

## ODOUR MANAGEMENT PLAN (HOLBEACH)

### 1. Procedure Objectives

- 1.1. This odour management plan has been developed in conjunction with the requirements of the Environment Agency H4 odour management guidance to ensure odours produced on-site are contained and treated.

### 2. Scope

- 2.1. This management plan is specific to the processes and equipment at Holbeach's AD plant.

### 3. Health and Safety considerations

- 3.1. Routine maintenance and testing shall be covered under site-based standard operating procedures and risk assessments. Non-routine work shall be completed in accordance with the company's Permit to Work system and shall include adherence to relevant policies and procedures such as safe isolation and lock-off.

### 4. Environmental considerations

- 4.1. As detailed in the plan.

### 5. Introduction

- 5.1. Biogen Holbeach Biogas Facility was commissioned in 2013. In February '18 Biogen (a portfolio company of Ancala Partners LLP ('Ancala'), an independent mid-market infrastructure investment manager) acquired Tamar Energy. This included the Holbeach facility, amongst 4 other AD plants and 6 composting sites.
- 5.2. The legal entity remains as Holbeach Biogas Facility and this shall also remain as the 'operator'. Biogen's Managing Director, Operations Director and Commercial Director are listed as Company Directors for Holbeach Biogas Facility and can, therefore, demonstrate sufficient control of the activity to ensure; day-to-day control, compliance with permit conditions, control over recruitment activities, provide funding and ensure management of the facility in an emergency.
- 5.3. Biogen was established in 2005 and prior to the acquisition of Tamar, operated 8 AD plants throughout England, Wales and Scotland, establishing itself as the UK's leading operator.
- 5.4. The company uses a technology called anaerobic digestion to provide a green solution to the significant food waste challenges that exist in the UK. Anaerobic digestion is a biological process which uses naturally occurring microorganisms in a sealed chamber to break down organic matter such as waste food into a valuable fertiliser and a methane- rich biogas to produce renewable energy.
- 5.5. Biogen is a member of the Renewable Energy Association (REA)

### 6. Responsibility

- 6.1. The AD facility is the responsibility of the Managing Director, located at Biogen (UK) Ltd's Head Office in Milton Ernest, Bedfordshire.
- 6.2. The facility has a dedicated Site Manager who has overall responsibility for the day-to-day operation of the site.
- 6.3. Routine preventative and reactive breakdown maintenance is the responsibility of the Site Manager. A technical maintenance support team provides assistance; however, all works on-site are authorised by the Site Manager.
- 6.4. Site staff at the AD facility are responsible for maintaining an awareness of general site

Odour Management Plan (Holbeach)	Version 4	Issue date: 24.05.19	Issued by: Kate Lister
Uncontrolled when printed			PAGE 1 OF 20

performance during their daily activities. Staff are instructed to report any unusual odour occurrences to the Site Manager without delay.

- 6.5. The Director of Compliance is responsible for ensuring the Compliance Team conduct audits to assess conformance to the OMP. Deviations will be reported to the Site Manager and an improvement log raised as per the **Problems, Complaints and Improvements Procedure**.

## 7. Definitions

N/A

## 8. Associated Documents

- 8.1. All associated documents referred to in this Procedure are highlighted in bold and underlined.

## 9. Description of the site and process

- 9.1. Holbeach AD site has been designed to accept and treat 55,000 tonnes per annum of primarily vegetable outgrades and energy crops from neighbouring agricultural farmland to generate biogas, which in turn is used to produce exportable electricity, heat and a nutrient rich organic fertiliser for use on the farm.
- 9.2. The AD Facility is designed to process both loose solid and liquid feedstocks.
- 9.3. The plant is also used to process a wide variety of other commercially available wastes which are similar in nature to crop residues (potato washings for example).
- 9.4. The biogas generated from the process is used to produce renewable energy and heat through a combined heat and power (CHP) plant which produces an electricity output of approximately 1.487MWe.
- 9.5. The facility also includes a remote digestate storage lagoon which has a storage capacity of approximately 22,730m<sup>3</sup>.
- 9.6. The activities undertaken on-site can be broken down into the following areas:

### **Waste Reception and Pre-Treatment**

- 9.7. The facility will use the adjacent Manor Farm weighbridge for recording deliveries and materials taken off site. The weighbridge is located off site of the AD Plant itself.
- 9.8. The solid materials, namely maize silage (fine cut harvested), vegetable wastes and some other 'similar' commercial wastes (e.g. fruit and vegetable) will be received into the process via mechanical operated feed hoppers. These will be loaded by front end shovel loaders.
- 9.9. Liquids will arrive at the AD Plant in tankers. The liquids are discharged into liquid reception tanks prior to being fed into the process.
- 9.10. Pre-treatment will ensure particle size of the substrate is reduced prior to the digestion process.

### **Temporary Waste Storage**

- 9.11. Harvested maize (non-waste feedstock) can be stored on the existing clamp whilst other solid waste deliveries will also be temporarily stored on impermeable surfacing serviced with sealed drainage system.

### **Anaerobic Digestion Plant:**

- 9.12. Within the Digestion Tanks and in the absence of oxygen, the substrate is heated in the presence of inoculum material. This results in the organic matter biologically degrading and releasing biogas. The tanks are agitated in order to prevent stratification, sedimentation, crusting and to ensure that the micro-bacteria are distributed throughout.

### **Pasteurisation:**

- 9.13. The digestate is then pasteurised at a minimum of 70°C for one hour to remove

Odour Management Plan (Holbeach)	Version 4	Issue date: 24.05.19	Issued by: Kate Lister
Uncontrolled when printed			PAGE 1 OF 20

any pathogens as required by the Animal By-Product Regulations.

**Gas and Energy Infrastructure:**

- 9.14. The biogas is collected from within the roof space of the digester tanks and conditioned and utilised by a Combined Heat and Power (CHP) unit which has a rated electrical capacity of circa 1.487MWe. Any excess or out of specification gas can be controlled through the use of an enclosed emergency flare.
- 9.15. Heat from the cooling jacket of the CHP at a minimum 90°C is used to provide process heat for the AD Plant and use in the pasteurisation unit.
- 9.16. The electricity is then distributed to Manor Farm which is owned by A. H. Worth & Co Ltd and the national grid network.

**Digestate Management:**

- 9.17. After digestion, the substrate is processed to separate the liquid and solid fractions. The liquid fraction is then pumped to the storage lagoon. The solid fraction falls from the elevated screw-press into a farm trailer which is removed daily or every other day (as required). The material is then stored on the side of fields or spread directly to land.
- 9.18. The digestate produced by the plant is compliant with BS PAS 110: QP Specification for whole digestate; Thus all digestate material which leaves the Holbeach AD Facility is classified as a product material and not as a waste material.

**10. Surrounding Area and Odour Sensitive Receptors:**

- 10.1. The Holbeach AD Facility lies on the southern part of the existing farm complex at Manor Farm, immediately adjacent to an existing drainage ditch and the junction of two private roads, which are owned by A. H. Worth & Co Ltd. The adjacent Farm complex comprises a number of large buildings used in connection with vegetable grading, packaging and storage marketing of potatoes and arable crops. Manor Farm is an established farm complex with agricultural buildings, coldstores, existing offices and staff facilities, as well as the processing and packaging plant for QV Foods Ltd.
- 10.2. The general location of the Farm and AD Facility is predominantly agriculture and fairly remote from sensitive receptors. Holbeach Hurn is the nearest village which lies approximately 900m to the south-west of the site. Holbeach Hurn is situated north of the A17 and approximately 9.5 miles east of Spalding.
- 10.3. The closest receptors to the AD Facility are two semi-detached farm worker's houses which lie on the northern side of the Manor Farm access road, approximately 260m from the AD Facility. These houses are owned by the Farmer and leased to employees of the Farm.
- 10.4. The full site address is:

Holbeach Biogas Ltd  
 Manor Farm  
 Holbeach Hurn  
 Spalding  
 Lincolnshire  
 PE12 8LW

Table 1: Site Location

Odour Management Plan (Holbeach)	Version 4	Issue date: 24.05.19	Issued by: Kate Lister
Uncontrolled when printed			PAGE 1 OF 20

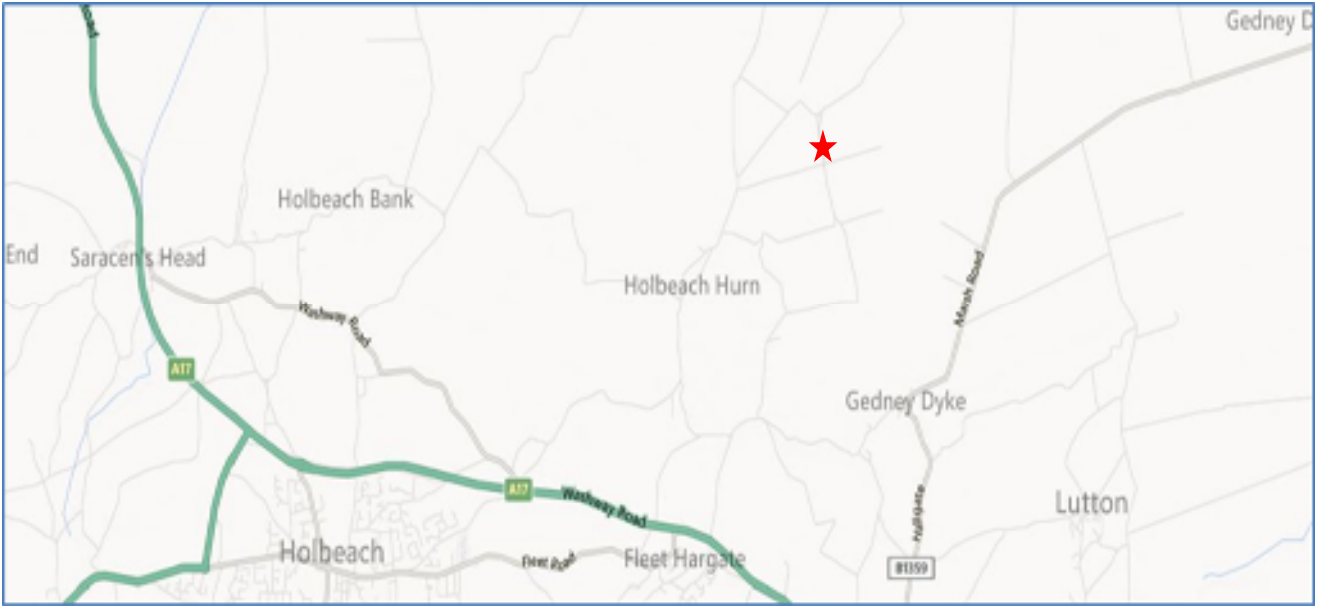
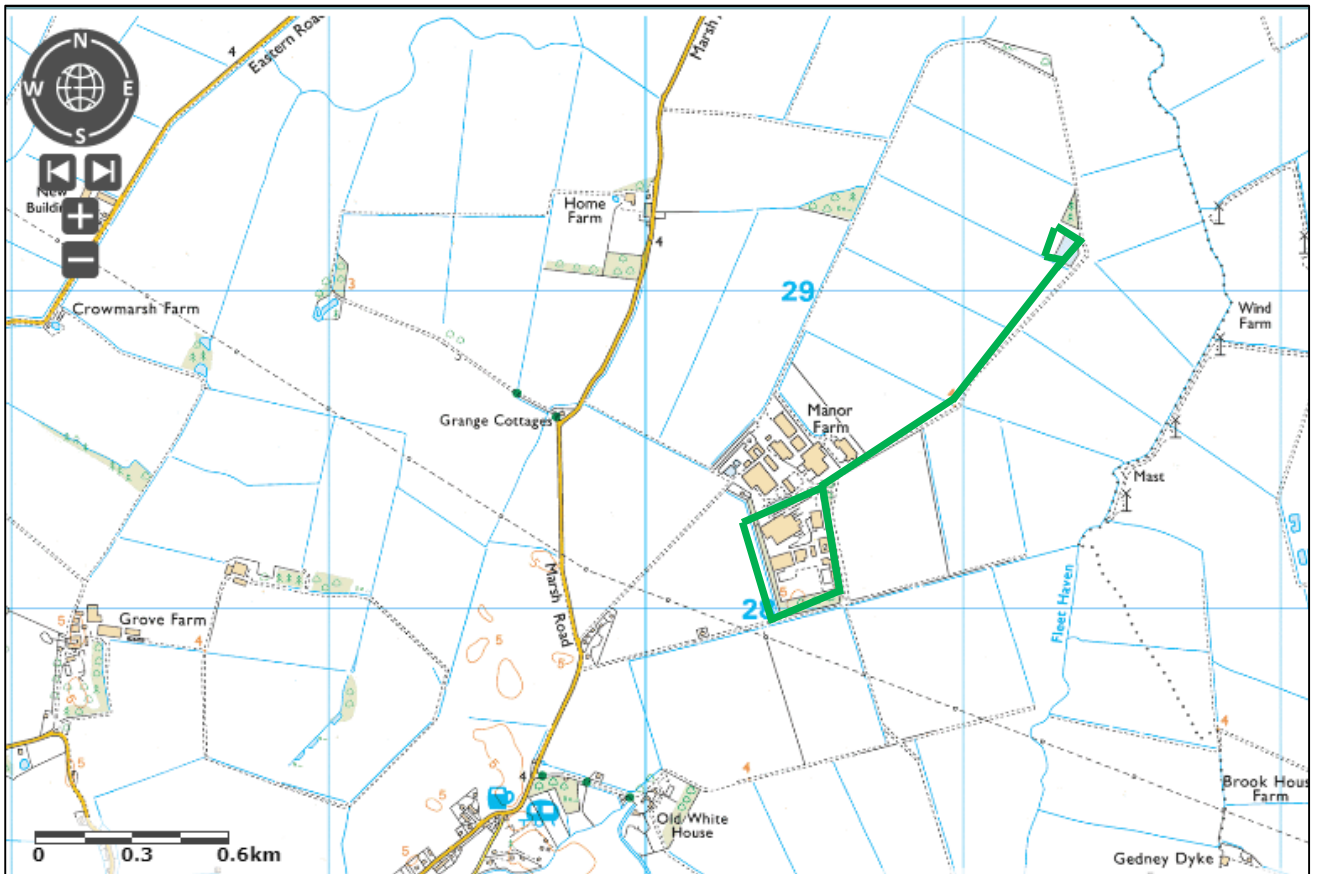


Table 2: Site Layout Plan



- 10.5. The area surrounding the site is relatively rural and fairly remote from sensitive receptors. The neighbouring Farm complex itself lies in the centre of an existing network of arable fields, all of which are under the control of the land owned (A. H. Worth & Co Ltd) and the farm workers housing are the closest receptors.
- 10.6. The nearest settlement is Holbeach Hurn, with the closest residential properties located approximately 940m to the South-West of the AD Facility.
- 10.7. Old White House and several other properties lie on Baily's Lane to the east of the village. These extend slightly closer to the AD Facility.
- 10.8. To the north of the village, along Marsh Road, there are other receptors including cottages at the junction of Manor Farm access road and Marsh road; Grange Cottages; and Home Farm.
- 10.9. In addition, there are a number of residential properties, all of which are summarised within Table 3.4.1.A below.

**Table 3.4.1.A: Site Sensitive Receptors**

Location	Distance (m) and Direction from AD Plant	Distance (m) and Direction from Lagoon
Farm worker's houses, Manor Farm	260 W	740 NW
Cottages at Junction of Marsh road and Manor Farm access road	540 W	1050 NW
Holbeach Hurn Village	940 SW	1200 W
Old White House (and other properties on Baily's Lane)	650 SW	770 W
Grange Cottages	925 NW	1500 NW
Home Farm	1300 NW	1890 NW
Gedney Dyke Farm	1450 SE	925 E
Red House Farm / White House Farm	1635 E	1500 E
Brook House Farm / Ashtree Farm	1685 SE	1285 E
Gedney Village	1950 S	1430 S
Cardwell House and Cardwell Farm	2400 NE	2500

- 10.10. Meteorological conditions play a large role in the potential impact of odourous emissions from the site. Generally higher wind speeds result in increased dispersion due to the turbulence and lower wind speeds can inhibit dispersion. The predominant wind direction for the site is South Westerly.

## 11. Holbeach Odour Inventory

11.1. The Holbeach site is designed to treat up to 55,000 tonnes of feedstock per year. The table below provides an inventory of the odour emissions including the source, activity and point of release onsite.

Source	Location	Activities and Materials Involved	Types of Emissions	Potential Odour	Means of Control	Release to atmosphere description/ characteristics	
Waste delivery and reception	Site Access road and concrete apron	Incoming loads of organic feedstock	Fugitive	Odour from waste	<p>Only pre-arranged feedstock deliveries will be received at the site. There will be no Adhoc waste deliveries to site</p> <p>Liquid wastes will be delivered in enclosed tankers and delivered directly into Pre-tank Liquid. All other wastes will be delivered in sealed and covered containers in accordance with the requirements of the Duty of Care Regulations.</p>	Fugitive emissions only under abnormal conditions	Intermittent release of odour
	Temporary storage of raw solid feedstocks (Silage clamp bays)	Tipping of waste	Fugitive	Odour from waste	<p>Vehicles delivering feedstock unload onto either the enclosed/sheeted maize clamp area or directly into one of the two liquid storage tanks (depending on the particular feedstock type). Storage period for any other waste stream are kept to a minimum to prevent an advanced state of decomposition</p> <p>Site team completed odour checks daily.</p>	Fugitive emissions only under abnormal conditions	Intermittent release of odour.

Source	Location	Activities and Materials Involved	Types of Emissions	Potential Odour	Means of Control	Release to atmosphere description/ characteristics	
	Feeding Room Processes	Hammermill, Feeding modules and pasteurisation processes	fugitive	Odour from processing	Waste processing takes place within an enclosed building with the roller shutter doors closed.	Fugitive emissions only under abnormal conditions.	No release in normal operation, possible intermittent release in abnormal conditions
External process tanks	External Process tanks	Treatment in Primary Digester	None	Digestate odour	<p>The process tanks are gas tight vessels. All the transfer pipework is sealed and therefore under normal operation, there is no potential for odour release. The integrity of the process tanks will be inspected daily as part of the daily check's procedure.</p> <p>The tanks are fitted with pressure relief valves (PRVs) for protection for both over and under pressure. These are located on the roof and are designed to relieve under abnormal operation as a safety protection mechanism. The PRVs are checked monthly and records of these checks and findings are fully documented.</p>	Fugitive emissions only under abnormal conditions.	No release in normal operation, possible intermittent release in abnormal conditions
		Treatment in Secondary Digester	None	Digestate odour			

Source	Location	Activities and Materials Involved	Types of Emissions	Potential Odour	Means of Control	Release to atmosphere description/ characteristics	
Screening of digestate	Vicinity of bunded area	Screening	Fugitive	Digestate, ammonia odour	The final stage screen is located outside, however, odours generated at this stage are localised to the source. The digestate is transferred to the offsite lagoon via an enclosed pipe work.	Fugitive emissions only	intermittent release
Storage of Digestate	Separated fibre (SF)	Odour from cake trailers	Fugitive	Digestate odour	<p>Odour checks completed as part of daily walk-round. Material has been digested for a minimum retention time that is deemed sufficient to produce digestate with acceptable level of odour.</p> <p>In the event of leachate escaping, it would be contained within the bund and directed back into the process via the drainage system, all liquid would be re-processed and fully treated.</p> <p>Spreading of SF is only undertaken when weather conditions are suitable, weather monitoring is undertaken.</p>	Fugitive emissions only under abnormal conditions.	No release in normal operation, possible intermittent release in abnormal conditions
	Separated Liquor (SL)	Odour from temporary storage of separated liquor in small effluent holding tanks	Fugitive	Digestate odour	Odour checks completed as part of daily walk-round. Material has been digested for a minimum retention time that is deemed sufficient to produce digestate with acceptable level of odour.	Fugitive emissions only under abnormal conditions.	No release in normal operation, possible intermittent release in abnormal conditions



	Off-site Storage Lagoon	Odour from transfer of digestate for spreading	Fugitive	Digestate Odour	<p>Material stored in the Lagoon is fully treated and is therefore stabilised. Residual biogas potential (stability) testing is conducted at least twice per annum.</p> <p>Product is spread using a low odour application technique i.e. digestate will primarily be pumped through the underground irrigation main to discharge points in fields around the farm. This is an enclosed pipe and therefore has no associated odour. Parameter inspections are carried out.</p>	No odour	Spreading if management procedures not adhered to could result in medium risk however unlikely due to adherence to management plan & low odorous nature of the material.
Storage of biogas	In head of secondary Digester	Storage of gas before combustion	Fugitive	Gaseous	<p>Gas is stored within the inner gas tight membrane of the secondary digestion tank. The integrity of this membrane is regularly checked. Gas monitoring equipment is used to monitor gas levels.</p> <p>The site has been designed with 1 CHP with sufficient capacity to ensure gas is burnt through controlled combustion. The CHP will ensure the levels in the gas holders are maintained and controlled.</p> <p>The facility benefits from an emergency flare; if either of the CHP failed, the excess gas would be directed to the flare preventing odour release from unburnt biogas.</p>	Fugitive emissions (unlikely as stabilised)	No release in normal operation, possible intermittent release in abnormal conditions

## 12. Odour Control during Normal operations

- 12.1. Several control techniques, specific technologies and products have been selected to ensure the most effective control of odours produced during the anaerobic digestion process.
- 12.2. The roller shutter doors are closed feeding room reducing the likelihood of odours being released. There is localised extraction over the more odorous stages of the process to minimise the potential for fugitive emissions when the doors are opened.
- 12.3. Process tanks are gas tight sealed tanks, to prevent releases of odorous emissions.

## 13. Odour control during pre-acceptance, waste delivery and waste reception

- 13.1. Prior to delivery on-site all potential feedstocks are subject to approval in accordance with the **Food Waste Pre-acceptance Procedure**. This procedure requires the 'Approval team' (consisting of members of the research, compliance and operations) to review information about the potential waste before it is approved for delivery on-site. Only after all three departments authorise will the waste be approved and given authorisation to deliver to site. At this stage, the above team will assess the waste for its odour potential. Highly odorous wastes will not be accepted on-site without additional controls for their handling (e.g. priority processing, direct processing into the gas tight tanks, etc.). If a load which is particularly odorous arrives on site, the Site Manager is ultimately responsible for assessing whether the load should be processed without delay or whether it should be rejected. If the load has already been tipped and it is not possible to reload it and the decision is to reject it. It shall be quarantined and removed as soon as practically possible.
- 13.2. All deliveries are booked in on a daily schedule; this ensures only approved suppliers tip their waste on-site.
- 13.3. Each load delivered to site is weighed in and checks are undertaken at this point to ensure that it is an approved load. The vehicle is then directed to the reception bays for tipping.
- 13.4. The vehicles delivering waste to site are either enclosed or covered in accordance with the Duty of Care Regulations. Vehicles are directed into the reception bays promptly for tipping and tipping is only undertaken with the roller shutter doors closed.
- 13.5. Vehicles tip the food waste into the reception bays where it is inspected by trained operatives. Large contaminants are removed, if there is a large amount of contamination in the load it may be rejected in accordance with the **Contaminated Feedstock Procedure**.
- 13.6. If the material is identified as highly odorous at this stage it will be rejected if it cannot be processed.
- 13.7. The food waste is transferred through enclosed pipes into the hopper, the hammermill and into two feeding modules. All transfers of product are undertaken in sealed pipework, preventing odour release.
- 13.8. The feeding modules, pasteurizer and hammermill are housed inside an enclosed feeding room.
- 13.9. Waste processing only takes place with the doors to the feeding room closed.

## 14. Odour control during anaerobic digestion

- 14.1. Once processed in the two feeding modules, the material enters a sealed system of gas-tight tanks and enclosed pipework. The integrity of the pipework and tanks on-site is checked daily in accordance with the **Daily Checks Procedure**. There is very low potential for odour from this part of the process.
- 14.2. Biogas produced by the process is stored within a purpose-built double membrane gas holder at the head space of the secondary digester. Condensate produced from the process tanks, common gas line and gas holder drain to a condensate chamber and is then returned to the desulphurization unit for reprocessing via enclosed pipework.

Odour Management Plan (Holbeach)	Version 4	Issue date: 24.05.19	Issued by: Kate Lister
Uncontrolled when printed			PAGE 1 OF 20

- 14.3. Gas monitoring equipment is available on-site and gas levels are monitored continuously by the SCADA system. The site also has 1 CHPs and an emergency flare to ensure gas is burnt through controlled combustion. There is very low potential for odour from this part of the process.
- 14.4. Representative samples are taken from the digesters and screw press separation point on a regular basis and are analysed for a variety of parameters including dry matter (DM), organic dry matter (ODM), pH, alkalinity and VFAs. Representative samples are drawn from the screw press separation point and analysed for parameters required under PAS 110 to ensure of suitability and to determine the application rate to land. This includes residual biogas potential (RBP) to ensure the material has been digested.
- 14.5. Analysis of DM, ODM, pH and alkalinity are undertaken using standard methods in Biogen in-house laboratories. Analysis of VFA and analyses required for regulatory purposes are sub-contracted to an external laboratory.
- 14.6. Samples are routinely analysed for pH, DM and ODM, all of which is undertaken in Biogen's in-house laboratories using the standard method of heating to 105 C for 18 hours (DM) and burning at 550 C for 2 hours (ODM). pH is determined in a solution with a x10 dilution using a standard pH electrode. Samples from the digester are routinely analysed in-house for pH and partial and intermediate alkalinity via titration with dilute H2SO4. Analysis of DM, trace elements and VFAs are contracted to an external laboratory and are undertaken using their standard methods. Samples from the effluent storage tanks are analysed for regulatory purposes by an external laboratory; again, using their standard methods.
- 14.7. During normal stable digester operation, samples from digester are analysed for pH and alkalinity and DM / ODM twice or more a week. The results are compared to a set of Process Control Parameters; values more than the Control Parameters trigger specific actions and an increased frequency of sampling. During normal, stable operation, samples from the digester and effluent storage tanks are analysed for VFA once or more per month. Values more than the Process Control Parameters may trigger increased frequency of sampling.

## 15. Odour control during screening, final storage and dispatch

- 15.1. The digestate is passed through a 12mm macerator prior to pasteurisation. The pasteurisation process occurs within the feeding room which is in an enclosed building served with local extraction.
- 15.2. From the pasteurizer, the digestate is transferred to the storage in screw press buffer tank prior to separation. The storage in screw press buffer tank is gas tight therefore no odours are emitted.
- 15.3. From the storage in screw press buffer tank, the material is passed through a screw press for separation into liquor and fibre. Although this process is carryout in the open, odours are generally localized to the source and dissipates quickly.
- 15.4. Digestate is separated into Separated Fibre and Separated Liquor. The fibre is stored in cake trailer while awaiting collection for spreading. The separated liquor is transferred into final effluent tanks prior to being pumped to the off-site lagoon. Both the fibre and liquor are spread on Worth Farm as the good agricultural practice guidance. The liquor is applied during the spreading seasons using an umbilical of irrigation network.
- 15.5. The digestate from this site is certified to PAS 110.

## 16. Influencing receptors

- 16.1. Biogen understand the importance of being a good neighbour and employ the following measures to engage with residents;
- 16.2. Contact details are made available to the public for residents to contact a member of the Biogen team
  - Planned maintenance works which could cause disruption will be communicated in writing and/or verbally to those who may be affected.
  - Odour complaints are recorded on the electronic management system (improvement log). All complaints are investigated, and residents are provided with feedback promptly.

Odour Management Plan (Holbeach)	Version 4	Issue date: 24.05.19	Issued by: Kate Lister
Uncontrolled when printed			PAGE 1 OF 20

## 17. Routine Maintenance

- 17.1. Scheduled and routine maintenance is critical to ensure the control of odours on-site. Biogen are committed to ensuring that all equipment is maintained to an acceptable standard.
- 17.2. Critical spares shall be held in stock or shall be available at short notice. Provision will be made for equipment to be repaired as soon as practicable
- 17.3. All processing plant is included within the preventative maintenance schedule to ensure it is well maintained and remains operational.

## 18. Routine Monitoring, Recording and Reporting

Biogen will monitor the site to ensure releases from the site do not cause a nuisance for sensitive receptors. Biogen monitoring includes:

- Monitoring of complaints
  - Monitoring of the process to give early warning of any potential odour issues
  - Monitoring by sniff testing will be undertaken by a Biogen representative and is required for the following reason:
    - Assess the likelihood of odours being detected by sensitive receptors
- 18.1. A daily olfactory inspection will be conducted during operational hours by a member of the site team. The site is frequently visited by non-site-based employees, it is company policy that all attending within the operations and compliance team will also conduct an offsite odour check on their way to the site. Sniff testing will be undertaken at least once every day and recorded in the site diary with a rating of the detected odour in accordance with the Environment Agency scale.

Intensity (Detectability)

0 No odour (no odour can be detected)

1 Very faint odour (only detectable if you specifically sniff for it)

2 Faint odour (detectable if you casually sniff for it)

3 Distinct odour (detectable by just standing there normally)

4 Strong odour (unavoidable odour)

5 Very strong odour (likely to leave lingering smell on clothes, or lingering taste)

6 Extremely strong odour (likely to causes immediate physical symptoms such as nausea, sore throat and headaches)

- 18.2. If particularly odorous activities were taking place, further odour checks shall be undertaken.
- 18.3. During the inspection, a walk around of the perimeter will be conducted and observations made concerning the type and nature of any odours detected, including the likely source.
- 18.4. In the event that the Site Manager or nominated other, detects odour at the site boundary which they believe has the potential to cause off-site odour annoyance, they are required to notify the Director of Compliance and/or Regional Compliance Officer. The findings and remedial steps from such inspections will be documented.
- 18.5. All members of the team will be trained to undertake odour investigations and the weather conditions, in particular wind direction and strength will be assessed prior to undertaking the inspection. The exact locations for monitoring will be dependent on the meteorological conditions at the time; however, the approach which will be adopted, includes investigating areas where weaker strength is expected prior to stronger. An onsite weather station allows for an accurate reflection of actual weather conditions, historical and forecast. This is useful both for completing odour checks but also for carrying out planned maintenance where such works could give rise to fugitive emissions.
- 18.6. Staff undertaking the olfactory monitoring are required not to consume strong food or drink (such as coffee) up to an hour before completing the check and if a vehicle is

Odour Management Plan (Holbeach)	Version 4	Issue date: 24.05.19	Issued by: Kate Lister
Uncontrolled when printed			PAGE 1 OF 20

necessary, not to use a vehicle with a strong deodoriser or air freshener inside.

- 18.7. Any complaints received regarding are dealt with in accordance with the **Problems, Complaints and Improvements Procedure** and recorded on the **Improvement Log**. All complaints received are recorded and an investigation is undertaken to identify the source of the odour. Complaints are reviewed as part of the Biogen IMS.
- 18.8. In addition to the daily sniff tests, an inspection of all plant that is critical from an odour risk perspective, e.g. doors, extraction fans, pipework, PRVs, etc, will be conducted at the prescribed frequencies to ensure they are in working order. The results of such inspections shall be recorded.

## 19. Odour Control during Maintenance and Abnormal Events

- 19.1. Biogen have undertaken a full review of the foreseeable situations which might compromise the sites ability to prevent and or minimise odorous releases from the process and the actions taken to minimise the impact. This can be seen in the **Emergency Preparedness and Response Procedure** which covers eventualities such as fire/explosion, power failure, plant failure, flooding and highly odorous waste.

## 20. Training and competence

- 20.1. All staff at the plant are made fully aware of the need to ensure odour abatement measures are in place and recognise the importance of the management procedures associated with odour control. Staff who are responsible for the operation, maintenance or repair kit will be trained and competent. Records will be maintained demonstrating compliance with this. The typical areas highlighted will be:

- General awareness of sources of odour and their direct responsibilities for avoiding odour nuisance
- Minimising emissions during normal operations
- Actions to be taken during abnormal conditions

- 20.2. A record of training will be kept for each person trained. Site staff will receive refresher training as identified on the company's **Skills and Competency Matrix**.

## 21. Handling complaints

- 21.1. The **Problems, Complaints and Improvements Procedure** details how complaints will be managed to ensure records are kept of all complaints and remedial actions are taken where necessary. Biogen will ensure prompt feedback is provided to the complainant where feedback is requested. All complaints are logged on the electronic IMS system and can be made available for inspection at the request of the EA.

## 22. OMP Reviews

- 22.1. Biogen will review the effectiveness of the OMP at least annually. However, this will be reviewed sooner in the following situations:

- Significant changes to site operations
- Complaints received have highlighted areas where further control measures or remedial action are required
- At the request of the Environment Agency

