

Beddington Lane AD Facility

784-B049185

Odour Management Plan

Environmental Permit Application

SUEZ Recycling and Recovery UK Ltd

March 2025

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1.0 INTRODUCTION

1.1 REPORT CONTEXT

- 1.1.1 This Odour Management Plan (OMP) 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 Beddington Lane (the site), at 79 – 83 Beddington Lane, London Borough of Sutton, CR0 4TH. The site location and permit boundary are presented on Drawing Number SUEZ/B042242/PER/01.
- 1.1.2 SUEZ are seeking to apply for an 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 mainly 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 via a gas main situated to the northeast corner of the site. Alternatively, excess biogas will be processed by the CHP engines to generate electricity that will be exported to the National Grid. 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 1.2 MWMCP with a specified generator (SG).
- 1.1.3 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 discharge consent. The treatment capacity of the wastewater treatment plant is over 50 tonnes per day, causing it to be a Schedule 1 activity.
- 1.1.4 In addition, SUEZ seek to agree to undertake the process of carbon capture as a function of this application.
- 1.1.5 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.

1.2 OBJECTIVES OF THE ODOUR MANAGEMENT PLAN

- 1.2.1 This OMP 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 odour emissions, 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 odour impact and details site management procedures for the management and monitoring of odour.
- 1.2.2 This document has been prepared in accordance with Environment Agency's (EA) 'Odour Management Plan' template (Version 2, May 2021).
- 1.2.3 The OMP will adopt a Source → Pathway → Receptor model with an emphasis on implementing effective and robust controls for odour abatement at the earliest stages possible (i.e., at source). The guidance acknowledges that assessment and control of odour can be difficult due to dispersal and the episodic nature of odour events.
- 1.2.4 This document provides a summary of the physical and management controls that will be employed to minimise odour release. It provides a site-specific assessment of the potential sources of odour; the pathways odour can take from the site and the receptors it is likely to impact. The potential release points

of odour are identified and the management systems to prevent and control fugitive odour emissions. Monitoring and reporting systems are described in addition to emergency contingency plans.

2.0 SITE DESCRIPTION

2.1 SITE LOCATION

- 2.1.1 The AD facility will be located to the west of Beddington Road and is centred at approximate National Grid Reference (NGR) TQ 29657 66505. The site is situated approximately 2.7km to the west of Croydon.
- 2.1.2 The surroundings of the site are predominantly industrial and commercial properties, and the nearest residential receptors are Portland Cottages which are located approximately 175m northeast of the proposed AD facility. The nearest sensitive receptors are the industrial and commercial properties approximately 30m away from the site to the east of Beddington Lane. The nearby industrial and commercial properties have the potential to produce odour.

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 mainly 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 via a gas main situated to the northeast corner of the site. Alternatively, excess biogas will be processed by the CHP engines to generate electricity that will be exported to the National Grid.
- 2.2.3 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.
- 2.2.4 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) - 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 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 ;
 - Gas storage; and,

- Digestate storage.

2.2.6 Details of the process description are provided in Section 4 of this document.

2.3 MAINTENANCE AND REVIEW OF OMP

- 2.3.1 The implementation and dissemination of this OMP 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.
- 2.3.2 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 OMP are adhered to.
- 2.3.3 The OMP 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.
- 2.3.4 Staff training will be a key aspect of ensuring that odour can be controlled through effective management during daily operations. All site operatives will therefore be trained via toolbox talks to deal with odour management issues. Annual refresher toolbox talks will ensure that the requirements of the OMP are reinforced.

2.4 RELEVANT SECTOR GUIDANCE

- 2.4.1 This OMP has been prepared with consideration to the following guidance documents: -
- Environment Agency - Environmental permitting: H4 odour management (April 2011);
 - Environment Agency - Biological waste treatment: appropriate measures for permitted facilities (September 2022);
 - European Commission's BAT Reference (BREF) Document for Waste Treatment (August 2018); and,
 - European Commission's BAT Conclusion for Waste Treatment (August 2018).

3.0 RECEPTORS

3.1 RECEPTOR LIST

3.1.1 The potential receptors within 1km of the AD facility have been identified in the table below and are presented on Drawing Number SUEZ/B049185/REC/01.

Table 1: Receptors Within 1km of the AD Facility

ID	Receptor	Direction from Operational Area	Minimum Distance from the Permit Application Boundary (approx. m)
Domestic Dwellings			
1	Beddington Lane Residencies	SE	515
2	Portland Cottages (Therapia Lane)	NE	175
3	Residential Estate off Elberon Ave	N	540
4	Residential Estate off Brookmead Road	N	605
5	Properties of Croydon	E	480
6	Properties of Mitcham Junction	W	1000
7	Properties of Beddington	S	942
Commercial and Industrial Premises			
8	Industrial Estate east of Beddington Lane	E	30
9	Beddington Water Treatment Works	S	35
10	Industrial Estate Beddington Lane	N	Adjacent
11	Valencia - Beddington Power Plant	NW	310
12	Prologis Park Beddington	N	285
13	Jessops Way Industry	N	605
Schools/Hospitals/Shops/Amenities			
14	Croydon Rifle and Pistol Club	NW	570
15	Traq - Motor Racing	NW	735
16	Axten Football Club	SW	710
17	Beddington Cricket Club	SW	820
18	Our Day Nursery	SW	880
19	Beddington Park Primary School	S	1000
20	The Archbishop Lanfranc Academy	NE	880
21	The Archbishop Lanfranc Nursery	NE	980
22	The Peppermint Childrens Centre	E	565
Highways or Minor Roads and Railways			
23	B727 (Beddington Lane)	E	Adjacent
24	A23	E	970
25	A236	N	960
26	Tram Service (Wimbledon – West Croydon)/Rail Line	N	505
27	Mitcham Junction – Elwell Train Tracks	W	920

Sensitive Land Uses			
28	Beddington Park	SW	665
29	Beddington Park Allotments	S	990
30	Beddington Farmlands Southern Birdwatching Site	SW	990
31	Beddington Farmlands Three Corner Field Bird Hide	NW	845
Protected Habitats/Designated ecological habitats e.g. Ramsars, SAC, SPA, SSSI			
32	Beddington Farmlands Wildlife Site	W	405
33	Beddington Farmlands Three Corner Field Bird Hide (Nature Reserve)	NW	560
34	Beddington Cricket Club Deciduous Woodland	SW	595
35	Beddington Farmlands Deciduous Woodland	W	920
36	Hackbridge Community Orchard Deciduous Woodland	W	955
37	Beddington Lane Deciduous Woodland	N	715
38	Traq Motor Racing Deciduous Woodland	NW	790
Surface Water e.g. rivers and streams			
39	River Wandle	S	920
40	Beddington Farmland Ponds	W/N/S	700
41	Pond/wetland adjacent to Croydon Rifle Club	NW	940
42	Pond	SW	335
43	Collection of Ponds	SW	505
44	Mitcham Common Ponds	N	860
45	Stream	NW	425
46	Stream off River Wandle	W	540
47	Beddington Water Treatment Works Pond	S	50
Statutory Monuments			
48	Roman villa E of Beddington Park	S	450
Local Wildlife Sites (LWS)			
49	Beddington Farmlands	W	125
50	Therapia Lane Rough	E	260
51	Beddington Park	SW	920
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 a Secondary A Superficial Drift Aquifer and an Unproductive Bedrock Aquifer.

- 3.1.2 In addition to the above, a Nature and Heritage Conservation Screen (Reference Number EPR/EP3125SW/P001) was requested from the 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 sites that are located over 1km of the site.

Table 2: Receptors Identified from Nature and Heritage Conservation Screen

Site	Designation	Direction from Operational Area	Minimum Distance from the Permit Application Boundary (approx. m)
Wimbledon Common	SAC	NW	7,395
Spencer Road Wetlands	LNR	W	1,585

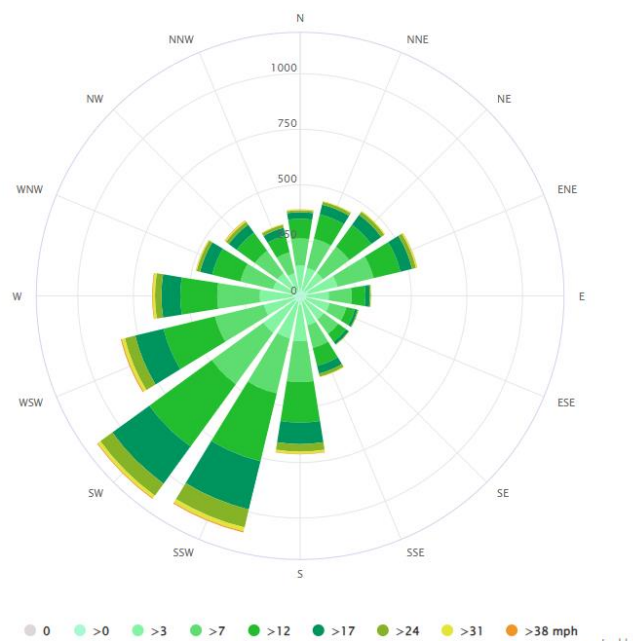
Wilderness Island	LNR	W	1,550
Wandle Valley Wetland	LNR	W	1,715
The Spinney, Carshalton	LNR	SW	1,740
Brandon Hill Cemetery	LWS	S	1,820
St Mary's Court Wildflower Area, Brute Road	LWS	SW	1,750
Queen Elizabeth Walk	LWS	S	1,510
Waddon Ponds	LWS	SE	1,670
Wandle Park	LWS	SE	1,800
Land North of Goat Road	LWS	NW	1,570
Caraway Place Pond	LWS	SW	1,550
Mill Green	LWS	NW	1,340
The Spinney (Nightingale Road Bird Sanctuary)	LWS	SW	1,770
Croydon Cemetery Complex	LWS	NE	1,150
Upper River Wandle	LWS	W	1,660
Mitcham Common	LWS	N	1,360

- 3.1.3 The receptors likely to be most sensitive to an odour nuisance arising from the site are domestic dwellings or commercial offices. As such, it's considered that receptors in Table 1 may be the most sensitive to an odour nuisance.

3.2 METEOREOLOGICAL DATA

- 3.2.1 The prevailing wind direction will determine which receptors will be affected and at what frequency.
- 3.2.2 Meteorological data has been used from the London Borough of Sutton from www.meteoblue.com which is considered to be representative of conditions within the vicinity of the application site. According to the wind rose data for the area, the prevailing wind in the local area is from the southwest (SW) as shown in Figure 1 below.

Figure 1: Prevailing Wind Direction for the London Borough of Sutton



4.0 SOURCES OF ODOUR AND SITE PROCESSES

4.1 PROCESS DESCRIPTION

4.1.1 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. An indicative site layout plan showing the proposed waste storage and treatment areas is provided on Drawing Number 1452 PL100.

4.1.2 A simplified process flow diagram has been prepared which outlines the above operational sections. This diagram has been provided within the BATOT Document (Appendix C of this Application).

Reception

4.1.3 Materials will be delivered to the site via road transport in Refuse Collection Vehicles (RCV) or tipping vehicles which will be covered to prevent fugitive emissions being released.

4.1.4 Vehicle movements to and from the site will be restricted to the following hours outlined in Section 4.3.

4.1.5 Delivery vehicles would reverse into the reception hall via a fast-acting door. Once the door is closed, the driver would deposit the waste into a waste pit that is situated within the reception hall. The pit itself is to be constructed with reinforced concrete walls and base with appropriate lining system. Within the concrete surround, the reception bunker will be formed of stainless steel with either a walking floor or screw conveyor in the bottom of the bunker transferring material to a screw conveyor which would feed the pre-treatment equipment. This will ensure that waste is processed in the order it is received (first-in, first-out). Under normal operations, the material received in the bunker would be processed within 24 hours of deposition. However, the bunker will be designed to allow a storage capacity of up to 72 hours for contingency. .

4.1.6 The bunker will benefit from a sump to collect liquids. These will be pumped to the buffer tank prior to digestion.

4.1.7 The screw conveyor motor or hydraulic pack driving the walking floor would be located within the concrete pit, but outside of the steel bunker to allow for maintenance without entering the bunker containing food waste.

4.1.8 The bunker would be emptied and cleaned periodically for inspection of the walking floor or screw conveyor. This will be done periodically in line with the manufacturer's guidance.

Separation

4.1.9 Waste will be fed into 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, seeds, pips, and bones). Any packaging and contaminants recovered from the plant will be discharged into skips/RoRos where they will be 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.

4.1.10 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

4.1.11 The residual organic waste will be pumped into the hydrolysis buffer tank(s) 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.

4.1.12 Slurry is then pumped from the hydrolysis buffer tank to the anaerobic digesters. Three 7,800m³ 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.

4.1.13 As part of the process, SUEZ intend to install pasteuriser tanks which may be used to heat the slurry to 70°C 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 70°C for a minimum 1 hour before being pumped into the post digestion buffer tank. For both scenarios, the pasteurisation process will comprise three tanks and a heat exchanger system that will allow the following to occur simultaneously: -

- One tank charging with slurry (pre-pasteurisation) or digestate (post-pasteurisation);
- One tank discharging to the digesters (pre-pasteurisation) or post digestion buffer tanks (post-pasteurisation); and,
- One tank to heat the slurry (pre-pasteurisation) or the digestate (post-pasteurisation) to 70°C for a minimum of 1 hour.

4.1.14 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 outlined in PAS 110 'Specification for whole digestate, separated liquor and separated fibre derived from the anaerobic digestion of source-segregated biodegradable materials.'

4.1.15 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.

4.1.16 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.

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

4.1.18 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.

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

Liquor Treatment

4.1.20 Liquor extracted during the dewatering process (as detailed in Section 4.1.15) would gravitate to the liquor pumping sump from where it would be transported to the wastewater treatment plant on site.

4.1.21 The wastewater treatment plant is based on Membrane Bio Reactor (MBR) technology. The wastewater to be treated will be fed into an aerobic bioreactor tank for biological nitrification and carbon removal. Ammonia nitrogen species are nitrified by autotrophic bacteria while heterotrophic aerobic organisms convert carbon to cellular biomass and part to gaseous CO₂.

- 4.1.22 After the biological treatment, ultra-filtration (UF) membrane separation is applied to separate the biomass from the effluent. The incoming stream with high solids (biomass) content encounters a UF membrane barrier producing a clean permeate as treated effluent and where the solids are retained in a concentrated retentate. The concentrate stream is partially returned to the process as wastewater treatment process as return activated sludge (RAS) and partially bled from the system as surplus activated sludge (SAS) to prevent a build-up of biomass in the wastewater system.
- 4.1.23 The remaining liquid from the treatment process is clean enough to be recirculated for washing down or within the process. Excess liquid will be discharged to sewer in accordance with a trade effluent consent. In the event that excess water cannot be discharged to sewer, arrangements will be made to tanker the wastewater to an appropriate permitted facility.

Biogas Handling

- 4.1.24 The biogas is captured from the AD tanks and then will mainly 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 via a gas main situated to the northeast corner of the site. Alternatively, excess biogas will be processed by the CHP engines to generate electricity that will be exported to the National Grid. A description of the biogas upgrading process is provided in the sections below.
- 4.1.25 The biogas is pre-treated to partially remove water and contaminants from the biogas through a gas conditioning unit by condensation of the saturated biogas. Activated carbon is then utilised to remove hydrogen sulphide (H₂S), volatile organic compounds (VOCs) and siloxanes contaminants from the biogas.
- 4.1.26 The biogas is then compressed and further treated to reduce liquids (oil and water) and contaminants to protect the membranes. The biogas passes through the membrane modules separating carbon dioxide and water from methane. The methane rich low dew point (-60°C) flow exits the membrane system as product biomethane gas. Prior to injecting the biomethane into the local gas grid propane gas is added to increase the calorific value, an odorant is added in line with the local gas grid requirements and final quality is checked through a series of gas analysers. After passing the final quality control the product gas is ready to be compressed for injection into gas grid via a gas main situated to the northeast corner of the site.
- 4.1.27 The almost pure quality carbon dioxide-rich (typically > 98%) flow is routed to the carbon capture process. Reject gas from the Gas Entry Unit (GEU) located within a dedicated compound remote from the AD site shall either be diverted into the biogas collection system via return piping, or to a dedicated flare stack local to the GEU.
- 4.1.28 Any surplus biogas not utilised by the biomethane upgrading system or when the biomethane system cannot be utilised will be passed to the CHP engines or flare.

Carbon Capture

- 4.1.29 The biogas produced by AD contains mainly methane (CH₄ - 50-70% with an average of approx. 61%) and carbon dioxide (CO₂ - 30-45% with an average of approx. 39%). As noted in Section 4.1.24
- 4.1.30 , the biogas produced from the AD facility will be piped to a gas upgrading system which will comprise the removal of CO₂ from the biogas. The CO₂ will be routed to the carbon capture process which will liquefy the CO₂ while recovering the residual methane (<1%) which can be returned to the biogas upgrading unit..
- 4.1.31 The CO₂ capture process comprises: -
- Gas compression unit;
 - CO₂ filtration and drying unit;

- CO₂ liquefaction module; and,
- Storage tanks.

Gas compression

- 4.1.32 The first step is CO₂ liquefaction inlet pressure control which is achieved via modulating valves to ensure that the connected upstream equipment is not disturbed. A CO₂ blower will be added to increase the inlet pressure should it be required. The pressure control system is followed by a CO₂ compressor which increases the pressure to 18-20 bar; this allows the liquefaction process to take place at relative high temperatures of -20 to -25°C. The temperature increase after each compression stage is cooled by using after-coolers and a cooling module.

Filtration and drying

- 4.1.33 After compression, the CO₂ gas is passed through a drying and purification module which removes moisture and trace components such as VOC's and H₂S. Using regeneration gas, the module can be continuously operated without replacement of filter material. When the CO₂ rich gas is conditioned, it enters the CO₂ liquefaction module.

Liquification

- 4.1.34 The CO₂ rich gas is first pre-cooled in a reboiler after which it is condensed into LCO₂ in the CO₂ condenser. Secondly, the LCO₂ then enters a stripper column where it is purified by an up-flow of boil-off gas from the reboiler. The LCO₂ is collected in the reboiler sump vessel from where it is pumped into a storage tank via the CO₂ liquid pump.

Storage tanks

- 4.1.35 LCO₂ is stored into a storage tank ready for transfer to LCO₂ trailers for off-loading and export from site for use in manufacturing. To ensure the right quality of the LCO₂, a quality measurement system can be included in the liquid CO₂ lines and storage tanks.
- 4.1.36 The boil-off gas from the reboiler and stripper removes the CH₄, N₂ and O₂ impurities from the CO₂ gas which would otherwise build-up into the liquefaction plant. A purge gas line will ensure pressure control of the liquefaction module and continuously purges part of the systems volume. Careful control of the purge gas line ensures the highest possible CO₂ recovery rate.
- 4.1.37 A refrigerant module is included to provide the required cooling capacity to the CO₂ condenser. This closed loop refrigerant system includes the refrigerant compressor package and refrigerant condenser

4.2 ODOUR CONTROL SYSTEM

- 4.2.1 Processes will be fully enclosed with two-stage odour abatement system which is summarised in the sections below.
- 4.2.2 The air within the building shall be treated by incorporating a background extraction system. The system will cover the reception hall, pre-treatment area and the digestate out section as shown Drawing Number 1452 PL100. The system will be designed to provide a ventilation rate of 3 air changes per hour.
- 4.2.3 All of the collected air shall pass through a dust filter then deep beds of activated carbon, designed to provide a minimum of 3 seconds contact time. The inclusion of a dust filter enhances the effectiveness of the activated carbon.
- 4.2.4 Air from the buffer and pasteurisation tanks, pre-treatment plant and the digestate dewatering unit shall be collected and pass through an enclosed biofilter which will comprise wood chips or other suitable material

for the media. The biofilter will be designed to provide minimum of 45 seconds contact time. The air will then pass through the dust filter and activated carbon filter prior to being discharged to atmosphere via an elevated vent stack.

- 4.2.5 The odour abatement system will be maintained in accordance with the manufacturer's guidance. This is a requirement in SUEZ's Integrated Management System (IMS). Details of the plant's maintenance will be kept in the Site Equipment and Maintenance Plan which will form part of the site's management system.
- 4.2.6 In addition, site staff will undertake daily inspections of the site's plant and infrastructure in accordance with SUEZ's IMS policies and procedures. These inspections will be recorded electronically on the Vision App (SUEZ internal logging system).
- 4.2.7 In the event that any defects are identified so that it no longer meets the required standards, necessary remedial work will be completed as soon as practicable.

4.3 OPERATING HOURS

- 4.3.1 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

4.4 ODOROUS MATERIALS

- 4.4.1 The AD facility will solely treat food waste. A complete list of the proposed waste types is provided as Appendix A.
- 4.4.2 The waste acceptance limit for the AD facility will be no more than 100,000 tonnes per annum.
- 4.4.3 The following table provides an inventory of all potential odorous materials that may be accepted and generated as a result of the AD facility.

Table 3: Odorous Materials

Odorous and potentially odorous material (any solid, liquid or gas)	Odour potential High Risk / Medium Risk / Low Risk	Maximum quantity on site at any given day (tonnes per day or litres per day)	Maximum time held on site (hours or days)	Location of odorous materials on site
Food waste within waste reception area	High	500 tonnes	72 hours	Reception Hall (as shown on Drawing Number 1452 PL100)
Packaging and contaminants recovered from pre-treatment	Low	162.5 tonnes	7 days	Pre-Treatment Area (as shown on Drawing Number 1452 PL100)
Organic slurry in AD tanks	High	3 x 7,800m ³ tanks	60 days	Digester tanks (as shown on Drawing Number 1452 PL100)

Digestate (post digestion) prior to treatment	High	2 x post digestate storage tanks	72 hours	Post digestate storage tanks (as shown on Drawing Number 1452 PL100)
Digestate cake recovered from centrifuge	High	50 tonnes	2 weeks	Digestate out storage area (as shown on Drawing Number 1452 PL100)
Biogas generated from the AD process	High	-	-	The biogas is captured from the AD tanks and then will mainly 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 via a gas main situated to the northeast corner of the site. Alternatively, excess biogas will be processed by the CHP engines to generate electricity that will be exported to the National Grid

4.5 SOURCES OF ODOUR

- 4.5.1 The key aspects of the process which may lead to odour emissions are identified in Table 4 below and the control measures that will be used are detailed in Table 5.

Table 4: Source-Pathway-Receptor Routes from Waste Activities at the Site

Source	Pathway	Receptor	Type of impact
Receipt of organic waste in reception hall	Atmospheric dispersion	Receptors listed in Table 1.	Odour annoyance
Mechanical treatment of waste as part of pre-treatment process	Atmospheric dispersion		Odour annoyance
Transfer of shredded material into waste dissolver	Atmospheric dispersion		Odour annoyance
Storage and treatment of waste in tanks	Atmospheric dispersion		Odour annoyance
Biogas production, storage and treatment	Atmospheric dispersion		Odour annoyance
Storage of waste outputs (digestate and liquor)	Atmospheric dispersion		Odour annoyance

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Odour from odour system stack release point	Atmospheric dispersion		Odour annoyance
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5.0 CONTROL MEASURES AND PROCESS MONITORING

5.1 APPROPRIATE MEASURES AND BAT

- 5.1 The following table details how appropriate measures and BAT (as specified in Section 2.4) will be applied for the AD facility.

Table 5: Monitoring procedures for appropriate measures/ BAT

Odorous and potentially odorous process / material	Control measures (Appropriate Measure / BAT)	Monitoring procedure and optimum process parameters	Trigger level	Action taken if outside optimum process parameters
Receipt of organic waste in reception hall	<p>The whole AD process will be undertaken within the confines of a building. This building benefits from a fast-acting doors which will be kept closed when not in use (i.e., arrival or departure of vehicles). In addition, pedestrian doors are also closed when not in direct use. This will minimise the potential for any odour generated on site to impact receptors beyond the site boundary.</p> <p>Waste will be deposited into the reception pit which will benefit from either a walking floor or screw conveyor in the bottom of the bunker transferring material to a 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) Under normal operations, the material received in the bunker would be processed within 24 hours of deposition. However, the bunker will be designed to allow a storage capacity of up to 72 hours for contingency.</p> <p>The reception hall and pre-treatment area will benefit from an odour control system designed to extract and treat any odour emissions that may be generated from the AD process. Further details of the odour control system are provided in Section 4.2.</p> <p>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 is 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</p>	<p>SUEZ's IMS includes site inspection check sheets that include a daily requirement to check the following: -</p> <ul style="list-style-type: none"> • Condition of plant and equipment (including odour suppression system); • Condition of site infrastructure; • Litter; and, • Qualitatively assess odour. <p>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.</p>	<p>Fault identified on plant, equipment, or site infrastructure during daily checks.</p> <p>Waste identified on the reception hall floor (outside the reception pit).</p>	<p>If a fault is identified during the daily checks, remedial action will be instigated as soon as practicable.</p> <p>In the event of a mechanical breakdown that may result in an increased risk to odour emissions, the Site Manager (or a nominated delegate) will consider a reduction in waste deliveries or cease the acceptance of further waste until the required remedial action has been undertaken. In addition, the Site Manager (or a nominated delegate) may consider arrangements to transfer waste from the reception hall to a suitable permitted facility.</p> <p>If waste is identified outside the reception pit, site staff will undertake litter picking.</p>

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	<p>review this information via weighbridge reports to understand the available storage capacity.</p> <p>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 managed volumes.</p>			
Mechanical treatment of waste as part of pre-treatment process	<p>The whole AD process will be undertaken within the confines of a building. This building benefits from a fast-acting doors which will be kept closed when not in use (i.e., arrival or departure of vehicles). In addition, pedestrian doors are also closed when not in direct use. This will minimise the potential for any odour generated on site to impact receptors beyond the site boundary.</p> <p>Waste will be deposited into the reception pit which benefit from either a walking floor or screw conveyor in the bottom of the bunker transferring material to a 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). Under normal operations, the material received in the bunker would be processed within 24 hours of deposition. However, the bunker will be designed to allow a storage capacity of up to 72 hours for contingency.</p> <p>The reception hall and pre-treatment area will benefit from an odour control system designed to extract and treat any odour emissions that may be generated from the AD process. Further details of the odour control system are provided in Section 4.2.</p> <p>SUEZ's IMS includes policies and procedures that requires all plant to be maintained in accordance with the manufacturer's guidance. This will minimise the risk of mechanical failure that may result in increased odour emissions.</p>	<p>SUEZ's IMS includes site inspection check sheets that include a daily requirement to check the following: -</p> <ul style="list-style-type: none"> • Condition of plant and equipment (including odour suppression system); • Condition of site infrastructure; and, • Qualitatively assess odour. <p>The checklist will be completed by the Site Manager or designated staff and signed off at least weekly by the TCM for the site.</p>	<p>Fault identified plant, equipment, or site infrastructure during daily checks.</p>	<p>If a fault is identified during the daily checks, remedial action will be instigated as soon as practicable.</p> <p>In the event of a mechanical breakdown that may result in an increased risk to odour emissions, the Site Manager (or a nominated delegate) will consider a reduction in waste deliveries or cease the acceptance of further waste until the required remedial action has been undertaken. In addition, the Site Manager (or a nominated delegate) may make arrangements to transfer waste pending treatment to a suitable permitted facility.</p>
Transfer of shredded	<p>The whole AD process will be undertaken within the confines of a building. This building benefits from a fast-acting doors which will be kept closed when not in use</p>	<p>SUEZ's IMS includes site inspection check sheets that</p>	<p>Fault identified plant, equipment, or site</p>	<p>If a fault is identified during the daily checks or the process control system, remedial action will be instigated as soon as practicable.</p>

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material into waste dissolver	<p>(i.e., arrival or departure of vehicles). In addition, pedestrian doors are also closed when not in direct use. This will minimise the potential for any odour generated on site to impact receptors beyond the site boundary.</p> <p>Following the pre-treatment process, shredded organic waste material will be conveyed from the pre-treatment area to the waste dissolver. This process will be supervised by a competent member of staff. The conveyor will be covered and situated within the confines of the building.</p> <p>The reception hall and pre-treatment area will benefit from an odour control system designed to extract and treat any odour emissions that may be generated from the AD process. Further details of the odour control system are provided in Section 4.2.</p> <p>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.</p>	<p>include a daily requirement to check the following: -</p> <ul style="list-style-type: none"> • Condition of plant and equipment (including odour suppression system); • Condition of site infrastructure; • Litter; and, • Qualitatively assess odour. <p>The checklist will be completed by the Site Manager or designated staff and signed off at least weekly by the TCM.</p> <p>In addition, the operational parameters of the AD plant will be monitored continuously via the process control system.</p>	<p>infrastructure during daily checks.</p> <p>Fault is identified via the process control system.</p>	<p>In the event of a mechanical breakdown that may result in an increased risk to odour emissions, the Site Manager (or a nominated delegate) will consider a reduction in waste deliveries or cease the acceptance of further waste until the required remedial action has been undertaken. In addition, the Site Manager (or a nominated delegate) may make arrangements to transfer waste in the reception hall to an alternate facility.</p> <p>If waste is identified during the transfer of material from the pre-treatment area to the waste dissolver, site staff will undertake litter picking.</p>
Storage and treatment of waste in tanks	<p>The whole AD process will be undertaken within the confines of a building. This building benefits from a fast-acting doors which will be kept closed when not in use (i.e., arrival or departure of vehicles). In addition, pedestrian doors are also closed when not in direct use. This will minimise the potential for any odour generated on site to impact receptors beyond the site boundary.</p> <p>The main AD process will be undertaken within a sealed system that has been designed in line with the CIRIA 'Containment systems for the prevention of pollution (C736)' document.</p> <p>The AD plant will benefit from a process monitoring control system which will monitor the operational parameters of the plant including the available storage</p>	<p>SUEZ's IMS includes site inspection check sheets that include a daily requirement to check the following: -</p> <ul style="list-style-type: none"> • Condition of plant and equipment (including odour suppression system); • Condition of site infrastructure; and, • Qualitatively assess odour. <p>The checklist will be completed by the Site Manager or</p>	<p>Fault identified plant, equipment, or site infrastructure during daily checks.</p> <p>Fault is identified via the process control system.</p>	<p>If a fault is identified during the daily checks or the process control system, remedial action will be instigated as soon as practicable.</p> <p>In the event of a mechanical breakdown that may result in an increased risk to odour emissions, the Site Manager (or a nominated delegate) will consider a reduction in waste deliveries or cease the acceptance of further waste until the required remedial action has been undertaken. In addition, the Site Manager (or a nominated delegate) may make arrangements to discharge the slurry into a tanker and transfer to a suitable permitted facility.</p>

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	<p>capacity of the vessels. This system will be used to facilitate effective stock management and minimise the risk of vessels overfilling. The system will also be designed to identify system failures that may lead to increased odour emissions (e.g., leaks in pipework or containment).</p> <p>SUEZ's IMS includes policies and procedures that requires all plant to be maintained in accordance with the manufacturer's guidance. This will minimise the risk of mechanical failure that may result in increased odour emissions.</p>	<p>designated staff and signed off at least weekly by the TCM.</p> <p>In addition, the operational parameters of the AD plant will be monitored continuously via the process control system.</p>		
Biogas production, storage and treatment	<p>The biogas is captured from the AD tanks and then will mainly 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 via a gas main situated to the northeast corner of the site. Alternatively, excess biogas will be processed by the CHP engines to generate electricity that will be exported to the National Grid..</p> <p>The gas collection system will comprise a leak detection programme which will identify any methane slippages and therefore allow remedial action to be undertaken as soon as practicable.</p> <p>The AD facility will benefit from a gas flare which will be used to process excess biogas.</p>	<p>SUEZ's IMS includes site inspection check sheets that include a daily requirement to check the following: -</p> <ul style="list-style-type: none"> • Condition of plant and equipment (including odour suppression system); • Condition of site infrastructure; and, • Qualitatively assess odour. <p>The checklist will be completed by the Site Manager or designated staff and signed off at least weekly by the TCM.</p> <p>In addition, the operational parameters of the AD plant will be monitored continuously via the process control system.</p>	<p>Fault identified plant, equipment, or site infrastructure during daily checks.</p> <p>Fault is identified via the process control system.</p>	<p>If a fault is identified during the daily checks or the process control system, remedial action will be instigated as soon as practicable.</p>
Storage of outputs	<p>The whole AD process will be undertaken within the confines of a building. This building benefits from a fast-acting doors which will be kept closed when not in use (i.e., arrival or departure of vehicles). In addition,</p>	<p>SUEZ's IMS includes site inspection check sheets that include a daily requirement to check the following: -</p>	<p>Fault identified plant, equipment, or site</p>	<p>If a fault is identified during the daily checks or the process control system, remedial action will be instigated as soon as practicable.</p>

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(digestate and liquor)	<p>pedestrian doors are also closed when not in direct use. This will minimise the potential for any odour generated on site to impact receptors beyond the site boundary.</p> <p>Digestate produced by the AD process will be discharged into articulated trailers where it can be periodically collected and subsequently transferred off site. The trailers will be situated within a designated area inside the AD building. The storage area will be connected to an odour control system to process any odour that may be generated from the digestate.</p> <p>Any liquor will be pumped and stored in a designated tank that has been designed in line with the CIRIA 'Containment systems for the prevention of pollution (C736)' document.</p> <p>The liquor storage tank will be fitted with an alarm to warn the potential of overfilling.</p>	<ul style="list-style-type: none"> • Condition of plant and equipment (including odour suppression system); • Condition of site infrastructure; and, • Qualitatively assess odour. <p>The checklist will be completed by the Site Manager or designated staff and signed off at least weekly by the TCM.</p>	<p>infrastructure during daily checks.</p> <p>Fault is identified via the process control system.</p>	
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6.0 ODOUR REPORTING

6.1 COMPLAINTS REPORTING

Investigation and Records

- 6.1.1 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 odour. All responses will be through trained and experienced staff.
- 6.1.2 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 odour investigations are carried out using the Amenity Complaint Investigation form. A copy of the form is provided as Appendix B.
- 6.1.3 Complaints investigations are to be carried out by site management and the EIR Manager that are not regularly exposed to the odours and therefore are able to assess the level of odour objectively.
- 6.1.4 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.
- 6.1.5 Where necessary, the EA shall be informed of the investigation findings so they can relay this back to the complainant.
- 6.1.6 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 odour is being investigated and remediated.
- 6.1.7 Site management and the EIR Manager will review all procedures for the facility against other SUEZ operations and management procedures as well as industry 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.
- 6.1.8 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.

Non-Conformances and Complaints

- 6.1.9 The investigation will determine the source of the complaint and then the cause of the odour.
- 6.1.10 If an odour can be directly related to the site, corrective actions will be identified and programmed for remediation. Actions taken in response to any odour complaint will be recorded on the odour investigation form.
- 6.1.11 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.
- 6.1.12 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).

6.2 COMMUNITY ENGAGEMENT

- 6.2.1 Should odours 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 odour, if possible, to establish communication in relation to those activities.
- 6.2.2 Should extensive work be required on site which may lead to potential odour complaint then the site may consider providing advance warning to residents, dependent upon the likely duration and estimated impact of such works. The EA would be contacted prior to issuing any such notice.
- 6.2.3 Initially, SUEZ plan to undertake ongoing community engagement, however this would be reviewed in light of any complaint received at the facility.

6.3 MONITORING

Odour Checks

- 6.3.1 The Site Manager will be responsible for ensuring that daily odour inspections are made of the site in order to identify any sources of odour and to establish whether any odours are discernible.
- 6.3.2 However, the site management do not solely rely on the odour checks and odour is continually assessed by all staff present on site and any odours identified outside the regular inspections are reported to site management for investigation.
- 6.3.3 Generally, the site manager site will carry out the daily odour checks. Any odours identified must be clearly marked on the daily and weekly IMS Checklist (Appendix C) or Vision App.
- 6.3.4 Should a distinct odour be identified during a routine odour check then an investigation on the source of the odour will be undertaken.
- 6.3.5 Upon identification of an incident or failure of a control measure, then in consultation with the EIR Manager the odour check frequency might be increased to twice daily if necessary.
- 6.3.6 Should an odour be attributed to the site and the odour sources cannot be resolved within a timely manner then an odour inspection shall be undertaken at key sensitive receptors and recorded on the external odour assessment survey which will clearly indicate whether or not odour was detected.
- 6.3.7 Should an odour attributed to the site be recorded external to the site as detailed above then an investigation shall be carried out and recorded on the odour assessment form included in Appendix D.
- 6.3.8 The Site Manager will be informed immediately of any findings of odour attributed to the site and will authorise remedial measures to be taken.

Odour Assessment

- 6.3.9 In the event of an odour issue, due to the potential for desensitisation to odours, an odour assessment will be carried out by site personnel who do not work closely with handling waste e.g. office or weighbridge staff. These personnel will be the most suitable to detect any fugitive odour outside the site. Routine odour assessment shall be undertaken, where possible, during hours of waste acceptance and prior to those assessing the odour having entered operational areas where they may be likely to be exposed to odours.
- 6.3.10 Those undertaking odour assessment should try to avoid where possible strong food or drinks, including coffee, for at least half an hour beforehand and strong scented toiletries and deodorisers in any vehicle used during the assessment. Where possible the use of perfume sprays, cleaning products etc are avoided within the offices to prevent exposure.

- 6.3.11 Should staff have been exposed to odours within the facility or any scented products, food or drinks prior to undertaking odour assessment then they may request that the assessment is undertaken by someone else. If this is not possible then the assessor may leave site for a period of time (approximately 15 mins or more) or complete the assessment but ensure that a follow up assessment is carried out after half an hour.
- 6.3.12 Routine odour assessment should, where possible, be undertaken by staff who have undergone odour acuity assessment to ensure a suitable detection threshold for odours.
- 6.3.13 Odour assessment is carried out using sniff testing to check ambient air on or off site.
- 6.3.14 Off-site olfactory assessment will be carried out with reference to the H4 Odour Management Guidance, with an odour assessment form being completed. All site personnel will be responsible for reporting any odour problems immediately to the site manager or the next level of management if the manager is not available.
- 6.3.15 The form used for odour inspections and assessments is included within Appendix D.
- 6.3.16 All odour assessments are undertaken using the intensity scale detailed below which is in line with the H4 Odour Management Guidance. This ensures consistency and enables odour assessments taken by Site Management to be compared with odour assessments taken in conjunction with or independently by the Environment Agency.
0. None
 1. Very Faint
 2. Faint
 3. Distinct
 4. Strong
 5. Very Strong
 6. Extremely Strong

Quantitative Monitoring

- 6.3.17 As noted in Section 4.2, the AD facility will benefit from an odour control system that will comprise emission points to air and will include an enclosed biofilter, dust filter and an activated carbon filter prior to final release through a stack. The location of these emission points are shown on Drawing Number SUEZ/B049185/ASE/01.
- 6.3.18 SUEZ propose to monitor the emission points in accordance with the details provided in Table 6 below.

Table 6: Summary of Techniques for Monitoring Emissions to Air from Odour Control System

Parameter	Limit (including unit)	Reference Period	Monitoring Frequency	Monitoring standard or method
Enclosed Biofilter Stack Emission (A1)				
Hydrogen Sulphide	No limit set	Average over sample period	Once every 6 months	CEN TS 13649 for Sampling NIOSH 6013 for analysis
Ammonia	20 mg/m ³	Average over sample period	Once every 6 months	EN ISO 21877

Odour Control Emission Stack

No parameters set.	-	-	-	-
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7.0 ABNORMAL EVENTS AND CONTINGENCY PLANS

7.1 CONTINGENCY AND EMERGENCY PLANS

- 7.1.1 The OMP assumes that the site will be running under expected operational conditions. There are however a number of circumstances which could result in an odorous emission from the site if not appropriately considered in advance.

Table 7: Contingency and Emergency Plans

Issue	Potential Impact on Site Operations	Contingency Measures
Planned plant maintenance/shut down	This could potentially mean the site does not have capacity to transfer/treat wastes.	The operational procedures for shutdowns will then be implemented. The site will act as a transfer station for bulking of waste and treatment at other permitted facilities off site.
Unplanned plant maintenance/ shut down	This could potentially mean the site does not have capacity to transfer/treat wastes.	See above
Receipt of particularly odorous wastes	This could potentially mean that the storage of waste causes unacceptable odour impact.	The Site Manager or appropriately appointed person will assess the load and make a decision on whether or not the load in question should be accepted. If the load is rejected, SUEZ's load rejection procedure will be followed. Waste streams that are consistently very odorous will be stopped from entering the site.
Weather (or other factors) limiting removal of waste	Poor weather could lead to transport issues, causing waste to accumulate on site.	Alternative disposal or recovery points within the UK will be explored (with landfill as the final option). Waste inputs will be minimised or stopped so that the site remains compliant with the maximum storage capacities and timescales.
Factors limiting removal of other potentially odorous waste streams	Difficulties in removing these waste streams could lead to waste accumulating on site.	Alternative disposal or recovery points within the UK will be explored (with landfill as the final option). Waste inputs will be minimised or stopped so that the site remains compliant with the maximum storage capacities and timescales.
Failure of control infrastructure	Failure in control infrastructure could lead to inadequate containment of waste.	A Corrective Action Request will be raised. Contractors will be appointed to repair the damage as soon as possible. Site operations will continue, but they will be monitored carefully to ensure that emissions are managed.

Experience with Contingency/Emergency Situations

- 7.1.2 SUEZ is experienced in developing contingency plans for other long-term contracts which have worked effectively on previous occasions.

- 7.1.3 SUEZ has a policy of continuous review of emergency and contingency procedures which has allowed experience from these incidents to be used to improve procedures across the operations.
- 7.1.4 SUEZ experience in operating a significant number of waste facilities, together with managing complex long-term contracts offering similar services, means that SUEZ is able to offer the benefit of experience in and knowledge of logistical planning to ensure that service continues effectively with minimal disruption.

Review and Update of Contingency and Emergency Plans

- 7.1.5 The Contingency Plan and Emergency Plan will be reviewed following any incident where they have had to be followed. They will be updated as necessary incorporating the outcome of any lessons learned.

DRAWINGS

Boundary Plan - SUEZ/B042242/PER/01
Environmental Receptors - SUEZ/B049185/REC/01
Proposed Site Layout – 1452 PL100
Air Source Emissions Plan - SUEZ/B049185/ASE/01

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	<ul style="list-style-type: none"> • Malt husks, malt sprouts, malt dust • Spent and sludge from breweries • Sludge from wine making <p>Waste types in this section allowed if biodegradable material only, no chemical agents added</p>
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	Waste from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 12	Other wastes (including mixtures 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 – AMENITY COMPLAINT INVESTIGATION FORM

APPENDIX C - INDICATIVE DAILY/WEEKLY INSPECTION CHECKLIST

APPENDIX D – ODOUR INSPECTION FORM