Holloway Lane AD Facility

784-B049182

Pest Management Plan

Environmental Permit Application

SUEZ Recycling and Recovery UK Ltd

February 2024

Document prepared on behalf of Tetra Tech Environment Planning Transport Limited.
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1.0 INTRODUCTION

1.1 REPORT CONTEXT

1.1.1 This Pest Management Plan (PMP) has been prepared by Tetra Tech on behalf of the operator, SUEZ Recycling and Recovery UK Ltd (SUEZ) in connection to an area of land located off Holloway Lane (the site), Sipson, Middlesex, UB7 0AE. The site location and permit boundary are presented on Drawing Number SUEZ/B049182/PER/01.

1.1.2 SUEZ are seeking to apply for a new environmental permit to allow the operation of an Anaerobic Digestion (AD) facility that will process food waste from household waste collections as well as industrial and commercial customers. The process will generate biogas which will be processed by a Combined Heat and Power (CHP) engine to generate heat and electricity that would be used by the AD plant. Once the parasitic load has been met, any excess biogas will be processed by a gas upgrading plant to National Gas Grid criteria and injected into the gas grid. Alternatively, excess biogas will be processed by the CHP engines to generate electricity that will be exported to the National Grid.

1.1.3 The CHP engine will have a capacity of 1.2MW and therefore it's considered that the CHP engine will be subject to the Medium Combustion Plant Directive (MCPD) and therefore will comprise a MCP with a specified generator (SG).

1.1.4 The Operator also seeks to implement a wastewater treatment plant on site which will be used to treat the liquor extracted during the dewatering process of the digestate. Having been treated, the remaining liquid will be clean enough to either be used for washing down or within the process. Excess liquid will be discharged to public sewer in accordance with a trade effluent consent. The treatment capacity of the wastewater treatment plant is over 50 tonnes per day, causing it to be a Schedule 1 activity.

1.1.5 In addition, SUEZ seek to agree to undertake the process of carbon capture as a function of this application.

1.1.6 All SUEZ operations are certified to ISO 14001, ISO 9001, and ISO 45001 and operate under documented management procedures. All SUEZ operations are controlled by an Integrated Management System (IMS) comprising quality, environmental and health and safety requirements.

1.1.7 This PMP identifies the potential causes and effects of pest and describes the measures that will be in place to prevent the occurrence of pest from the AD facility.

1.2 OBJECTIVES OF THE PEST MANAGEMENT PLAN

1.2.1 This PMP is a working document, intended to be used as a reference document for operational staff on a day-to-day basis. SUEZ will implement the plan to ensure that all reasonable measures are taken to control pests, and in the event that an adverse impact is caused, prompt action will be taken to identify the source and apply corrective measures. It provides a schedule of actions that will be taken to minimise pest impact and details site management procedures for the management and monitoring of pests.

1.2.2 The PMP will adopt a Source → Pathway → Receptor model with an emphasis on implementing effective and robust controls for pests at the earliest stages possible (i.e., at source).

1.2.3 This document provides a summary of the physical and management controls that will be employed to minimise pests at the AD facility. It provides a site-specific assessment of the potential sources of pests and the receptors it is likely to impact. The document also outlines the control measures including monitoring and contingency actions to be deployed at the AD facility in order to prevent or minimise any infestation of pests.

1.3 MAINTENANCE AND REVIEW OF PMP

1.3.1 The implementation and dissemination of this PMP will be the responsibility of the Site Manager, supported by other staff. The Site Manager can delegate certain tasks as required, although ultimate responsibility will remain with them.

1.3.2 A nominated deputy will be appointed for all times when the Site Manager is not on site. In such circumstances, it will be the nominated deputy's responsibility to ensure that the requirements of the PMP are adhered to.

1.3.3 The PMP is to be reviewed as a minimum on an annual frequency by the Site Manager and the Environment and Industrial Risk (EIR) Manager to ensure it reflects the latest guidance, legislation, and the site operations.

1.3.4 Staff training will be a key aspect of ensuring that pests can be controlled through effective management during daily operations. All site operatives will therefore be trained via toolbox talks to deal with pests management issues. Annual refresher toolbox talks will ensure that the requirements of the PMP are reinforced.

2.0 SITE DESCRIPTION

2.1 SITE LOCATION

2.1.1 The site is located approximately 1.2km south of the West Drayton town centre and is centred at approximate National Grid Reference (NGR) TQ 06719 78035. The site location is shown on Drawing Number SUEZ/B049182/PER/01.

2.1.2 The site forms part of a historic landfill which extends to areas further offsite to the south, east and west, and to the north of Holloway Lane.

2.1.3 The site is occupied by two tenants to operate separate waste facilities. The first facility comprises a soil recycling facility in the western section of the site. The operation of this facility will cease before operations commence for the proposed AD facility.

2.1.4 The second facility comprises a Material Recycling Facility (MRF) to the east of the site. The proposed AD facility will overlap some of the permit areas for the MRF facility including the internal haul road and an area to the north of the MRF which is currently used as a car park. Despite this, the operation of the MRF is expected to continue.

2.1.5 The immediate surroundings of the site comprise agricultural land to the east and south, Holloway Lane to the north, stormwater retention ponds, commercial stores and a garden centre to the west. In addition, there is a landfill located to the south of the site off Harmondsworth Lane. The nearest residential properties are located approximately 145m to the south of the site.

2.1.6 Access to the site is achieved by an access road to the north of the site off Holloway Lane.

2.2 OVERVIEW OF AD FACILITY

2.2.1 As noted in Section 1.1, SUEZ are seeking to operate an AD facility at the site.

2.2.2 The AD facility would provide the treatment of organic food waste (initially from municipal waste streams only, although this is likely to be expanded to include some commercial food wastes as further facilities are developed). The process will generate biogas which will be processed by a CHP engine to generate heat and electricity that would be used by the AD plant. Once the parasitic load has been met, any excess biogas will be processed by a gas upgrading plant to National Gas Grid criteria and injected into the gas grid. Alternatively, excess biogas will be processed by the CHP engines to generate electricity that will be exported to the National Grid.

2.2.3 The waste acceptance limit for the AD facility will be no more than 100,000 tonnes per annum.

2.2.4 It is considered that the AD facility will fall under following Schedule 1 activity of the Environmental Permitting (England and Wales) Regulations 2016 (as amended): -

- Section 5.4 A(1)(b)(i) - Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day (or 100 tonnes per day if the only waste treatment activity is anaerobic digestion) involving biological treatment.

2.2.5 In addition, the site will operate a wastewater treatment plant which will fall under the following Schedule 1 Activity:-

- Section 5.4 A(1)(a)(ii) – Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day (or 100 tonnes per day if the only waste treatment activity is anaerobic digestion) involving physico-chemical

treatment.

2.2.6 In addition to the above, the AD facility will have the following Directly Associated Activities (DAAs): -

- Storage of waste pending recovery or disposal;
- Physical treatment for the purpose of recovery;
- Heat and electricity power supply (i.e. CHP);
- Emergency flare operation;
- Gas upgrading;
- Carbon capture;
- Raw material storage;
- Wastewater treatment plant with subsequent discharge to sewer;
- Gas storage; and,
- Digestate storage.

2.3 WASTE TYPES

2.3.1 As mentioned above, the AD facility will solely treat food waste. A complete list of the proposed waste types is provided as Appendix A.

2.4 PROCESS DESCRIPTION

2.4.1 The AD facility can be separated into several general areas: reception, separation, anaerobic digestion, liquor treatment, biogas handling (including electricity generation), odour control and carbon capture.

Reception

2.4.2 Delivery vehicles would reverse into the reception hall via a fast-acting doors. Once the door is closed, the driver would deposit the waste into a waste pit that is situated within the reception hall. The pit will comprise a walking floor and screw conveyor that will push the waste into the pre-treatment area. This will ensure that waste is processed in the order it is received (first-in, first-out) and therefore ensure that the waste is not stored for more than 72 hours which will be the maximum residency time that waste will be stored in the reception hall prior to treatment.

Separation

2.4.3 Waste will be fed into a fixed shredder and would subsequently enter a de-packaging plant which is situated within the reception hall. The plant will be designed to remove unwanted packaging and contamination (e.g., stones, glass). Any packaging and contaminants recovered from the plant will be discharged into skips where they will be bulked up and transferred to an appropriate permitted facility for further treatment. It's envisaged that up to 162.5 tonnes of packaging and contaminants will be stored on site prior to transfer and will be stored for no longer than 7 days.

2.4.4 The waste will also be diluted with recovered water from the process, towns water and liquid waste from the food industry (as detailed in Appendix A) in order to achieve the required dry solids concentration to feed into the digestion process.

Anaerobic Digestion

2.4.5 The residual organic waste will be conveyed into a waste dissolver which will liquify the waste into a slurry and then pumped into the hydrolysis buffer tank located to the north of the main AD process building. The

tank acts as a buffer between the intermittently working reception and processing halls and the continuously operating AD plant, as well as providing residence time for the enzymatic hydrolysis of fats and proteins.

2.4.6 Slurry is then pumped from the hydrolysis buffer tank to the anaerobic digesters. Three 7,800m^3 AD tanks would convert organic material to biogas (methane and carbon dioxide) by the fermentation of organic material in the absence of oxygen. The retention time of the digester is up to 60 days to maximise the biogas production and biogas is collected within the roof space, which is connected to the biogas system. As part of the process, SUEZ intend to install pasteuriser tanks which may be used to heat the slurry to 70ₒc before it is pumped into the aerobics digesters. Alternatively, the pasteuriser tanks may be incorporated at a later stage of the AD process where it will be used to heat the material 'digestate' to 70ₒC for a minimum 1 hour before being pumped into the post digestion buffer

2.4.7 The material left from the process (digestate) will still be in slurry form and can be used as a fertiliser, compost, or soil improver. To achieve this, the digestate will be subject to the specifications outlined110 'Specification for whole digestate, separated liquor and separated fibre derived from the anaerobic digestion of source-segregated biodegradable materials.'

2.4.8 At this stage, SUEZ are considering the potential options to process the digestate. The main process is to process the digestate slurry through a centrifuge where solids are dewatered to a dry solid concentration of approximately 25%. The centrifuges will be located within the main AD process building.

2.4.9 Digested material falls by gravity into articulated trailers where it can be periodically collected and subsequently transferred off site. The trailers will have a total storage capacity of 50 tonnes. Under normal operating conditions, the maximum residence time for the digestate will be no longer than 24 hours before it is transferred off site.

2.4.10 The facility would provide approximately 19,000 tonnes of digested cake per annum which would be spread to agricultural land as a soil enhancer.

2.4.11 In the event that the digestate does not meet the required specifications, the material will be stored within designated RoRos/skips inside the AD building and disposed of accordingly.

2.4.12 Alternatively, SUEZ are considering the potential to utilise the digestate in a slurry form and therefore would not be processed by the centrifuge.

Liquor Treatment

2.4.13 Liquor extracted during the dewatering process (as detailed in Section 2.4.8) would gravitate to the liquor pumping sump from where it would be transported to the wastewater treatment plant on site. The treatment process will reduce the Chemical Oxygen Demand, oxidise ammonia to nitrate and correct pH. Waste sludge from this process will be used to dilute the food waste entering the plant. The remaining liquid is clean enough to either be used for washing down or within the process. Excess liquid will be discharged to sewer.

Biogas Handling

2.4.14 The biogas is captured from the AD tanks and then will be processed by the CHP engine to generate heat and electricity that would be used by the AD plant. Once the parasitic load has been met, any excess biogas will be processed by a gas upgrading plant to National Gas Grid criteria and injected into the gas grid. Alternatively, excess biogas will be processed by the CHP engines to generate electricity that will be exported to the National Grid.

Odour Control

2.4.15 Processes will be fully enclosed with an odour abatement system comprising the following: -

- The air within the building shall be treated by incorporating a local extract ventilation system above and around the reception put and other point sources of odour within the building at a rate of 3 air changes per hour. All of the collected air shall pass through a dust filter then deep beds of activated carbon, designed with sufficient contact time to prevent the release of odorous air. The inclusion of a dust filter enhances the effectiveness of the activated carbon.
- Air from some of the process equipment (e.g. buffer tanks, pasteurisation and storage tanks) shall also be collected and pass through and enclosed biofilter, then the dust filter and activated carbon filter. The treated air from the carbon filters will be discharged to atmosphere via an elevated vent stack.

Carbon Capture

2.4.16 The biogas produced from the AD facility will be piped to a gas upgrading system to remove hydrogen sulphide (H_2S) and separate CO_2 from the bio-methane. After the biogas has been cleaned into bio-methane, its envisaged that the remaining gas will contain about 99% of CO_2. The carbon capture process liquefies the CO_2 while recovering the residual methane which can be returned to the biogas upgrading unit.

2.4.17 The CO_2 capture process comprises: -

- Gas compression unit;
- CO_2 filtration and drying unit;
- CO_2 liquefaction module; and,
- Storage tanks.

2.4.18 The carbon capture mechanism on-site operates as a closed system, the full details are provided as Section 4.6 of the Best Available Techniques and Operating Techniques (BATOT) document (Appendix C of this Environmental Permit Application).

2.5 SITE LAYOUT

2.5.1 An indicative site layout plan of the AD facility is provided on Drawing Number 1451_PL100.

2.6 OPERATING HOURS

2.6.1 The facility will operate 24 hours a day, but vehicle movements to and from the site will be restricted to the following hours: -

- 07:00 –19:00 – Monday - Sunday.

3.0 POTENTIAL SOURCES FOR PESTS

3.1 VERMIN

3.1.1 Vermin (principally rodents) will be attracted by waste streams that contain putrescible materials. Waste that may contain putrescible materials will be stored in the AD building which is equipped with fast acting roller door which will be kept closed when not in use. In addition, pedestrian doors are also closed when not in use.

3.2 INSECTS

3.2.1 There are around six insect species that have the potential to cause regular and significant problems on and around waste management facilities. Fly larvae occur in damp, decaying organic waste. However, each species will have a preferred niche in terms of temperature, moisture levels and nature of the material. There is an increased chance of fly problems occurring where waste is stored for a prolonged period of time.

3.2.2 The most common species associated with waste management facilities which have the potential to generate complaints are outlined in Table 1.

Table 1: Main Fly Pest Species

Fly species	Typical pest status	Notes
Common housefly (Musca domestica)	Can cause widespread and severe problems	Larvae found in poultry, pig, and calf manure, and in refuse. Adult readily disperses and enters buildings.
Lesser housefly (Fannia canicularis)	Can cause widespread and severe problems	Larvae found in poultry manure, and in refuse. Adult readily disperses and enters buildings.
Blow flies: Bluebottles / Greenbottles (Calliphora / Lucilia)	Localised problems	Larvae found in carrion and faecal material, commonly associated with putrescible waste. Adults tend not to disperse far.
Stable flies (Stomoxys calcitrans)	Localised problems only	Larvae found in manure of large animals, e.g., cattle and pigs. Adult is blood-feeding and tends not to disperse far.
Fruit flies (drosophila spp.)	Localised problems only	A small (2mm) fly. Larvae found in rotting vegetation or vegetable waste, e.g., green-waste composting. Tends not to disperse far.
Cluster flies (Pollenia rudis, Eudasyphora cyanella, Musca autumnalis)	Localised problems only	The larvae of these flies are not found in livestock or waste facilities, but the adults do enter buildings in the autumn, and may be confused with houseflies by complainants.

3.3 BIRDS

3.3.1 Many different bird species may be considered a hazard or annoyance including Corvids, Pigeons, Geese, Starlings, and Gulls. Birds are likely to be attracted by putrescible waste stored at a site. The varying species of Gull could often be the primary source of hazard or annoyance at a site. A variety of methods of control are required, especially as gulls are a reasonably intelligent species and will acclimatise to a single control measure used in isolation quite quickly.

3.3.2 There are also seasonal variations that will affect the numbers of birds on site. If the birds are nesting during the spring/summer months and require food for their chicks or if food availability is scarce in winter, this may make the birds more desperate to find food and bring increased numbers.

4.0 RELEASE POINTS, PATHWAYS AND SENSITIVE RECEPTORS

4.1 RELEASE POINTS AND PATHWAYS

4.1.1 Vermin - It is possible that vermin may pass from premises to premises overground or by establishing burrows under the boundary fence. These may be easily identified and blocked.

4.1.2 Insects - Most adult flies stay close to their breeding sites. However, a proportion will disperse away and have the potential to cause a nuisance at receptors. Houseflies are capable of dispersing over distances of several kilometres, although problems seldom occur at distances greater than 2-3 km from the source. Significant problems will generally occur within 500m of the source. Dispersal factors can vary but are mainly influenced by high levels of fly breeding at the source and weather conditions.

4.1.3 Birds - Putrescible waste streams will be stored in the AD building; however, birds may hover around the facility and settle on rooftops awaiting an opportunity to set on a food source.

4.2 RECEPTORS IDENTIFICATION

4.2.1 Key potentially sensitive receptors within 1km of the AD facility are identified in Table 2 and are shown on Drawing Number SUEZ/B049182/REC/01.

Table 2: Receptors Within 1Km of the AD Plant

ID	Receptor	Direction from Operational Area	Minimum Distance from the Permit Application Boundary (approx. m)
Domestic Dwellings			
1	Properties of Harmondsworth	SW	350
2	Properties of Sipson	SE	235
3	Properties of West Drayton	N	445
4	Property off Harmondsworth Lane	S	145
Commercial and Industrial Premises			
5	Industry off Polar Park Lane	S	710
6	Industry off Heathrow Boulevard	S	715
7	Sipson Road Industry	NE	320
8	Holloway Lane Industry and Commercial Properties	W	85
9	Harmondsworth Road Industry	S	75
10	Industry East of Tunnel Road West	E	710
11	Heathrow Boxing Club	N	720
12	Commercial Properties of Harmondsworth	SW	675
13	Commercial Properties of Sipson	W	390
14	Commercial Properties of West Drayton	N	480
15	Holloway Lane Commercial Properties	W	45

16	Industry South of Bath Road (A4)	S	1000
17	Powerday	E	Adjacent
Schools/Hospitals/Shops/Amenities			
18	Heathrow Holiday Inn and Car Rental Services	NE	550
19	Novotel – Heathrow Airport and Airport Pick Ups	NE	775
20	Crowne Plaza Hotel	NE	990
21	Cherry Lane Childrens Centre	NE	550
22	Cherry Lane Primary School	NE	580
23	Once Upon a Daytime Nurseries	NE	720
24	Laurel Lane Primary School	NW	945
25	Lady Nafisa Secondary school for Girls	E	555
26	St Martins Church of England Primary School	NW	890
27	LGH Hotels Management Limited	N	700
28	Hyatt Place London Heathrow Airport	S	960
29	Hotels off Heathrow Boulevard	S	890
30	Heathrow Primary School	SE	200
Sensitive Land Uses			
31	Butterfly Park	NW	610
32	The Brambles Playground	NW	535
33	Harmondsworth War Memorial Recreation Ground	SE	820
34	Sipson Way Playground	SE	980
35	Sipson Village Recreation ground	SE	485
36	Little Harlington Playing Field	E	985
37	Harmondsworth Barn	W	1000
38	Home Farm	SW	635
Highways or Minor Roads			
39	M4 Tunnel Road West & East	E	670
40	M4	N	380
41	A4 Bath Road	S	1000
42	A408	E	400
43	A3044	N	140
Protected Habitats/ Designated ecological habitats e.g. Ramsars, SAC, SPA, SSSI			
44	Wordsworth Way Deciduous Woodland	N	430
45	Holloway Lane	NE	505
46	Holiday Inn Deciduous Woodland	NE	490
47	M4 Deciduous Woodland	NE	460

Surface Water e.g. rivers and streams			
48	Pond adjacent to the site	W	Adjacent
49	Saxon Lake	W	900
50	Two ponds Sipson Road	NE	175
51	Hardcrete Pond	E	905
52	Harmondsworth Lane Brook	S	135
53	Bath Road Brook	S	355
54	Pond	SE	980
Local Wildlife Sites (LWS)			
55	Carp Ponds and Broads Dock	W	900
Groundwater (sensitivity)			
According to the Multi-Agency Geographic Information for the Countryside's (MAGIC) website, the site is not situated within a groundwater source protection zone. In addition, the MAGIC website indicates that the site overlies an Unproductive Bedrock Aquifer and a Principal Superficial Drift Aquifer.			

4.2.2 As noted in Table 2, the underlies site overlies an Unproductive Bedrock Aquifer and a Principal Superficial Drift Aquifer which are not considered to be a receptor that is susceptible to pests. As such, these receptors are not considered further in this PMP.

4.2.3 In addition to the above, a Nature and Heritage Conservation Screen (Reference Number EPR/NP3139PK/P001) was requested from the Environment Agency (EA). This screen determines the presence of any sites of nature and heritage conservation, or protected species or habitats that may be impacted by the proposal. The results of the screen identified the following receptors that are located over 1km of the site.

Table 3: Receptors Identified from Nature and Heritage Conservation Screen

Site	Designation	Direction from Operational Area	Minimum Distance from the Permit Application Boundary (approx. m)
Field Close Open Space Roughs	Local Wildlife Site	SE	1,036
Carp Ponds and Broads Dock	Local Wildlife Site	W	900
Iron Bridge Road Railsides	Local Wildlife Site	NE	2,017
Londons Canals	Local Wildlife Site	N	1,095
Lower Colne	Local Wildlife Site	W	1,058
St Georges Meadows Southlands Arts Centre	Local Wildlife Site	NW	1,032
Stockley Road Rough	Local Wildlife Site	NE	1,049

Wall Garden Farm Sand Heaps	Local Wildlife Site	SW	3,016
Southwest London Water Bodies	RAMSAR/SPA	SW	4,011
Windsor Forest and Great Park	Special Areas of Conservation	SW	9,035
Atlantic Salmon Migratory Route	Protected Species	W	1,022
European Eel Migratory Route	Protected Species	W	1,022

4.2.4 Although some of these sites may be susceptible to pests, it is considered that the risk from the proposed AD facility is negligible due to the distance of the sites. As such, these receptors are not considered further in this PMP.

4.2.5 The sensitive receptors will be reviewed at least annually and following complaints to site or to the EA.

5.0 PEST MANAGEMENT CONTROLS

5.1 WASTE ENQUIRIES

5.1.1 Prior to setting up any new contract, the agreed procedures will determine the acceptability of the waste based on the information supplied by the customer. The customer should complete a Waste Enquiry Form and return it to the Site Administrator.

5.1.2 Before the waste arrives at site, a copy of the completed Waste Enquiry Form will be made available to the site so that the Site Manager is aware of and can make provision for any special handling requirements (including pests such as vermin and insects) as detailed in the form.

5.1.3 A contract request form will be completed by the Sales Co-ordinator and forwarded to the relevant Site Administrator so that a contract can be set up before the waste arrives on site. This ensures the weighing exercise will be very quick to reduce the period of time incoming vehicles spend on site before depositing of waste.

5.1.4 The continued acceptability of all waste contracts will be reviewed annually, or in line with changes to legislation.

5.1.5 As the waste received at the site is via a long-term contract and similar to other contracts within SUEZ, a high level of operator experience is shared in handling the feedstock.

5.2 WASTE ACCEPTENCE

5.2.1 The site operators will ensure that capacity is available on-site before accepting waste. In particular, if the waste reception pit is full, all inbound loads of waste must be diverted until the quantity of waste on site has been reduced. If loads are turned away, then this will be recorded in the site diary.

5.2.2 Only waste types detailed within the environmental permit will be accepted at the site.

5.2.3 Upon arrival, all documentation accompanying the load shall be checked at the weighbridge, and shall include, but not be limited to the Carriers Certificate of Registration and Duty of Care Waste Transfer Note.

5.2.4 Where practicable, the Weighbridge Clerk will complete a visual inspection of each load. The main inspection will be in the reception hall including an assessment of pests. Site staff will visually inspect the waste, as it is unloaded from the vehicles and complete the Waste Acceptance Form.

5.2.5 If vermin or insects such as flies were identified within loads, then the site may choose to reject them if it is thought to cause ongoing compliance issues.

5.2.6 If any material delivered to site was thought to have the presence of vermin or insects, then this information would be fed back.

5.2.7 In order to reduce impact of insects such as flies during vehicle movements the site staff ensure that all waste vehicles fitted with sheets are sheeted when entering and leaving site.

5.2.8 During collection from the households, the collection crews will be making checks of the material to ensure that only acceptable contracted wastes are collected. Checks for the presence of pests within the waste are also undertaken during collection and appropriate action will be taken if the material is deemed not to be acceptable at the site.

5.2.9 Should it become necessary, the Site Manager will arrange for the pest contractor to visit the site to carry out further control works.

5.3 WASTE STORAGE, BUILDING ENCLOSURE AND ABATEMENT

5.3.1 All wastes accepted for the AD facility will be stored and processed within the confines of a building. The building will benefit from fast acting roller shutter doors which will be kept closed when not in use (i.e., arrival or departure of vehicles) and during non-operational hours. In addition, pedestrian doors are also closed when not in direct use. In addition, the building would be maintained under negative air pressure through the extraction of air by forced ventilation. This would ensure that all odours are drawn through the odour control system preventing odour release from the building which could subsequently attract pests.

5.3.2 Upon receipt, all wastes will be deposited into the waste reception pit which comprises a walking floor and screw conveyor which will feed the waste that will push the waste into the pre-treatment area. This will ensure that waste is processed in the order it is received (first-in, first-out) and therefore ensure that the waste is not stored for more than 72 hours which will be the maximum residency time that waste will be stored in the reception hall prior to treatment.

5.3.3 Although the main AD process will comprise a retention time of 60 days, the process will be undertaken within a sealed network. The retention time has been selected to optimise the extent of biodegradation which will subsequently optimise the production of biogas and potentially increase the quality of the digestate with low odourous compounds. This will subsequently minimise the risk of pests from digestate.

5.3.4 The AD process will generate a digestate which will be processed by a centrifuge to produce a digestate 'cake' which will be stored within a designated bay located inside the AD building. The cake storage area is designed to hold 2 weeks' worth of digested cake and is connected to the odour control system for direct air extraction. This would ensure that all odours are drawn through the odour control system preventing odour release from the building which could subsequently attract pests. Details regarding the odour control system are provided in Section 2.4.15.

5.3.5 Any liquor extracted from the centrifuge would be treated and subsequently stored in tankers prior to reuse in the dissolver or discharge to sewer.

5.3.6 The available storage capacity of the AD facility will be influenced by the period of time the waste is in the treatment vessels (60 days). Waste will only be accepted if there is sufficient capacity. All waste entering the site will be logged at the weighbridge including weight, EWC codes, date, and time. The Site Manager will be able to review this information via weighbridge reports to understand the available storage capacity.

5.3.7 In addition, the AD plant will benefit from a process monitoring control system which will monitor the operational parameters of the plant including the available storage capacity of the vessels. This system will be used to facilitate effective stock management and minimise the risk of vessels overfilling.

5.3.8 Deliveries will be planned in advance with the delivery date agreed by SUEZ and the waste producer/holder. This will ensure that waste is accepted at manageable volumes.

5.3.9 All voids are sealed within the AD building to reduce the opportunity for nesting vermin such as rats/mice. The general design of the internal areas has been considered so as to reduce the amount of inaccessible areas for cleaning, the bays will be sealed to prevent waste accumulation behind them.

5.4 LITTER

5.4.1 The control of litter is also important to reduce the potential for insects, pests, and vermin. All vehicles delivering and removing waste at the site, will be required to be sheeted or enclosed. The site entrance, gates and perimeter fences will be inspected daily, by a member of staff for windblown litter. Where litter is blown outside of the boundary, it will be collected as soon as possible.

5.5 HOUSEKEEPING

5.5.1 The site will be subjected to a good housekeeping regime which assists with the aim of proactive management and associated environmental compliance. Daily inspections will be undertaken at the site via the Daily/Weekly Checklist (Appendix B) or the Vision App. The checklist will be completed by the Site Manager or designated staff and signed off at least weekly by the Technical Competent Manager (TCM) for the site. All employees will be required to report any vermin/pest issues around the plant, AD building or vehicles immediately to the Site Manager. Any incidents will be recorded in the Site Diary and remedial action instigated as quickly as possible.

5.5.2 Regular cleaning will be undertaken in the waste storage areas, including floors and bays to ensure the removal of any residues or debris to reduce the potential of pests.

5.5.3 In addition to operating a first in and first out policy, the waste reception pit and digestate storage bay will be regularly emptied to allow it to be cleaned thoroughly.

5.6 STAFF TRAINING

5.6.1 Staff training will be a key aspect of ensuring that pest can be controlled through effective management during daily operations. All site operatives will therefore be trained via toolbox talks to deal with pest management issues. Annual refresher toolbox talks will ensure that the requirements of the PMP are reinforced.

5.7 VEGETATION

5.7.1 Vegetation is to be kept in control around the facility and all grassed areas regularly reviewed and cut when appropriate to reduce the likelihood of vermin nesting.

5.8 DRAINAGE

5.8.1 Drainage is to be regularly inspected and cleared as and when required to prevent the potential for standing water which may attract vermin.

5.9 SPECIFIC BIRD CONTROL MEASURES

5.9.1 Specific bird control measures will be deployed by specialised designated contractor when deemed necessary.

5.10 SPECIFIC VERMIN CONTROL MEASURES

5.10.1 In addition to the regular monitoring and checks carried out by site staff, approved pest control contractors are engaged to visit site on a monthly frequency as a minimum. The works undertaken by the contractor may include those detailed below; -

- Baiting inside and outside the AD building as well as on the neighbouring administration buildings;
- Collection and disposal of dead vermin; and,
- Written reports provided and filed at site after each visit to site detailing findings and any actions undertaken and/ or recommendations for improvement.

5.11 SPECIFIC FLY CONTROL MEASURES

5.11.1 Effective fly management can be achieved through rigorous turn-around of waste during the waste reception stage and frequent cleaning.

5.11.2 The Site Manager will record fly activity within the site diary where identified.

5.11.3 The EA guidance outlines fly management techniques, with particular attention brought to the use of non-chemical techniques as a first priority where appropriate. This is also imposed in the COSHH Regulations 2012, where the use of non-hazardous pest control techniques is identified as being favoured over those which could potentially be harmful, such as pesticides.

5.11.4 Flies are controlled as and when required by an approved Pest Controller using non-chemical techniques where possible. In circumstances where this is not possible then suitable chemical spray (insecticide space spray or surface spray) to treat waste storage areas is completed.

5.11.5 Where additional control is required, in line with the IMS the pest control contractor will be required to use electrical fly control methods or spray the waste / building, as necessary.

5.11.6 The proposed control mechanisms will be reviewed on an annual basis to assess their effectiveness. Any significant changes will be communicated to the EA in a format of their choosing.

6.0 MONITORING SITE CHECKS

6.1 OVERVIEW

6.1.1 Regular monitoring is to be carried out to assess the following: -

- Confirmation that any vermin, birds, and insects are under control; and,
- Assessment to confirm compliance with the environmental permit.

6.1.2 The presence of pests is regularly assessed by site staff and any issues related to vermin, birds or insects identified reported to site management for investigation.

6.2 DAILY/WEEKLY CHECKS

6.2.1 Daily inspections are to be carried out by Site Management and recorded on the daily/ Weekly IMS checklist (Appendix B) or the Vision App. The daily inspections include checks for the following: -

- Pests;
- Vegetation;
- Drainage;
- Infrastructure; and,
- Litter.

6.2.2 Any issues or non-conformances identified will be clearly marked on the inspection form.

6.2.3 Should a pest nuisance be identified during a routine assessment then an investigation on the source of the nuisance will be undertaken.

6.2.4 Should the pest nuisance be attributed to the site, then the site manager will be informed immediately, and remedial measures will be taken. Remedial actions may include but be not limited to: -

- Checking storage areas to identify the source of the nuisance to a particular waste;
- Removal of the waste causing the nuisance at the earliest opportunity and within 24 hours;
- Cleaning of storage area/s;
- Using either non-chemical techniques or suitable chemical spray (insecticide space spray or surface spray) to treat waste storage areas; and,
- Arrival of pest control contractor on site.

7.0 SPECIALIST CONTRACTOR

7.1 ROUTINE INSPECTIONS

7.1.1 In addition to the regular monitoring and checks carried out by site staff, approved pest control contractors are engaged to visit site on a monthly frequency as a minimum. The works undertaken by the contractor are detailed in Section 5.0.

7.2 MANAGEMENT OF CONTRACTORS

7.2.1 All records of inspections and controls by Specialist Contractors are retained on file on site.

7.2.2 Regular review meetings will be held with the Specialist Contractors.

7.2.3 Site Management will ensure that Specialist Contractors complete site visits in line with the agreed frequency. Where inspections are not completed a review of the performance of the contractor should be completed by Site Management who will take appropriate action.

8.0 COMPLAINTS & ENGAGEMENT

8.1 INVESTIGATIONS AND RECORDS

8.1.1 Any complaints received at the facility or via the regulatory bodies including the EA and Local Authority, will be logged as soon as practicably possible. Where possible, as much information and detail about the complaint will be recorded, whether this is from the relevant authority or complaint direct to site. This information will assist in the investigation and determining the source of the pest nuisance. All responses will be through trained and experienced staff.

8.1.2 Complaints management will be undertaken in line with the amenity complaints procedure provided in the IMS. The first stage of complaints investigations is to complete a basic screening exercise to determine if the site is the likely cause and if further, more detailed investigations are required. Once determined that further investigations are needed, an off-site and on-site pest investigations are carried out using the Amenity Complaint Investigation Form. A copy of the form is provided as Appendix C.

8.1.3 Complaints investigations are carried out by site management and the EIR Manager.

8.1.4 Should the complaint be received out of operational hours then Site Management shall try to attend site as soon as possible to carry out an investigation dependent upon availability.

8.1.5 Where necessary, the EA shall be informed of the investigation findings so they can relay this back to the complainant.

8.1.6 SUEZ will ensure that the complainant has all the relevant contact details of the site (i.e., the Site Manager) and the officer responsible at the EA. SUEZ will be in regular contact with the complainant and the Agency whilst the cause of the pest nuisance is being investigated and remediated.

8.1.7 Site management and the EIR Manager will review all procedures for the facility against other SUEZ operations and management procedures as well as industrial practice, guidance, and legislation to ensure continued best practice is carried out at the facility. If required, the Operating Techniques and OMP shall be updated to reflect any changes made to the management procedures on site following the review.

8.1.8 An evaluation of the effectiveness of the techniques used will be carried out on completion of any remedial measures or if the complaints persist. Records of the above will be retained by site for future reference.

8.2 NON-CONFORMANCES AND COMPLAINTS

8.2.1 The investigation will determine the source of the complaint and then the cause of the pest nuisance.

8.2.2 If a nuisance can be directly related to the site, corrective actions will be identified and programmed for remediation. Actions taken in response to any pest complaint will be recorded on the Amenity Complaint Investigation Form (Appendix C).

8.2.3 Corrective action procedures are documented in the IMS procedure titled – ‘Non-conformance, Corrective and Preventive Actions’. A list of all policies and procedures is included in the site specific management system.

8.2.4 If a nuisance can be directly related to the site, corrective actions will be identified and programmed for remediation. Actions taken in response to any pest complaint will be recorded either on the IMS daily checklist or in the site diary.

8.2.5 If remediation cannot be completed within 24 hours then the non-conformance and remedial actions shall be raised on the SUEZ Compliance and Audit System (COMPAS).

8.3 COMMUNITY ENGAGEMENT

8.3.1 Should pest nuisance be identified from external sources which are thought may have been related to complaints received or likely to cause complaints, then the site would consider contacting those responsible for the nuisance, if possible, to establish communication in relation to those activities.

8.3.2 Initially, SUEZ plan to undertake ongoing community engagement, however this would be reviewed in light of any complaint received at the facility.

DRAWINGS

Permit Boundary Plan - SUEZ/B049182/PER/01

Receptor Plan - SUEZ/B049182/REC/01

Proposed Site Layout – 1451_PL100

APPENDICIES

APPENDIX A – WASTE TYPES

Table A1: Waste Types for Anaerobic Digestion Plant

Waste Code	Description
02	**Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing.**
02 01	**Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing**
02 01 01	Sludges from washing and cleaning – vegetables, fruit and other crops
02 01 02	Animal tissue waste
02 01 03	Plant tissue waste
02 01 06	Animal faeces, urine and manure (including spoiled straw) only
02 01 07	Wastes from forestry
02 01 99	Wastes not otherwise specified – spent mushroom compost from commercial mushroom growing only
02 02	**Wastes from the preparation and processing of meat, fish and other foods of animal origin**
02 02 01	Sludges from washing and cleaning
02 02 02	Animal tissue waste
02 02 03	Materials unsuitable for consumption or processing
02 02 04	Sludges from on-site effluent treatment
02 02 99	Sludges from gelatine production and animal gut contents only
02 03	**Wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation**
02 03 01	Sludges from washing, cleaning peeling, centrifuging and separation (including sludge from production of edible fats and oils, seasoning residues, molasses residues, residues from production of potato, corn or rice starch only)
02 03 04	Materials unsuitable for consumption or processing
02 03 05	Sludges from on-site effluent treatment
02 04	**Wastes from sugar processing**
02 04 01	Soils from washing and cleaning beet
02 04 03	Sludges from on-site effluent treatment
02 04 99	Other biodegradable wastes, allowed only if no chemical agents added and no toxin residues
02 05	**Wastes from the dairy products industry**
02 05 01	Wastes from the dairy products industry
02 05 02	Sludges from on-site effluent treatment
02 06	**Wastes from the baking and confectionery industry**
02 06 01	Materials unsuitable for consumption or processing
02 06 03	Sludges from on-site effluent treatment

02 07	**Wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)**
02 07 01	Wastes from washing, cleaning and mechanical reduction of raw materials
02 07 02	Wastes from spirits distillation
02 07 04	Materials unsuitable for consumption or processing
02 07 05	Sludges from on-site effluent treatment – sludges from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)
02 07 99	• Malt husks, malt sprouts, malt dust • Spent and sludge from breweries • Sludge from wine making Waste types in this section allowed if biodegradable material only, no chemical agents added
04	**WASTES FROM THE LEATHER, FUR AND TEXTILE INDUSTRIES**
04 02	**Waste from the textile industry**
04 02 10	Organic matter from natural products such as grease and wax
07	**WASTE FROM ORGANIC CHEMICAL PROCESSES**
07 01	**Wastes from the manufacture, formulation, supply and use of basic organic chemicals**
07 01 08	Glycerol waste from bio-diesel manufacture from non-waste vegetable oils
15	**WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED**
15 01	**Waste packaging, absorbents, filter materials, wiping cloths and protective clothing**
15 01 01	Paper and cardboard packaging (excluding veneers, plastic coatings or laminates) certified to EN 13432 or equivalent certified compostable standard
15 01 02	Plastic packaging – compostable plastics only certified to EN 13432 or equivalent certified compostable or digestible standard
15 01 03	Wooden packaging – virgin timber only
15 01 05	Composite packaging meeting EN 13432 or equivalent certified compostable or digestible standard
15 02	**Absorbents, filter materials, wiping cloths and protective clothing**
15 02 03	Absorbents, filter materials and cloths from the production of alcoholic and non-alcoholic beverages other than those mentioned in 15 02 02 made from compostable material only
16	**WASTES NOT OTHERWISE SPECIFIED IN THE LIST**
16 10	**Aqueous liquid waste destined for off-site treatment**
16 10 02	Untreated wash waters from cleaning fruit and vegetables on farm only
16 10 02	Milk and dairy waste milk from agricultural premises only
16 10 02	Liquor or leachate from a composting process that accepts waste input types listed in these standard rules or composting and anaerobic digestion standard rules only and in compliance with Animal By Products Regulations
19	**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**

19 02	**Wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation**
19 02 03	Premixed wastes composed from waste listed within these standard rules only
19 02 06	Sludge types from waste listed within this table that have been heat treated only
19 02 06	Sludges from physico/chemical treatment other than those mentioned in 19 02 05 (sewage sludge which has been previously pasteurised and stabilised only)
19 02 10	Glycerol not designated as hazardous – excludes 19 02 08
19 05	**Wastes from anaerobic treatment of solid wastes**
19 05 99	Waste types in this section are allowed only if derived from input types allowed by the Anaerobic Digestion Quality Protocol
19 06	**Wastes from anaerobic treatment of waste**
19 06 03	Liquor from anaerobic treatment of municipal waste (from a process that treats wastes which are listed in this table only)
19 06 04	Digestate from anaerobic treatment of source segregated biodegradable waste (from a process that treats wastes which are listed in this table only)
19 06 05	Liquor from anaerobic treatment of animal and vegetable waste (from a process that treats wastes which are listed in this table only)
19 06 06	Digestate from anaerobic treatment of animal and vegetable waste (from a process that treats wastes which are listed in this table only)
19 08	**Wastes from wastewater treatment works**
19 08 09	Grease and oil mixture from oil and water separation containing only edible oils and fats
19 08 12	Sludges from biological treatment of industrial waste water (from a process that treats wastes which are listed in these standard rules only)
19 12	**Wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified**
19 12 12	Other wastes (including mixture of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11
20	**Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions**
20 01	**separately collected fractions (except 15 01)**
20 01 01	Paper and cardboard (excluding veneers, plastic coatings or laminates) meeting EN 13432 or equivalent certified compostable or digestible packaging only
20 01 08	Biodegradable kitchen and canteen waste
20 01 25	Edible oil and fat
20 02	**Garden and park wastes (including cemetery waste)**
20 02 01	Biodegradable waste
20 03	**Other municipal wastes**
20 03 01	Mixed municipal waste
20 03 02	Waste from markets

APPENDIX B - DAILY/WEEKLY SITE INSPECTION CHECKLIST

APPENDIX C – AMENITY COMPLAINT INVESTIGATION FORM