Accident Management Plan - EPR/FP3628SH/P001

Brains Farm Anaerobic Digestion Facility

Japan Environmental Development and Investment UK Limited

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'Experience and expertise working in union'

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Project:	Brains Farm Anaerobic Digestion Facility
For:	Japan Environmental Development and Investment UK Limited
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Reviewer:	Steph Charnaud, Director of Permitting

Contents

Tables and Figures

Drawings and Appendices

1.0 Introduction

1.1 Purpose and Scope

1.1.1 This Accident Management Plan (AMP) has been prepared to support the new Bespoke Environmental Permit application, being applied for by Japan Environmental Development and Investment UK Limited (the 'Operator') at Brains Farm Anaerobic Digestion Facility, Moor Lane, Wincanton, Somerset, BA9 9RA (the 'Facility').

1.1.2 This AMP has been written to be used as a working document for the operational staff on a day-to-day basis. It identifies accidents that that could result in pollution or harm to human health and describes the likelihood and consequence of potential incidents occurring. It then specifies the measures taken to avoid such incidents occurring and the measures taken to minimise the impacts if an incident were to occur. It also provides details on how incidents and breaches of the Permit will be recorded, investigated, and remediated.

1.1.3 This AMP will be transposed into the Facility's Environmental Management System (EMS) once approved by the Environment Agency (EA). The AMP will be updated and reviewed in accordance with the requirements of the Facility's management systems.

1.2 Relevant Guidance

1.2.1 This AMP has been prepared in line with the following relevant guidance:

- Environmental Permitting (England & Wales) Regulations 2016 (as Amended);
- Environment Agency Guidance – Risk assessments for your environmental permit, published 1st February 2016 (updated 21st November 2023); and
- Environment Agency Guidance – Develop a management system: environmental permits, published 1st February 2016 (updated 3rd April 2023).

1.3 Regulated Activities

1.3.1 The proposed listed activities within this Permit Application are outlined within Table 1.3.1 below.

Table 1.3.1: Regulated Activities

Activity	Description of Activity and WFD Annex I and Annex II operations	Limits of specified activity and waste types
Activity Listed in Schedule 1 of EPR		
Part A (1) Section 5.4 Part A()1) (b)(i) Anaerobic Digestion Plant – 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 is anaerobic	**R13:** Storage of wastes pending the operations numbered R1, R3 and D10. **R3:** Recycling or reclamation of organic substances that are not used as solvents.	Total capacity of 50 000 tonnes per annum. Maximum treatment capacity of 172 tonnes per day. But the usual daily treatment capacity will be 137 tonnes.

Activity	Description of Activity and WFD Annex I and Annex II operations	Limits of specified activity and waste types
digestion) involving one or more of the following activities, and excluding activities covered by Council Directive 91/217/EEC- (i) biological treatment		
Directly Associated Activities		
DAA 1 Storage of waste pending recovery or disposal	**R13:** Storage of waste pending the operations numbered R1 and R3 (excluding the temporary storage, pending collection, on the site where it is produced).	From the receipt of permitted waste to pre-treatment and despatch for anaerobic digestion on site. Storage of layer and broiler litter and pig/cattle manure with straw on an impermeable surface with sealed drainage and a cover. Storage of vegetable and fruit waste on an impermeable surface with sealed drainage and a cover
DAA 2 Physical treatment for the purpose of recycling	**R3:** Recycling or reclamation of organic substances which are not used as solvents	From the receipt of waste to despatch for anaerobic digestion and/or off site for recovery. Pre-treatment of waste on an impermeable pavement with sealed drainage including shredding, sorting, screening, mixing, compaction, crushing and maceration Gas cleaning by biological or physical (carbon filtration) or chemical scrubbing.
DAA 3 Heat and electrical power supply	**R1:-**Use Principally as a fuel to generate energy	From the receipt of biogas produced at the on-site anaerobic digestion process to combustion with the release of combustion gases. Combustion of biogas within one biogas boiler with a thermal input of 577kW.
DAA 4 Combustion of natural gas in a combined heat and power (CHP) unit	Combustion of natural gas within a CHP unit	Combustion of natural gas within one (CHP) with a thermal input of 2.11MWth.
DAA 5 Emergency flare operation	**D10:** Incineration on land	From the receipt of biogas produced at the on-site anaerobic digestion process to incineration with the release of combustion gas.

Activity	Description of Activity and WFD Annex I and Annex II operations	Limits of specified activity and waste types
		Use of one auxiliary flare required only during periods of breakdown or maintenance of the biogas upgrading plant and/or biogas boiler.
DAA 6 Combustion of diesel in an emergency generator	Combustion of diesel within an emergency diesel generator	Combustion of diesel within one emergency generator with a thermal input of 410kWth. For use only in an emergency <50 hours per annum.
DAA 7 Gas Upgrading	Upgrading of biogas to biomethane (including the removal of moisture and other substances such as carbon dioxide, hydrogen sulphide and Volatile organic compounds) for injection	From the receipt of biogas produced at the on-site anaerobic digestion process to injection into the medium pressure gas main. This includes return of off-specification biogas for combustion to the on-site, biogas boiler and/or emergency flare.
DAA 8 Biogas Storage	**R13:** Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	From the receipt of biogas produced at the on-site anaerobic digestion process to despatch for use within the facility.
DAA 9 Raw material storage	Storage of raw materials including lubrication oils, antifreeze, propane, ferric chloride, activated carbon	From the receipt of raw materials to despatch for use within the facility.
DAA 10 Digestate Storage	Storage of liquid digestate derived from the anaerobic digestion of non -waste feedstocks and waste feedstocks including broiler and layer litter, cattle and pig manure with straw and fruit and vegetable waste only.	From the receipt of processed digestate produced from the on-site anaerobic digestion process to dispatch for use off site. Storage of processed liquid digestate in the on-site covered 4200m^3 digestate lagoon. Storage of processed solid digestate
DAA 11 Surface water and groundwater collection and storage	Collection and storage of uncontaminated site surface rainwater	From the collection of uncontaminated roof and site surface water from non-operational areas only to reuse within the facility.

1.4 Non-Permitted Activities

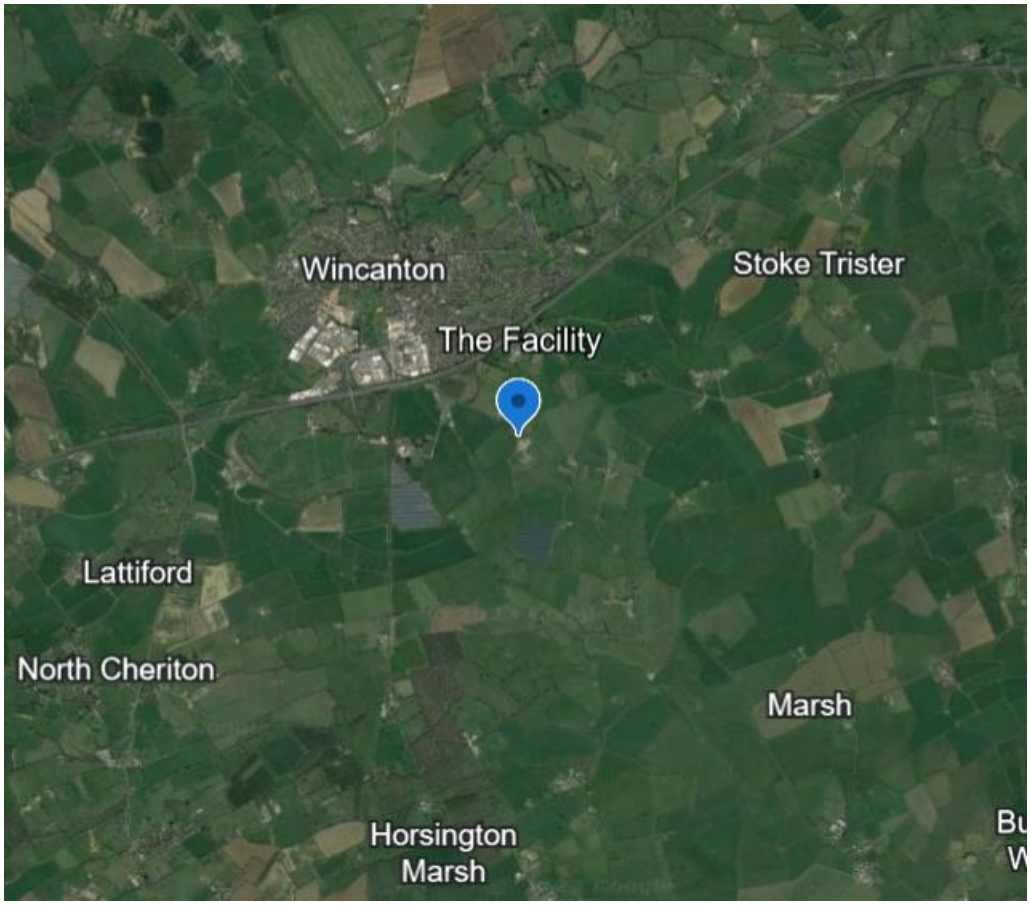
1.4.1 The Operator is not proposing to undertake any activities at the Facility other than those which will be included in the Environmental Permit. All activities will be carried out within the Permit Boundary.

1.5 Site Location

1.5.1 The Facility is located at:

Brains Farm Anaerobic Digestion Facility
Moor Lane
Wincanton
Somerset
BA9 9RA

Figure 1.5.1: Site Location



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1.5.2 The proposed Facility's layout is shown on drawing 'Proposed site plan', referenced SA48969-BRY-ST-PL-A-0005_ contained within the Drawings section of this Permit Application.

1.5.3 The National Grid Reference (NGR) for the proposed Facility is ST 71892 27406. The proposed Facility covers an area of approximately 2.8 hectares. The town of Wincanton is located approximately 537m to the northwest of the Facility.

1.5.4 The site currently comprises a combination of arable agricultural land, agricultural buildings, a residential property, concrete hardstanding and drainage ditches. The site is bound by Moor Lane to the north with a pond, recreational sports fields and tennis courts beyond. The site is also bound by Moor Lane to the East with agricultural fields beyond the road. The south of the site is bound by Forget-me-not farm with agricultural fields beyond. Finally, the west of the site is bound by agricultural fields.

1.5.5 A review of the flood map for planning on the Gov.UK website, indicates that the wester corner of the site is located within a Flood Zone 3. The remaining western half of the site is located in a Flood Zone 2 and the eastern half of site is located within a Flood Zone 1. Land lying within a Flood Zone 3 has a high probability of flooding.

1.5.6 The western half of the site is located over a secondary A aquifer within the superficial geology. The superficial geology aquifer across the eastern half of the site and the bedrock geology across the entire site are designated as unproductive aquifers.

1.5.7 The prevailing winds at the proposed Facility are generally from the southwest and west southwest, with the exception of April and May when the prevailing wind is from the north and west respectively. This data is based on historic daily observation data sourced from the Yeovilton Airport weather station. The weather station is located approximately 16.7km west southwest of the proposed Facility (based on data provided by www.windfinder.com).

1.6 Environmental Setting

1.6.1 Nearby receptors within 1,000m of the Facility have been identified as part of the ERA. Key receptors that have the potential to be impacted by emissions from the Facility are summarised in Table 1.6.1 below.

1.6.2 There are no Special Protection Areas (SPA), Special Areas of Conservation (SAC) Local Nature Reserves (LNR), National Nature Reserves (NNR), Sites of Special Scientific Interest (SSSI) or Ramsar sites within 5km of the proposed Facility based on a search carried out using Defra's Magic website.

1.6.3 The EAs nature and heritage conservation screening assessment has identified one Local Wildlife Site (LWS) within 2km of the proposed Facility. The Common Lane LWS is located approximately 1,957m south of the site. No further protected sites or species are identified by the EAs nature and heritage conservation screening assessment within the designated screening distance for an AD facility at this site.

1.6.4 The nearest residential property to the proposed Facility, following development, will be the residential property at Forget-me-not farm located adjacent to the site's southern boundary.

1.6.5 The nearest surface water feature to the Facility is the watercourse which currently runs through the centre of the site. It is proposed that this watercourse is rerouted as part of the development and will run adjacent to the Facility's southern and western boundaries. The nearest main river, River Cale, is situated approximately 390m west of the site.

Table 1.6.1: Sensitive Receptors

Receptor	Type	Distance (m)	Direction
Secondary A aquifer (superficial geology)	Hydrogeological	-	On site
Brains Farm	Agricultural	-	On site
Watercourse	Hydrological	0	E and S
Forget-me-not farm	Residential and agricultural	0	S
Agricultural land	Agricultural	9	N, E, S and W
Pond	Hydrological and ecological	35	N
Wincanton Sports Ground	Commercial/Recreational	190	NNE
River Cale	Hydrological and ecological	390	W
Home Farm	Residential and agricultural	400	ESE
Laurence Dairy Farm	Residential/ Agricultural	400	NNW
Somerset and Dorset Animal Rescue	Commercial	539	N

Balsam Farm	Residential	603	N
Chapper's Tailors	Commercial	631	N
Lower Horwood Farm	Residential and Agricultural	641	ESE
Explore Moto	Commercial	650	N
Matt's Respite Retreats	Commercial/residential	661	N
Nearest residence in Wincanton	Residential	673	NNE
Residence on Common Road	Residential	788	N
Bennetts Field Trading Estate	Commercial	800	WNW
Residence on Snag Lane	Residential	857	N
Honeyfield	Residential	912	ENE
Folly Farm	Residential	949	ENE

2.0 Overview of Facility Operations

2.1 Overview of Anaerobic Digestion Process

2.1.1 A detailed process description is included within the Operational Techniques and Monitoring Plan (OTMP) referenced CRM.0169.001.PE.R.006. The basic steps of the anaerobic digestion process are as follows.

- The feedstock to be processed at the Facility will be maize, straw, grass, wholecrop, chicken manure, pig/cattle manure and fruit and vegetable waste. The Facility will accept a maximum of 50,000 tonnes of feedstock per year.
- The non-waste feedstocks for the facility will be separately stored within purpose-built clamps at the Facility. The waste feedstocks, broiler and layer litter, straw mixed pig and cattle manure and fruit and vegetable wastes will be stored on the concrete pad adjacent to the clamps.
- The solid feedstocks will be fed into the primary digester tank via one of 2no. feeder units, a crusher and a screw conveyor.
- Liquid inputs, consisting of water and recirculated leachate and liquids from the process will be fed into a preliminary tank which will then feed these liquids into the primary digester tank.
- The materials are retained within the primary digester for 30 days at which point the resulting digestate passes through to the secondary digester, which has a residence time of 35 days.
- The digestate is constantly mixed via rotating paddle stirrers within the primary and secondary digesters. The digestate is transferred to the secondary digester via a gravity overflow system.
- Once the digestate has achieved its residence time it's then passed through a macerator then into one of 3no. pasteurisers and heated to 70°C for an hour to ensure pathogen destruction.
- The digestate is passed through a screw press to separate out the solid fraction. This fraction is collected in a bunker under the separator for use on land as an organic fertiliser and soil improver. The liquid fraction is stored in the covered digestate lagoon prior to spreading on land as organic fertiliser.
- The biogas resulting from the AD process is routed to the gas upgrading unit. The final biogas is upgraded and injected into the grid via a network entry facility or utilised in the biogas boiler.

2.2 Operating Hours

2.2.1 The anaerobic digestion process and combustion of natural gas in the CHP, upgrading biogas and injection into the national gas grid will occur continuously, with the exception of any downtime required for maintenance.

2.2.2 Deliveries and collections will be confined to the following hours:

- 07:00 – 19:00 Monday to Friday

- 08:00 – 14:00 Saturday
- No deliveries on Sundays or bank holidays (except during harvest season when some limited deliveries may occur with prior authorisation from the Operator).

2.3 Management of the Facility

2.3.1 The Operator has overall responsibility for environmental practice and will ensure that the policy is properly implemented, monitored and periodically reviewed, in accordance with the relevant statutory provisions.

2.3.2 The Operator has a Technically Competent Manager under WAMITAB to supervise operations and full details are provided within the OTMP. At least one WAMITAB COTC certified person will be available to manage the Facility's operations and ensure the correct activities and procedures are being carried out. These persons are notified to the Agency, and if any changes occur the company will inform the Regulatory Authority in writing or by email. The Facility will also be appropriately manned to ensure safe and efficient operation at all times.

2.3.3 The Operator implements a written EMS on site which meets EA requirements. The EMS identifies and addresses the relevant environmental and legal requirements and environmental standards that the Facility needs to comply with to carry out safe and environmentally sound operations.

2.3.4 Activities will be carried out in accordance with the Facility's EMS and by the stringent management controls in place. Where required, the EMS and associated procedures will be updated to reflect any proposed changes. This AMP will be transposed into the Facility's EMS and it will be used as a reference working document for operational staff on a day-to-day basis.

3.0 Accident Management

3.1 Overview

3.1.1 The following section of the AMP summarises all potential accidents and incidents that could impact off site receptors and describes how incidents will be managed and minimised.

3.1.2 An Accident Control Matrix is presented in Appendix A.

3.2 Failure of Containment and Spillages

3.2.1 Most of the permitted area is paved with reinforced concrete slab with sealed construction joints. The remainder of the site is made up of both grassed open ground and asphalt roadways. All impermeable concrete hardstanding areas are laid with a shallow gradient to direct any liquids to the gullies located around the permitter of the clamps and digester areas.

3.2.2 All effluent captured within the gullies is directed through the Facility's sealed drainage system to one of the three dirty water storage tanks. Each dirty water storage tank has a capacity of 45m^3 and this water will be used within the AD process. All clean rainwater from the internal haul roads will be captured separately and directed to the attenuation pond. Clean water within the attenuation pond will be used within the AD process.

3.2.3 Any rainwater falling on the grassed open ground percolates though to the underlying groundwater. A limited amount of surface water from between the site perimeter bund and digestate lagoon and attenuation pond bunds will be discharged into the adjacent watercourse south of the Facility. The discharge point is fitted with a flow control device and can be shutoff in the case of an emergency.

3.2.4 The main potential for leaks will be runoff from the feedstocks and digestate, both during and after the anaerobic digestion process. There is also the potential for leaks and spillages from oils and fuels stored on site for use in the Facility's plant and equipment.

3.2.5 All non-waste feedstocks are stored within dedicated clamps constructed of reinforced concrete slabs with sealed construction joints. The clamps are also served by the Facility's sealed drainage system which will direct any runoff to the dirty water storage tanks. Feedstocks will also be covered except during addition or removal of the feedstock, in order to prevent ingress of rainfall.

3.2.6 The waste feedstocks, broiler and layer litter, straw mixed pig and cattle manure and fruit and vegetable wastes will be stored on the concrete pad adjacent to the clamps which will be constructed to CIRIA 736 standards. Waste feedstocks shall be sheeted to prevent the ingress of rainfall and to reduce the release of odour.

3.2.7 All tanks, including the anaerobic digestion tanks, are constructed to CIRIA 736 standard. The digestor tanks are stored within a bunded area capable of containing 110% of the largest tanks volume.

3.2.8 The liquid digestate lagoons are constructed of an impermeable liner with leak detection installed below. The dirty water storage tanks will be constructed of impermeable plastic and also installed with a leak detection system. The leak detection systems will be checked as part of the weekly site checks carried out at the Facility.

3.2.9 The digestate lagoon will be periodically drained down completely to allow for a visual internal inspection of the impermeable liner and allow any maintenance or repair works to be carried out.

3.2.10 All oil and diesel tanks are made of double lined steel with bunding around them to contain either 25% of the total volume of all tanks within the bund or 110% of the largest tanks volume, whichever is greater as per Environment Agency Guidance and Oils Storage Regulations.

3.2.11 All fill points are provided with secondary containment and spill kits will be located nearby for containing and absorbing any minor spillages. Training will be provided to all staff in relation to use of spill kits and spill clean-up procedures. The spill response procedure in the Environmental Management System will be followed in all cases.

3.2.12 All site personnel will be tasked with monitoring for evidence of spillages and debris during their day-to-day routine. Any evidence of spillage or debris will be reported to site management who will arrange remedial action. All tanks, pipework and containment will be subjected to regular visual inspections by appropriately qualified personnel with records of all inspections kept on site. Any noted damage or defects will be repaired with all remedial actions recorded.

3.2.13 High level alarms and automatic shut off valves will be fitted to all tanks to prevent overfilling. The tank filling process is controlled electronically via the SCADA system which can be accessed remotely. Any abnormal conditions (e.g. high level alarms) will trigger automatic shut-down procedures and appropriate controls to prevent overfilling.

3.2.14 All chemicals will be handled in accordance with COSHH Regulations and stored accordingly with appropriate signage and labelling. Full product data sheets will be available for review by personnel on site.

3.2.15 Following any incident, an incident report form will be completed and a root cause analysis will be undertaken to determine why the incident occurred. This analysis will also review and update the procedures in place at the Facility, if required, to prevent a repeat of the incident. The Environment Agency will be notified as per the conditions of the permit.

3.3 Gas Leak

3.3.1 Biogas is produced at the Facility and the Facility is connected to the national gas grid. A gas leak procedure is in place for the Facility.

3.3.2 All personnel are tasked with monitoring for evidence of gas leakage during their daily routine. All tanks, pipework and containment will be subjected to regular visual inspections by appropriately qualified personnel with records of all inspections kept on site. Any noted damage or defects will be repaired with all remedial actions recorded.

3.3.3 The Facility has a SCADA system in place which monitors gas pressure and production. Alerts are issued directly to the plant manager and operatives should the Facility operate outside defined parameters.

3.3.4 Operatives will be provided with personal gas monitors in areas where there is a potential for gas build ups. In the event of a gas monitor alarm sounding, indicating a potential hazardous concentration of gas, personnel will evacuate their workstations to the muster point.

3.3.5 The digestate lagoon is covered by a flexible floating cover to prevent the release of biogas.

3.3.6 The Facility will operate a strict no smoking policy across the entirety of the site.

3.4 Fire and Explosion

3.4.1 The Operator has a Fire Response Procedure with site plans showing the location of fire extinguishers (under annual inspection contract), fire alarm call points, assembly points, and pollution prevention features such as drainage shut off valves. Staff training is carried out regularly and drills are undertaken by site management.

3.4.2 The anaerobic digestion process, biogas boiler, biogas upgrading plant and CHP are all controlled electronically via SCADA which can be accessed remotely. Any abnormal conditions will trigger automatic shut-down procedures and appropriate controls to prevent the build-up of an explosive atmosphere.

3.4.3 If abnormal operation occurs, or an issue is perceived, gas will be directed to the Facility's emergency flare. Should the emergency flare fail, digesters and the upgrading unit are fitted with emergency pressure release valves to avoid overpressure. All records of the use of PRVs will be kept on site and the reason for use documented.

3.4.4 Site security systems are in place to prevent entrance to the Facility by unauthorised persons, reducing the possibility of arson. These include security fencing around the perimeter of the Facility, lockable security gates, CCTV and security patrols.

3.4.5 The Facility will operate a strict no smoking policy across the entirety of the site.

3.4.6 Lightning protection is installed at the Facility to British Standard BS EN 62305.

3.4.7 Contaminated firewater will be stored in the attenuation pond before being tankered off site for disposal by a third-party contractor. The attenuation pond is fitted with shut off valves, which shall be manually activated in the event of a fire to prevent any water migrating into the process.

3.4.8 Shutoff valves are also fitted to the discharge point to the watercourse south of the Facility. Valves will be shut off in the case of an emergency, including fire, to prevent the offsite migration of firewater.

3.4.9 Following a fire, an incident form will be completed and a root cause analysis will be undertaken to determine why it occurred. A review of procedures in place at the Facility will be undertaken following any incident and procedures will be updated and enhanced as required. The Environment Agency will be notified as per the conditions of the permit.

3.4.10 In the event of plant or essential equipment malfunction or breakdown which means that the plant cannot accept or process feedstock, arrangements will be implemented to manage and divert any waste deliveries until normal operations resume. Alternative recovery or disposal routes will follow the principles of the Waste Hierarchy where possible.

3.5 Flooding

3.5.1 The western corner of the Facility is located within a Flood Zone 3. The remaining western half of the site is located in a Flood Zone 2 and the eastern half of site is located within a Flood Zone 1. Land lying within a Flood Zone 3 has a high probability of flooding.

3.5.2 As part of the construction works for the Facility, the site levels will be raised and a soil bund built around the site perimeter. In addition, a watercourse that currently runs through the site will be rerouted around the perimeter of the Facility. A flood compensation area will be established in the adjacent field and a flood risk assessment has been carried out for the Facility.

3.5.3 In the event of flooding on site, the following measures will be assumed to avoid or minimise accidents.

- Feedstock, digestate and all processing areas are surfaced with impermeable hardstanding with runoff directed via sealed drainage systems to the dirty water storage tanks, which have a combined capacity of 135m^3. Clean surface water is directed to the attenuation pond, which has a capacity of 808m^3.
- Emergency shut down procedures will be carried out in the event of flood waters reaching plant areas.
- Arrangements will be implemented to manage and divert any waste deliveries until normal operations resume. Alternative recovery or disposal routes will follow the principles of the Waste Hierarchy where possible.

3.5.4 After an incident of flooding, a root cause analysis will be undertaken to determine why the incident occurred and to assess the effectiveness of flood defence and mitigation measures at the Facility, including surface water drainage systems. Following this analysis, a review of procedures in place at the Facility will be undertaken and these will be updated if required.

3.5.5 The accident and incident report form located in the Environmental Management System will also be completed.

3.6 Failure of Plant and Equipment

3.6.1 All plant and equipment is operated and maintained in accordance with manufacturers recommendations. Routine preventative maintenance programs are set out within the Facility's EMS. A breakdown contract in place for plant and equipment and full provision of critical spare parts are maintained on site.

3.6.2 In the event of plant or essential equipment malfunction or breakdown which means that the plant cannot accept or process feedstock, arrangements will be implemented to manage and divert any waste deliveries until normal operations resume. Alternative recovery or disposal routes will follow the principles of the Waste Hierarchy where possible.

3.6.3 Following any incident due to plant and equipment failure, an incident report form will be completed. A root cause analysis will be undertaken to determine why the incident occurred. This analysis will also review and update the procedures in place at the facility if required.

3.7 Incorrect Waste Types or Quantities

3.7.1 Deliveries to the Facility are scheduled and no ad-hoc deliveries will be received. All feedstock received at the Facility will be supplied by approved suppliers who are appointed to supply feedstocks compliant with the appropriate specification under a supply agreement.

3.7.2 Waste will only be received in accordance with the Facility's Waste Acceptance Procedures. Operatives will carry out waste Duty of Care paperwork checks prior to accepting waste and any non-conforming wastes will be rejected.

3.7.3 All loads delivered by road to the Facility are weighed using the Facility's weighbridge.

3.7.4 The Operator has a system in place for visually inspecting the feedstocks as they are delivered. Records of the checks are maintained on site to provide a record of compliance.

3.7.5 Following the rejection of any feedstock load, an incident report form will be completed. A root cause analysis will be undertaken to determine why the incident occurred. This analysis will also review and update the supply contracts and procedures in place at the facility if required.

3.7.6 In the event of plant or essential equipment malfunction or breakdown which means that the plant cannot accept or process feedstock, arrangements will be implemented to manage and divert or cancel any waste deliveries until normal operations resume. Alternative recovery or disposal routes will follow the principles of the Waste Hierarchy where possible.

3.8 Failure of Mains Services

3.8.1 The Operator has contracts with utility suppliers and will keep informed of any planned utility outages and adjust activities at the Facility to ensure that no harm to human health or pollution to the environment can occur.

3.8.2 The onsite CHP will be capable of supplying the required power to the Facility during normal operating conditions. The Facility combusts natural gas within the CHP which can fulfil the requirements of the Facility. There is also a mains power connection at the Facility that can provide power in the event of a failure of the CHP.

3.8.3 A backup diesel generator is also present at the Facility in order to supply power to critical plant in the event of a failure of both the CHP and mains power supply.

3.8.4 A Water outage procedure is in place at the Facility in the event of a loss of mains water supply. Water from both the dirty water storage tanks and attenuation pond is the primary water source used at the Facility as part of the standard operation. In the event of loss of mains water these supplies will continue to be used until a mains water supply can be reestablished.

3.9 Staff Shortages

3.9.1 Short term staff shortages (such as a few days illness) will not affect the ability of the Facility to operate effectively as other employees can be reassigned to critical operations. Longer term absences require forward planning to ensure that risks are mitigated.

3.9.2 A staff standby rota is in place for the Facility and is actively managed. Staff are trained and able to undertake different roles at the facility.

3.9.3 In the event of prolonged absence of employees, temporary staff will be recruited and appropriately trained to fulfil non-critical roles whilst other more experienced staff members are reassigned.

3.10 Vandalism and Arson

3.10.1 The entire perimeter of the Facility is surrounded by security fencing with security gates installed at all entrances and exits. All security gates will be kept locked outside of the delivery hours. All visitors and staff must report to the site offices in order to gain access to the Facility. CCTV is installed throughout the Facility and security will attend any incident during the night. All boundary fencing is inspected regularly with repairs carried out by on site maintenance staff or external contactors.

3.10.2 Should any act of arson occur then the Fire Response Procedure within the Facility's EMS will be activated.

3.10.3 Following any incident of arson, vandalism or unauthorised access to the Facility an incident report form will be completed. A root cause analysis will also be undertaken to determine why

the incident occurred. This analysis will also review and update procedures in place at the facility if required.

3.11 Vehicle Collision

3.11.1 To reduce the likelihood of vehicle collision and vehicle collision leading to the release of waste or potentially polluting liquids, the following measures are taken to avoid/minimise effects:

- Deliveries and collections are to be scheduled and supervised to ensure limitation of vehicles on site reducing risk of collision, and correct procedures for the delivery and collection of materials are followed.
- The storage of oils and fuels is within dedicated areas separated from vehicle haul routes.
- A dedicated access route to the Facility is in operation, with dedicated loading and unloading points in place.
- Speed limits and traffic management plan are in place on site.
- All drivers must report to the Facility's site office where they will be instructed of the site rules and given appropriate directions.
- Drivers of site vehicles such as telehandlers are suitably qualified.

3.11.2 Following any incident involving a vehicle, an incident report form will be completed and a root cause analysis will be undertaken to determine why the incident occurred. This analysis will also review and update procedures in place at the facility if required.

4.0 Records and Reporting

4.1 Incident Review

4.1.1 Records will be made of all incidents and accidents which occur at the Facility. All records of incidents, accidents and actions taken will be retained as per the requirements of the Environmental Permit.

4.1.2 Where an accident or incident occurs, an investigation will take place to determine the root cause of the accident, to help to inform how to prevent the accident reoccurring. All findings of the investigation will be reported to the management of the Operator and will be shared with all employees, so preventative measures can be developed and incorporated into future works.

4.1.3 A formal review of all on site processes will be undertaken by the Operator following any major accident or incident. Any changes to processes or procedures required as a result of the formal review will be communicated to the management and employees at the Facility.

4.2 Notifying the Environment Agency

4.2.1 In the event of a significant accident or incident, the Operator will notify the EA as soon as practically possible, using the emergency 24hr phone line (0800 80 70 60). The Operator will also notify the EA Regulatory Officer should any complaints be received directly to the Facility as a result and advise what remedial measures or actions have been taken to address the problem. Copies of any material complaints received will be made available to the EA for review.

4.3 Accident Management Plan Review

4.3.1 This AMP will be reviewed by senior management every four years or immediately following any major accident or event.

4.3.2 Any technical or managerial changes on site will also initiate a review of the AMP to ensure that the control techniques remain appropriate for the Facility.

Table 1: Accident Control Matrix

Event	Likelihood	Consequence of Occurrence	Avoidance Measures to be Taken	Residual Risk	Response Measures
Containment Failure or Spillage					
Contaminated run-off/rainwater from the Facility; Failure of anaerobic digestion, dirty water, fuel or oil tanks; Spillages during delivery of feedstock or inputting of feedstock into anaerobic digestor; Spillages during refuelling of plant and equipment or deliveries of fuel and oil; Overfilling of anaerobic digestors; Overfilling of oil or fuel storage tanks; Leakage of anaerobic digestion tanks;	High	Very High – contamination of land and pollution of local groundwater and surface water.	Areas where wastes and digestate are handled or stored are paved with reinforced concrete slab with sealed construction joints. These areas are served by a sealed drainage system which directs liquids to the dirty water storage tanks. Waste feedstocks are covered except during addition or removal of the feedstock, in order to prevent ingress of rainfall. All tanks, including the anaerobic digestion tanks, are constructed to CIRIA 736 standard. All tanks are stored within a bunded area capable of containing 25% of the total volume of all tanks within the bund or 110% of the largest tanks volume, whichever is greater. The liquid digestate lagoons are constructed of an impermeable liner with leak detection installed below. The dirty water storage tanks are constructed of impermeable plastic and installed with a leak detection system. High level alarms and automatic shut off valves are fitted on all storage tanks and controlled by the SCADA system. All fuel and feedstock deliveries and collections are supervised.	Low	All spillages will be cleaned up as soon as practicable. Follow the spill response procedure in the Facility's EMS. Completion of an incident report form following any incident. Updates to EMS and Facility procedures following route cause analysis. Reporting of any relevant incident to the EA as per the Permit conditions.

Leakage of dirty water tanks/leachate storage lagoon; Leakage of oil or fuel storage tanks; Leakage from site vehicles or delivery/collection vehicles.			Secondary containment is present within all tank filling and emptying areas and spill kits are on hand. Refuelling of equipment in dedicated areas with impermeable surface and spill kits are on hand. All primary and secondary containment systems are regularly inspected with any repairs carried out promptly and records kept. All hardstanding areas are inspected for damage daily and repairs carried out promptly to original specification. The drainage system, tanks and lagoons are inspected and maintained on a regular basis. The clean surface water drainage discharge can be shut off on site, so in case of emergencies the surface water can be sealed to prevent any contamination off site.		
Gas Leak					
Gas Leakage from digestors, biogas storage, gas upgrading plant, gas main or any associated pipework.	High	Very High – Air pollution, creation of explosive atmosphere and Risk to health and safety of workforce.	Regular visual inspections of all tanks and pipework by appropriately qualified personnel. A programme of Planned Preventative Maintenance (PPM) is in place with all remedial actions recorded. Processes at the Facility are controlled electronically via SCADA system which can trigger automatic shut-down procedures and appropriate controls to prevent the build-up of an explosive atmosphere.	Low	Shutdown of all potential combustion sources. Follow the gas leak procedure in the Facility's EMS. Completion of an incident report form following any incident. Updates to EMS and Facility procedures following route cause analysis.

			Operatives will be provided with personal gas monitors in areas where there is a potential for gas build ups. Digestate lagoon is covered. No smoking policy at the Facility.		
Fire and Explosion					
Fire within the Facility's boundary; Explosion within the Facility's boundary; Lightning strike.	Medium	Very High - smoke and air pollution, escape of firewater, wastes and oils causing contamination of land, surface water and groundwater. Risk to health and safety of workforce and neighbouring receptors from fire and explosion of biogas.	Separation of incompatible materials and of combustible materials and ignition sources. Fire detection and alarm systems in place. Adequate firewater supply on-site and fire water containment procedures in place. Processes at the Facility are controlled electronically via SCADA system which can trigger automatic shut-down procedures and appropriate controls to prevent the build-up of an explosive atmosphere. Site security systems to prevent unauthorised access including perimeter fencing, security gates, security patrols and CCTV monitoring. The gates will be kept locked and secured outside the site's delivery hours. Programme of PPM in place for all plant and equipment. All plant and equipment and electrical installations will be kept in good working order and will be subject to a routine inspection and maintenance schedule. Staff training on fire procedures and use of equipment where appropriate. No smoking policy at the Facility. Lightning protection installed to BS EN 62305	Low	Automatic and manual shutdown procedures of all processes. Follow the fire procedure in the Facility's EMS. Follow the explosion procedure in the Facility's EMS. Completion of an incident report form following any incident. Updates to EMS and Facility procedures following route cause analysis.

Flooding					
Flooding on site	Medium-High	High – Wastes, digestate and fuels mobilising off site causing contamination of land, surface water and groundwater.	Waste, digestate and fuel storage and processing areas are surfaced with impermeable hardstanding with runoff directed via sealed drainage systems to the dirty water storage tanks, which have a capacity of 135m^3. Clean surface water is directed to the attenuation pond, which has a capacity of 808m^3. Watercourse to be rerouted as part of the Facility's development works. Site levels and site perimeter bund will be raised as part of the Facility's development and a new flood compensation area will be established in the adjacent agricultural field. The clean surface water drainage discharge is fitted with a flow control device and can be shut off. In the event that flood water ingress occurs into plant areas emergency shutdown procedures will be implemented.	Low	Automatic and manual shutdown procedures of all processes if flooding extends to plant areas. Follow the flood procedure in the Facility's EMS. Completion of an incident report form following any incident. Updates to EMS and Facility procedures following route cause analysis.
Failure of Plant and Equipment					
Unplanned breakdown of key plant or equipment. Leakages; due to faulty pipe work, valves, over-pressure, blockages, corrosion, severe weather, vehicle impact etc.	Medium	Medium – Leaking wastes, digestate and/or fuels causing contamination of land, surface water and groundwater. Partially treated wastes creating odorous emissions.	Machinery and plant used to process the wastes will be operated, serviced and maintained in line with the manufacturers' recommendations to prevent failure. Contingency arrangements in place for all feedstocks. Breakdown contract in place. Full provision of spare parts on-site.	Low	Arrangements will be implemented to manage and divert any feedstock deliveries until normal operations resume. Completion of an incident report form following any incident. Updates to EMS and Facility procedures following route cause analysis.

					Restocking of replacement parts if required.
Incorrect Waste Types or Quantities					
Too much waste received; Incorrect and inappropriate waste types accepted at the Facility; Mixing of incompatible materials or incorrect storage.	Low	High – Reaction of incompatible or incorrect wastes causing tank foaming, explosion and loss of digestate causing contamination of land, surface water and groundwater. Inappropriate wastes could reduce treatment equipment efficacy and contamination of resulting digestate.	All deliveries are scheduled and no ad-hoc deliveries will be received. All feedstocks will be supplied by approved suppliers who are appointed to supply feedstock compliant with a supply agreement. Waste will only be received in accordance with the Facility's Waste Acceptance Procedures. Operatives will carry out waste Duty of Care paperwork checks prior to accepting waste and any non-conforming wastes will be rejected. All loads delivered by road to the Facility are weighed using the on site weighbridge. All feedstock deliveries will be supervised to ensure that they are stored in the appropriate areas.	Low	In the event of plant or essential equipment malfunction or breakdown which means that the plant cannot accept or process feedstock, arrangements will be implemented to manage and divert any waste deliveries until normal operations resume. Completion of an incident report form following any rejected loads. Review of supply contracts and issuing notification to suppliers in the event of a rejected load.
Failure of Mains Services					
Failure of service supply – Water, gas	Low	Medium – Contamination of land, air, surface water and groundwater due to inability or insufficient waste treatment. Partially treated wastes creating odorous emissions.	The Operator will keep informed of any planned utility outages and adjust activities at the Facility as required. CHP on site to generate power for the Facility. Main power connection present to provide a backup in the event of a failure of the CHP. An emergency diesel generator is present at the Facility in order to supply power to critical plant in the event of a total failure of the CHP and mains power.	Low	Follow the power outage procedure in the Facility's EMS. Follow the gas outage procedure in the Facility's EMS. Follow the water outage procedure in the Facility's EMS.

			Water captured within the dirty water storage tanks and the attenuation pond provides the primary source of water for the Facility.		
Staff Shortage					
Staff absence	Medium	Low – Inability to operate plant to its full capability leading to inefficient treatment of wastes	Staff are trained and able to undertake different roles at the Facility. Emergency rota in place to enable replacement staff to be called up at short notice.	Low	Recruitment of staff to undertake less critical roles and reassignment of more experienced staff into more critical roles. Use of temporary staff if required. If required, Facility will cease operating.
Vandalism or Arson					
Vandalism to plant, equipment or storage vessels; Fire damage to plant, equipment or storage vessels.	Low	Very High – Explosion and fire due to ignition of biogas. Damage or fire impacting containment of wastes, fuels and/or digestate causing contamination of land, surface water and groundwater.	Security fencing around the perimeter with security gates installed at all entrances and exits. All security gates will be kept locked outside of delivery hours. All visitors and staff must report to the site office on arrival. Security personnel respond to incidents during the night. CCTV installed throughout the Facility.	Low	Follow the spill procedure in the Facility's EMS. Follow the fire response procedure in the Facility's EMS. Completion of an incident report form following any incident. Updates to EMS and Facility procedures following route cause analysis.
Vehicle Collision					
Release of wastes, fuels or digestate as a result of vehicle collision	Low	Medium – Vehicle impact damaging containment of wastes, fuels and/or oils causing contamination of land, surface water and groundwater.	Deliveries and collections are to be scheduled and supervised. Storage of waste material within dedicated areas separated from vehicle movements, where possible.	Low	Follow the spill procedure in the Facility's EMS. Completion of an incident report form following any incident.

			Dedicated access route to the Facility with dedicated loading and unloading points in place. Speed limits and a site traffic management system are in place. All drivers must report to the Facility's site office where they will be instructed of the site rules and given appropriate directions. Drivers of site vehicles are suitably qualified.		Updates to EMS and Facility procedures following route cause analysis.

Appendix B – Emergency Contacts

KEY CONTACTS – Last Updated February 2024			
Location: Brains Farm Anaerobic Digestion Facility, Moor Lane, Wincanton, Somerset			
Postcode: BA9 9RA			
Site Access Grid Reference: ST 71892 27406			
SITE CONTACTS	**Name**	**Office Hours and contact**	**Out of hours**
Director:			
Operations Manager:			
Operations Manager:			
Site Supervisor:			
Site Supervisor:			
Site Supervisor:			
Landowner / Agent:			
EMERGENCY SERVICES		**Office Hours and contact**	**Out of hours**
Emergency		**999**	**999**
Medical (non-emergency):			
Police:		**101**	
Fire:		**999**	
REGULATORS		**Office Hours and contact**	**Out of hours**
Health and Safety Executive (HSE) in incident hotline		Monday to Friday 8.30 am to 5 pm - **0345 300 9923**	**0151 922 9235**
Somerset County Council		**01522 552222**	
Environment Agency (24-hour emergency hotline)		**0300 123 2224**	
Local EA Officer –			
Environment Agency (non-emergency)		Monday to Friday 8 am to 6 pm - **03708 506 506**	
UTILITY / KEY SERVICES	**Name**	**Office Hours and contact**	**Out of hours**
Water and Sewerage Supplier:			
Sewerage undertaker:			
Gas supplier:			

Electricity Supplier:			
Oil supplier:			
Fuel supplier:			
Chemical supplier:			
Oil spill contractor:			
Maintenance contractor:			
OTHER KEY CONTACTS	**Name**	**Office Hours and contact**	**Out of hours**
Specialist advisors:	**Enzygo**	Monday to Friday 9 am to 5 pm - **01454 269 237**	

Appendix C – Incident Report Form

Name of person(s) responding to incident:				
Date of incident:		**Time of incident:**	_ _ : _ _	
Type of incident: (spill, explosion, fire, plant failure etc)				
Details of any spilled material				
What was it?				
How much of it?				
Medium into which the release occurred? *Please circle*	Air	Land	Drain	Water course
For Waste delivery spillages please give details of the following:				
Company?		**Vehicle registration?**		
Describe the incident *(include details of circumstances causing the incident, any hazardous situation(s) observed and clean up information. Photographic evidence to be taken)*				
Have photos have been taken?	Yes No	**Was any leak stopped?**	Yes No N/A	
Was the Environment Agency informed?	Yes No	**Were the Emergency Services involved?**	Yes No	
Was the load accepted?	Yes No	**If NO has Operations Manager been informed?**	Yes No	
Were contents of the spill kit used?	Yes No	**Were the contaminated items used disposed of properly?**	Yes No	
If Yes please give details of spill kit contents used:				
Signed:				
Incident Review				

Has an incident review been undertaken?	**Yes** **No**
Reviewer's comments: **Print name:** **……**	

Actions as a result of the incident review	
Note Action(s) taken and further action(s) required by a specific date	**Date**

Incident closure sign off				
Reviewed by (Site Supervisor)	**Signed**		**Date:**	
Reviewed by (Operations Manager)	**Signed**		**Date:**	

Additional comments:

Enzygo specialise in a wide range of technical services:

Property and Sites
Waste and Mineral Planning
Flooding, Drainage and Hydrology
Landscape Architecture
Arboriculture
Permitting and Regulation
Waste Technologies and Renewables
Waste Contract Procurement
Noise and Vibration
Ecology Services
Contaminated Land and Geotechnical
Traffic and Transportation
Planning Services

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Stocksbridge
Sheffield S36 2AA
Tel: 0114 321 5151

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Tel: 0161 413 6444

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Malthouse Avenue
Cardiff Gate Buisness Park
CF23 8RU
Tel: 02920 023 700

Please visit our website for more information.

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