuisance, it is important to ensure that the Fairlee WPS is operating as designed.

#### 4.2.2 Odour risk assessment

Unless it is in an emergency situation, an odour risk assessment will be undertaken before carrying out maintenance tasks with high odour risk and high odour sensitivity. Examples of such activities, where applicable, are:

- Shutdown of odour control systems for an extended period for maintenance
- Non-routine draining down of large open process tanks with potential to generate odour
- Lifting of odour control covers, opening of hatches or keeping doors of odour-controlled building open for an extended period
- Commissioning of new odour sensitive processes or equipment where odour risk may not be adequately mitigated

A flowchart to identify when an activity requires a separate odour risk assessment is provided in Appendix D.

An odour risk assessment matrix will be used to determine the odour risk for planned and unplanned maintenance work commonly performed. Where an unusual activity not contained in the matrix is planned, a site-specific risk assessment will be carried out according to a standard procedure. The matrix also includes foreseeable situations for emergency breakdown and situations arising as a result of dealing with an emergency where the ability to improve control of or minimise odorous release is compromised. The advice given by the odour risk assessment matrix will be followed, as appropriate, taking into account site conditions.

**Table 4.1: Example of risk assessment for routine maintenance**

Event	Implications	Odour risks (high, medium, low)	Proactive actions	Responsive actions
Maintenance of processes within WPS	Opening of hatches, and exposure of process units	Low	Processes contained within the WPS.	Minimise number of hatches open at any one time.
Maintenance on cake storage area	Potential for odour release if any cake is disturbed	High	Divert or minimise sludge throughput in storage area.	Carry out during summer months where possible, when storage requirements for cake is reduced. If required during winter manage through use of portable odour

Event	Implications	Odour risks (high, medium, low)	Proactive actions	Responsive actions
				reduction sprays and minimise storage volumes.

### 4.2.3 Abnormal conditions

Unanticipated breakdowns of equipment may occur which require unplanned and emergency maintenance.

During periods of abnormal conditions, the normal odour standard and emission standards may not be able to be fully complied with, and/or there may be fugitive emissions of odour from parts of the Site where there are normally none. An exemption may be required for these operations, but mitigation ought to be documented in an odour risk assessment.

In the event of plant failures or emergency situations, this would raise an alarm on the Site's SCADA or telemetry systems, which will be reacted to by on-site or regional control room operators and FPM.

Depending upon the nature of the fault or emergency, a mechanical or electrical technician, both of whom are on-call 24-hours, would be contacted and will attend the Site as soon as practicable if required. Where the on-call technicians are already engaged upon other response work, there is the facility to access staff from other Southern Water geographic divisions, coordinated by the FPM. All faults, breakdowns and emergencies are logged electronically together with records of the action taken and the solutions reached.

If any waste arrives on-site that fails to provide correctly completed paperwork this is immediately reported to the Industrial Waste Services Team, who will decide if it can be accepted or rejected as per Southern Water's Quarantine procedure. Waste arriving at Site is quarantined in any of the following circumstances:

Cake arriving at the Site is quarantined in any of the following circumstances:

- Hazard Analysis Critical Control Point (HACCP) critical limit breach
- Maximum Acceptable Concentration (MAC) sample failure
- Measured cake DS% on-site has dropped below 20% (the 20% has to be confirmed by 2nd sample)

If any of these take place, then material will need to be quarantined in line with the Biosolids Assurance Scheme procedures.

If quarantining is required, then the quarantined digested material is placed in an empty bay on site. If a storage bay is not available, then the Biosolids Compliance Team should be contacted to arrange alternative storage.

When the breach is HACCP or MAC failure related, the cake will be held at the quarantine location until compliant results are received from the laboratory provider. After bacti compliance is confirmed the relevant stakeholders will be notified by a certificate of compliance that cake from the site in question can be recycled to land.

When the breach is related to DS% content of the cake being below 20% then the affected cake will be held in quarantine until alternative treatment or disposal can be arranged by SWS.

If waste does not meet the specific pH limits, on sampling and testing, in the Environmental Permit, then further advice is sought from the Industrial Waste Services Team, who will decide if

it can be accepted or rejected. If rejected, then the Waste Rejection and Incident Note is completed, and the load is turned away.

Table 4.2 provides an example of a risk assessment for abnormal and emergency operations, which is reviewed and updated as required. The key contact group (the Environment Agency and Southern Water Customer Services) is informed, for high-risk activities, relating to odour, as soon as event occurs.

**Table 4.2: Risk assessment for emergencies and abnormal operating conditions**

<b>Event</b>	<b>Potential source of odour</b>	<b>Potential impacts</b>	<b>Odour risk</b>	<b>Measures to prevent or minimise risk</b>	<b>Actions to be taken</b>
Breach of cake containing structure	Split sludge cake	Risk of odour release until repairs completed, risk of odour from split sludge cake	Medium	Review sludge cake handling operations divert or minimise for duration of breach	Temporary containment pending full repair. Minimise odour generating activities in area Assess odour impact with local survey, use portable odour reduction sprays if requirement identified
Prolonged hot and dry period	High strength / wastewater	Potential for odorous wastes to be discharged into the WPS. Issues with temperature sensitive components	Medium	Increased monitoring. Planned maintenance on equipment	Record details and actions taken in site diary
Very high rainfall	Flooding causing failure of plant/ equipment.	Flooding on-site causing failure of equipment	Low	Increased monitoring. Installing new equipment above water levels, if known to be an issue on-site Planned maintenance on equipment	Check performance of water pumping stations, clearance of road drainage may be required following flooding

# 5 Monitoring

## 5.1 Routine monitoring

As part of the general operation of the Site, control room operators monitor the SCADA outputs on a routine basis in order to ensure that individual process units on and off the Site are performing within specification.

In the event that an out-of-specification plant item is operating beyond normal operating ranges, the process parameters are outside optimum or any other alarm being initiated, appropriate remedial actions would be instigated. Operatives will follow the Awareness Raising Instruction in Appendix A, and further measures are dealt with in subsequent sub-sections.

Any odour detected on-site during normal operation will be rectified using measures described in Table 5.1 to implement actions and prevention protocol. Routine sniff tests at the potential odour sources listed in Table 3.1 are in place to proactively mitigate odour reaching and exceeding the site boundary. If detected, investigation into odour source is undertaken and contingency measures listed in Table 5.1 are implemented.

### 5.1.1 General duties

Operators shall carry out routine duties according to the relevant operational and maintenance schedules and procedures to ensure effective operation of plants. Specific tasks include:

- Perform daily, weekly and monthly maintenance tasks as scheduled;
- Make regular observation of critical processes and equipment including odour sensitive and odour control systems, where applicable;
- Carry out routine performance tests and recording;
- Order and take deliveries of chemicals and other consumables; and

Report performance issues or equipment problems promptly to Process Scientists, Mechanical & Electrical (M&E) technicians, Instrumentation, Control & Automation (ICA) technicians or Specialist Contractors as appropriate.

### 5.1.2 Duties for odour control

Operators shall carry out the following tasks:

- Undertake and record any inspections in the site diary, along with any actions undertaken.
- Investigate odour complaints following the Complaints Procedure as shown in Appendix E.
- Record actions taken in respect of odour investigations.
- Conduct sniff tests – daily when the site is receiving or removing wastes.
- Record and report incidents that caused significant odorous emission, and follow the Awareness Raising Instruction in Appendix A.
- Produce other records as required by the OMP.
- Undertake the Site odour monitoring and controls, where appropriate, listed in Table 5.1.

Drivers delivering odorous loads shall carry out the following tasks:

- Ensure loads are sealed and covered when arriving at the Site.
- Covers to only be removed when loading or unloading, and replaced immediately once completed.

- Follow the spillage management procedures set out in section 5.1.6 if odorous materials are spilled.
- Any wastes that are not authorised to be accepted must not enter the Site (as referred to in the Duty of Care).



**Table 5.1: Site odour monitoring and detection processes**

Potential odour source	Routine actions required	Risk pre-control measures	Monitoring frequency	Attention level	Action level	Preventive action	Risk post-control measures
Waste discharged to pumping station	Check condition of imported wastes entering works for unusual odours	Low	For every load (when discharges occurs)	Noticeable odour from sewage	Noticeable odour from sewage Follow the Awareness Raising Instruction, Appendix A	Take sample and get analysed for BOD, COD etc. Check consented discharges	Low
Transportation	Ensure only sealed or covered skips/trailers used. No removal of covers whilst parked waiting to load/unload Monitor odours during cake loading	Medium	Every load discharged or loaded	Noticeable odour from vehicle	Follow the Awareness Raising Instruction, Appendix A.	If necessary, implement special odour mitigation measures to reduce the risk of odour nuisance. Make contractor aware of requirements in OMP	Low

### 5.1.3 Visual and olfactory inspections

There will be a daily walkover survey incorporating a “sniff-test”. Sniff testing will be undertaken at the operational area boundary, starting at an upwind location. Sniff testing will only be undertaken when waste is accepted on the Site, or whilst cake is being loaded or unloaded. Where possible, the sniff testing will be carried out by a person who is not accustomed to the odour generated by on site activities (i.e., a person who has recently entered the Site boundary such as a person working at the beginning of their shift).

During each walkover, the person undertaking the “sniff-test” must stand nearby to each potential source of odour identified in Table 3.1 and at least one location for the north, south, east and west of the site boundary (as close to the perimeter as practicable) and note on a map the location of the perimeter checks. Checks in each location should be undertaken for at least 20 seconds and the monitoring form completed, see Appendix **Error! Reference source not found.**

During this walkover, over a period of approximately 30 minutes, perceptive “sniff-testing” of the ambient atmosphere is conducted and observations are recorded on a daily check sheet. If odour is likely to exceed the site boundary and, therefore, has potential to cause a complaint, the procedure in Appendix A will be followed.

The results of the sniff test will be recorded in the site diary or an appropriate form, which will be sent to customer services and the management team. Sniff testing is designed to detect any abnormal plant odour emissions. In addition, it is important to document any potential contribution from other off-site sources of potential odour nuisance located outside of the Site boundary.

In addition to Olfactory monitoring, all regular visitors to the Site are asked to remain alert to potential odour issues at the Site. In the event that visitors detect significant odours at the site they are required to contact the Site Manager or report it at the Site’s admin building. Upon receipt of this information, the issue will be recorded and actions allocated to address the issue within suitable timescales. This exercise allows for the early detection of a problem if one should occur.

In the event that abnormal odour is detected, the source of the odour will be investigated, as appropriate, and remedial action taken, as necessary, following measures addressed in the OMP. The approximate extent of the downwind odour will be established to determine whether there is potential for the odour to leave the wider Site boundary. During maintenance and/or emergency conditions which are likely to result in release of odours, the frequency of “sniff-testing” will be increased to twice daily, or more frequently as appropriate.

Actions for remediation will be assigned by the Field Performance Manager (FPM) following the issue of an odour record. Once actions are completed, additional sniff tests at least once a day for minimum three days at the source of the odour will be carried out to determine whether further actions are required. Whereby odour is no longer detected the record will be closed. If odour remains, the OMP and maintenance records will be reviewed to determine alternative actions to be taken, this process will continue until the odour issue is no longer on-going.

### 5.1.4 Housekeeping

Good housekeeping improves efficiency, creates a pleasant environment to work within and makes the Site less likely to cause odour nuisance. Operators have a responsibility to keep sites clean and tidy. The “Top 10 Tips to Minimise Odour Impact” will be communicated to the Site, where they are appropriate to the activities undertaken.

- Ensure that your odour control plants are fully operational and maintained (not applicable to Fairlee)

- Keep all doors and hatches latch closed at all times to contain odour (applicable)
- Clean up debris / spillages as soon as practicable (applicable)
- Monitor sludge levels within Primary Treatment to avoid septicity (not applicable to Fairlee)
- Hose down and clean process tanks / channels after draining (applicable)
- Monitor digesters / Whessoe valves and gas flares (not applicable to Fairlee)
- Report any odour activity caused by Contractors to your Senior Manager (applicable)
- Where possible, do not undertake odour sensitive work if it cannot be completed before or continued during the weekend (applicable)
- Follow business procedures and respond to all odour complaints (applicable)
- If you See it, Smell it, do something about it (Don't ignore it) (applicable)

Additional reminder signs will be displayed in prominent positions at the Site where open-doors, covers and skips present an odour risk and include:

- Keep all doors shut
- Keep all covers / lids latch closed
- Clean up spills immediately using disinfectant if required
- Monitor odours
- All rubbish / waste to be disposed of immediately to relevant skip.

#### 5.1.5 Meteorological observations

Southern Water will record daily in the site diary the following meteorological data:

- Air temperature
- Wind Direction
- Wind Speed

Meteorological data will be reviewed in advance of activities that may present an odour concern, such non-routine activities such as emptying of sludge cake, to consider suitable measure to limit odour. For example, time such activities when wind speed is low (if possible). It should be noted that when the wind blows from the north east, it is more likely to cause nuisance to the residential properties on the south west, on the other side of the River Medina.

Meteorological data will also be available to complete odour records to establish potential trends. Wind direction, wind speed and temperature will be sourced online from the Met Office or onsite weather station.

#### 5.1.6 Spillage management

All staff on-site have a responsibility to maintain good housekeeping and clear spillages at the earliest opportunity to prevent odour. If a spillage occurs from a process, operators will carry out clean up as soon as possible (using disinfectant, where necessary). If a spillage is caused by a lorry or tanker, the driver is responsible to clean up before leaving the Site. If a lorry or tanker left a spillage behind, operators will log and report any incident observed. The driver or company involved will be asked to return to the Site immediately to clean up. Significant spillage incidents will be recorded in the site diary.

Key areas at risk from spillage (and the control measures):

- Sludge cake and tankered waste reception area
  - Tanker drivers are responsible for cleaning up spillages after every load. A hose is supplied.
- Sludge cake storage bays

- Drivers are responsible for cleaning up spillages after every load.
- Pumping station
  - Spillages around the inlet area must be cleaned up immediately.
- Entire site
  - Routine site inspections by FPM and site manager – a minimum of once per month.

### 5.1.7 Accident management

The Site operates under a generic site-wide Accident Management Plan, and associated Site Emergency Incident Plan, to prevent and manage environmental related accidents. The AMP includes a description of nominated key personnel and their responsibilities, emergency response procedures, contact details of internal contacts (Works Manager, Team Leader, Process Technician, Regional Control staff and key H&S staff), national and regional (where appropriate) contact details of emergency services and environmental regulators.

The AMP is distributed to key staff, to supervise the implementation of the Plan, and shared with external contacts (emergency services and the Environment Agency).

The key procedures relating to environmental accident and incident management are set out in Southern Water's ISO14001 accredited EMS.

The relevant procedures in the EMS relating to environmental accident and incident management includes:

- EMS240 – Nuisance management
- EMS260 – Pollution prevention
- EMS275 – Emissions to air
- EMS308 – Site housekeeping checklist
- EMS340 – Nuisance management procedure
- EMS341 – Air quality/odour management procedure
- EMS360 – Pollution prevention procedure
- EMS363 – Procedure for managing spills on sites
- EMS381 – Operational waste procedure
- EMS388 – Waste permit breaches and near miss reporting procedure

## 6 Training

### 6.1 Staff training

Southern Water provides a comprehensive programme of Health and Safety and operational awareness training which is carried out for new starters and as an ongoing programme of refresher courses.

All new starters receive a comprehensive programme of health and safety training and on-going refresher courses. All staff receive training to cover operations at the Site. On the job training is provided to all staff through a rolling training programme.

Southern Water has developed its own Competency Management System (CMS), which identifies the training required for different roles on site.

Training on the following technical subjects relevant to odour control will be provided to operational staff according to needs and site requirements:

- Wastewater treatment processes.
- Sludge treatment processes.
- Checks for odour control equipment.
- Risk assessment of odour sensitive maintenance activities.
- Deployment of temporary odour control measures, for sites where these are present.
- Site requirements in relation to the Odour Management Plan.

The training needs of each individual are assessed during personal performance appraisal and reviews.

Formalised training for all grades of staff on the Site is undertaken relevant to job role. All staff are made fully aware of the need to be constantly vigilant with regard to site odour control and management procedures.

Records for training received by all staff are held electronically. Records of environmental training are kept in the Southern Water EMS.

Relevant components of the OMP should form part of the induction process for all site staff and contractors, to ensure they are aware of the procedures and responsibilities in relation to odour.

# 7 Communication

The objective of communication in odour management is to raise the profile and awareness of the importance of odour control and to keep stakeholders informed of odour incidents, and management practices. Appendix A provides an example of an awareness raising instruction.

## 7.1 Internal communication

Odour management will be included by FPMs, as relevant, as an agenda item for team meetings.

Statistics of odour complaints and progress of actions to address odour issues will be updated monthly and communicated to key personnel with odour management responsibilities.

## 7.2 External communication

Southern Water is committed to working closely with stakeholders to achieve sustainable reduction of odour nuisance. Southern Water is committed to making available relevant records and information to regulatory and local stakeholders, where appropriate, and communicating and engaging, in advance, with stakeholders where appropriate, any relevant activities that may generate odours.

## 7.3 Reporting

Southern Water will send all reports and notifications required by the Environmental Permit, or upon request by the Environment Agency, within the given timescales.

## 7.4 Complaints management and resolution procedure

All customer complaints about odour are entered on the Southern Water Customer Services Management System (CSMS), the details of which are detailed in Appendix E.

## 8 Reviews and Auditing

### 8.1 Reviews

#### 8.1.1 Periodic reviews

A review of this OMP will be carried out by the FPM annually, unless agreed otherwise, and in accordance with the Environment Agency's H4 guidance (or current existing guidance should this change).

#### 8.1.2 Ad-hoc reviews

This OMP will be reviewed when any significant changes in operational practice are made and on completion of any significant capital scheme which could impact the OMP.

### 8.2 Auditing

The regulatory authorities, where required, will be provided with reasonable access, in order to audit the implementation of the OMP upon request.

### 8.3 Records

The following records will be maintained:

- Record of complaints are stored on CSMS.
- Reports of investigations are held electronically.
- Odour issues which require a capital scheme to be raised to resolve them.

## A. Awareness Raising Instruction

### Activities that may result in an odour nuisance

All Process Operations staff must ensure that if a failure of plant, equipment or a system occurs, which may lead to complaints from customers, that the RCC/Customer Services are informed in a timely manner.

Listed below (but not limited to) are some examples of the type of incident that are to be reported.

- Odour control plant failure
- Spillage of wastewater/sewage
- Spillage of sludge or sludge cake
- Odour monitoring equipment failure

If the Operational Control Centre or Customer Services are made aware of the problem, it means that they give a more constructive response to the person making the enquiry/complaint.

Please contact the OCC and request information is passed to the Customer Contact Team and added to the Operational Business Report.

Every effort must be made to carry out the above request, a short phone call to share information with colleagues dealing directly with the Customer will greatly help them deliver a more valid and informed response.

**Be proactive, not reactive!**



## B. Waste Codes

EWC Code	Description	Where accepted	Indigenous or imported	Justification for use
<b>16 10</b>	<b>aqueous liquid wastes defined for off-site treatment</b>			
16 10 02 <sup>5</sup>	aqueous liquid wastes other than those mentioned in 16 10 01; Wastewater from portable showers and chemical toilet waste and other wastes depicted in footnote below	Tankered waste reception area	Imported	The waste for this code will be for chemical toilet waste and wastewater from portable shower units from the Isle of Wight Festival site and any other wastes depicted under Footnote 6 below. However, other imports to the WPS are on an emergency basis, for example if a pumping station goes down or there is a burst rising main, the waste would be transferred via tanker to the Site and only from assets that would already discharge to the Sandown WTW (indigenous). This waste stream is accepted under the Urban Wastewater Treatment Directive under normal operations.
<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 cake	Cake Bay post digestion and dewatering	Indigenous/ Imported	Used for intersite transfers of post digested, dewatered cake from Sandown for storage at Fairlee
<b>19 08</b>	<b>wastes from waste water treatment plants not otherwise specified</b>			
19 08 01	screenings	Grit and screenings skip	Indigenous/ Imported	19 08 01, 19 09 01 and 19 08 02 is included to allow for importing of grit and screenings from sewer cleaning, they are not received at the head of the works but is either received in covered skips or road tankers to a designated bay on-site for bulking up.

<sup>5</sup> The waste for this code will be chemical toilet waste, STC liquors and other wastes depicted below. However, imports to head of works are on an emergency basis, for example if a pumping station goes down or there is a burst rising main, the waste would be transferred via tanker to the Site and only from assets that would already discharge to the Site (indigenous). This liquid waste is by-passing the pumping station, whilst it is being brought back online. This waste stream is accepted under the Urban Wastewater Treatment Directive under normal operations. Wastes accepted under 16 10 02:

- sludge from production of edible fats and oils, seasoning residues, molasses residues, residues from production of potato, corn or rice starch only, not containing substances at levels that will inhibit biological treatment
- waste effluents from the baking and confectionery industry, sludges from cleaning, flushing of equipment. Aqueous process waters and washwaters not containing substances at levels that will inhibit biological treatment
- aqueous process waters and washwaters from the leather, fur and textile industries; not containing substances at levels that will inhibit biological treatment
- wastes effluents/liquors from the MFSU of fertilisers including lagoon leachate, effluent and run -off; not containing substances at levels that will inhibit biological treatment
- waste biodegradable liquors/effluents from MFSU of basic organic chemicals. Aqueous process waters and washwaters not containing substances at levels that will inhibit biological treatment
- biodegradable effluent/liquors from the MFSU of pharmaceuticals. Aqueous process waters and washwaters not containing substances at levels that will inhibit biological treatment
- biodegradable effluent/liquors from the MFSU of detergents, disinfectants and cosmetics. Aqueous process waters and washwaters not containing substances at levels that will inhibit biological treatment
- waste effluents, liquors, sludges from the MFSU of fine chemicals and chemical products not otherwise specified. Aqueous process waters and washwaters not containing substances at levels that will inhibit biological treatment
- waste effluents, liquors arising from the washing, rising of material from the steel and iron industry. Aqueous process waters and washwaters not containing substances at levels that will inhibit biological treatment
- waste waters/effluents from the cleaning and pressure testing of storage tanks and barrels. Washwaters not containing substances at levels that will inhibit biological treatment
- run-off liquors, leachates that arise from the aerobic treatment of municipal, vegetable waste types.
- liquor/leachates from an anaerobic composting process that accepts municipal, animal and vegetable wastes
- centrate liquor from waste water treatment only. Aqueous process waters and washwaters not containing substances at levels that will inhibit biological treatment
- chemical toilet waste

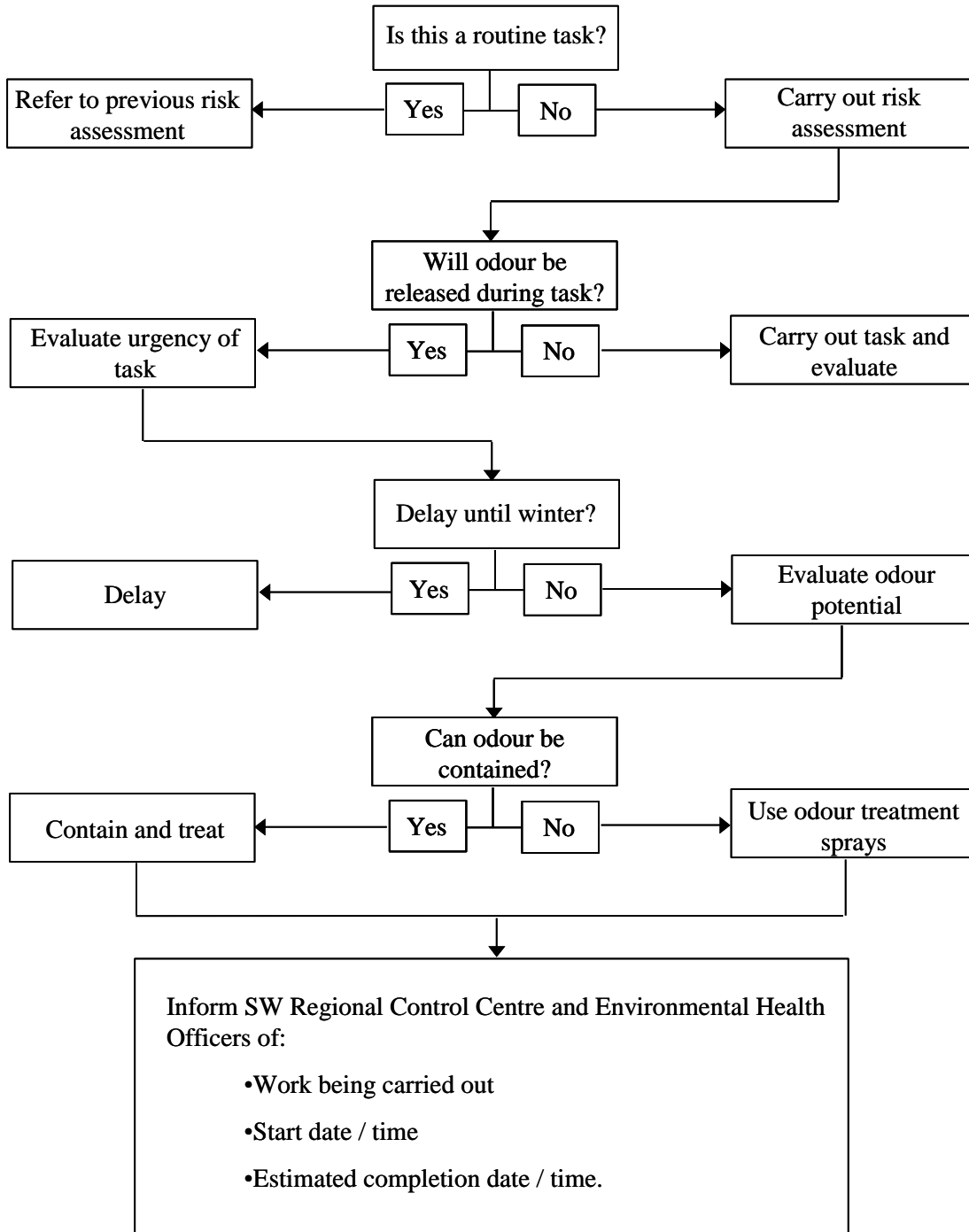
<b>EWC Code</b>	<b>Description</b>	<b>Where accepted</b>	<b>Indigenous or imported</b>	<b>Justification for use</b>
19 08 02	sewage waste (waste from desanding) only	Grit and screenings skip	Indigenous/ Imported	19 08 01, 19 09 01 and 19 08 02 is included to allow for importing of grit and screenings from sewer cleaning, they are not received at the head of the works but is either received in covered skips or road tankers to a designated bay on-site for bulking up.
19 08 05	sludge from treating urban wastewater	Dewatered cake	Imported	
<b>19 09</b>	<b>wastes from the preparation of water intended for human consumption or water for industrial use</b>			
19 09 01	Solid waste from primary filtration and screenings	Grit and screenings skip	Indigenous/ Imported	19 08 01, 19 09 01 and 19 08 02 is included to allow for importing of grit and screenings from sewer cleaning, they are not received at the head of the works but is either received in covered skips or road tankers to a designated bay on-site for bulking up.
19 09 02	sludge from water clarification	Tankered Waste Reception Area	Imported	19 09 02 has been transposed from the T21 exemption Southern Water therefore need to have this code on the permit in order to be able carry out the operations that would have been carried out under the exemption.
<b>20 03</b>	<b>other municipal wastes</b>			
20 03 04	Septic tank sludge/waste	Tankered Waste Reception Area	Imported	
20 03 06	Waste from sewage cleaning	Tankered Waste Reception Area	Imported	

## C. Odour Checklist

This is a generic checklist applicable to all sites and aspects that are not applicable to a particular site should be ignored.

Area of works	Potential issue		Follow up action
Odour management plan (OMP)	Is the Site operated according to the OMP?	YES / NO	Make changes to site operation to minimise odour production and release
Site - general	All covers in place?	YES / NO	Put back covers and close hatches as required
	Are all access hatches closed?	YES / NO	
Inlet works	Is the crude sewage black and/ or smelly?	YES / NO	Check incoming sewage for septicity (in communication with Operations Support Team) Check for potential septic discharges
Imports and Exports	Does the tanker filling and emptying process cause significant release of odour?	YES / NO	Investigate whether the process can be modified to reduce odour emissions Consider changing timing of tanker operations to reduce nuisance potential
Sludge storage	Are all covers in place?	YES / NO	Put back covers and close hatches as required
	Are all access hatches closed?	YES / NO	
	Are the doors to sludge treatment buildings / sludge cake stores kept closed?	YES / NO	Close doors as required
General	Are there any outstanding actions from a previous investigation?	YES / NO	Complete actions

## D. Risk Assessment Flowchart



## E. Complaints Management

### E.1 Management of odour complaints

#### E.1.1 System overview

Southern Water operates an integrated process to receive and record odour complaints by members of the public. It is designed to ensure complaints are dealt with promptly and consistently and a comprehensive record is kept. The following system ensures that these objectives are achieved:

- A unique and recognised point of contact for members of public and Southern Water staff to report odour incidents and issues
- A straightforward process for operational staff to investigate and mitigate odour issues after a complaint is received.
- A recognised point to provide feedback to customers
- A mechanism to review recent odour complaints and actions
- A database to capture trends and potentially serious problems to guide future improvement

The following sections describe how odour complaints are received and handled. This procedure may be augmented by local arrangement to provide a tailored service to meet local council requirements.

#### E.1.2 Receipt of odour complaints

The Customer Services is the first point of contact for members of the public to report odour incidents during normal working hours.

The Regional Control Centre can deal with odour complaints out of hours.

When a member of the public phones in to report odour from a Southern Water site, relevant information will be taken from the caller, including name, phone number, address, time, duration, the characteristics of the odour experienced and whether the customer would like to receive a feedback by phone. Each call is assigned a unique CSMS number. The information is entered into the CSMS Database under a designated sort code.

Verification of the complaint is made through identification of the caller's property and the Southern Water site in question on electronic GIS maps. Following verification, a CSMS summary sheet is generated and transmitted immediately to the relevant FPM or the Regional Controller.

Where odour complaints are received directly by other Southern Water staff, the receiver of the call will contact Customer Services to log the call on behalf of the caller. The caller will be provided with the telephone number for Customer Service for future use.

All CSMS records of odour complaints are stored in the Corporate Information System to ensure transparency, visibility and consistency of the information.

#### E.1.3 Follow up actions

##### Initial action by Field Performance Manager

The FPM or Regional Controller upon receiving a CSMS summary of odour complaint will investigate the issue as soon as practicable. Based on the sensitivity of the Site, the investigation may range from remotely checking the Site alarms to the assignment of an

operator to conduct a site investigation. Site investigation will be guided by and recorded on a site odour incident form if available or on a generic Odour Risk Checklist. Where possible, actions will be undertaken by the operator to improve control of odour emission. Following the investigation, the FPM or the investigator will forward the findings to the Customer Liaison Officer during normal working hours at other times. If required in the site specific OMP, FPM will also produce reports to the regulator within an agreed time period.

#### **Feedback to the customer from Customer Liaison Officer**

Unless the customer had indicated that they would not wish to receive a feedback, a feedback will be provided at the earliest opportunity by the Customer Liaison Officer. The Customer Liaison Officer will then close the CSMS call.

#### **Action by Process Scientist**

If requested by a FPM, a process scientist will carry out a further investigation where a site has received reoccurring odour complaints. Process scientists will advise FPMs of available options to mitigate odour, e.g., re-adjusting sludge disposal activities or process parameters. Process scientists will provide technical support if such measures are adopted. Process scientists will produce a written report for each investigation and follow up any further actions.

#### **Action by Southern Water Managers**

Managers will carry out regular reviews of odour complaints to all Southern Water sites and inform relevant FPMs where a trend is developing. Southern Water Managers will deploy additional monitoring resources where necessary to support the resolution of significant odour issues.

# F. Odour Monitoring Form

<b>Date:</b>	
<b>Name:</b>	<b>Visitor or staff:</b>

- Intensity**
- 0 – No odour
  - 1 – Very faint odour
  - 2 – Faint odour
  - 3 – Distinct odour
  - 4 – Strong odour
  - 5 – Very strong odour
  - 6 – Extremely strong

Location	Time	Weather conditions (dry, rain, snow etc)	Temperature (very warm, mild) <i>Use degrees when known</i>	Wind strength (light, strong) <i>Use Beaufort scale if known</i>	Wind direction (e.g. SE)	Intensity <i>(See above)</i>	Duration	Constant or intermittent in this period or persistence

