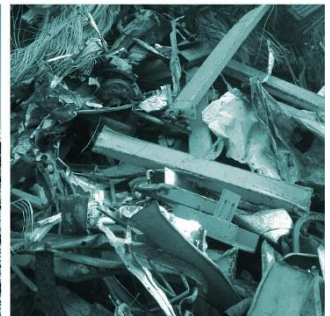
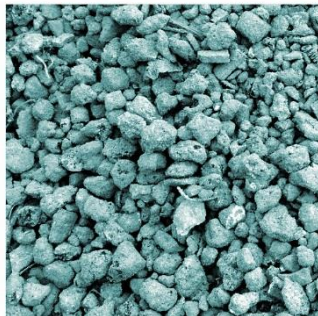
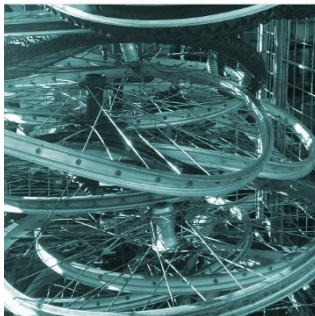
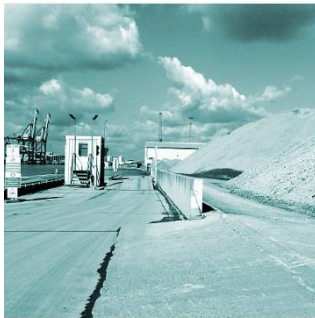
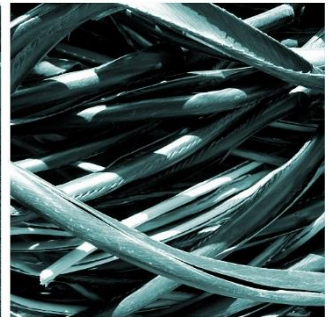
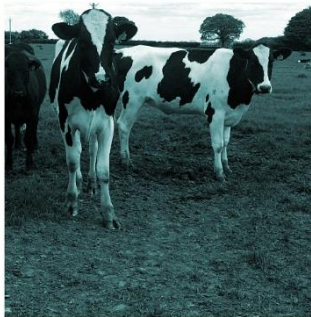
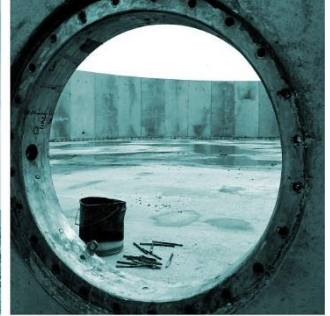
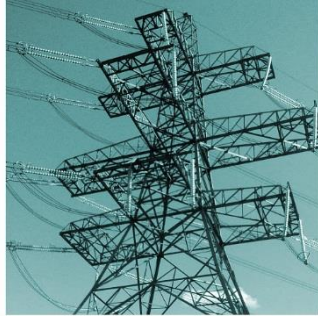


# BROCKLESBY LIMITED PERMIT VARIATION

## Fugitive Emissions Plan

June 2021



Client: Brocklesby Limited  
Document Reference: HC1676-12

## REPORT SCHEDULE

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**Client:** Brocklesby Limited

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**Document Reference:** HC1676-12

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# 1. INTRODUCTION

## 1.1. Introduction

- 1.1.1. Brocklesby Limited operates a fats processing plant, also referred to as the Brocklesby Fatty Acid Methyl Ester (FAME) plant at Crosslands Lane, North Cave, East Riding of Yorkshire, HU15 2PG, NGR SE 88124 32281. The site processes used edible cooking oil and fatty food wastes and has been in operation at North Cave, on the site of a former aluminium smelting works, since 1997
- 1.1.2. The processed oils and fats are sent on for use in biofuels and energy generation, and residual oils and water arising from the process are sent for use as Anaerobic Digestion (AD) feedstocks.
- 1.1.3. The site has the capacity to process up to 225,000tpa of non-hazardous wastes by heat treatment, physical treatment (centrifuge), chemical treatment (pH correction), or via the pre-esterification process. The final products from these treatment processes are sent for use as biodiesel, energy generation, or as AD feedstocks. The maximum daily processing capacity at the site is 975t.
- 1.1.4. The pre-esterification plant has the capacity to process up to 50,000tpa of non-hazardous wastes received at the site. This activity is listed under Section 4.1 A(1) (a) (ii) of Schedule 1 of the Environmental Permitting Regulations.
- 1.1.5. H&C Consultancy has prepared this formal Fugitive Emissions Management Plan and Risk Assessment to demonstrate that through the consideration of risks and implementation of mitigation measures there would be no unacceptable adverse environmental effects arising from fugitive emissions and no consequential detriment reaching any nearby sensitive receptors as a result of the operations at the site.
- 1.1.6. This Fugitive Emissions Management Plan and Risk Assessment (the Plan) has been compiled with reference to formerly available guidelines in Environment Agency Guidance EPR - H1, Part 1 'Simple Assessment of Environmental Risk for Accidents, Odour, Noise, and Fugitive Emissions dated April 2008' and also considers the Environment Agency Guidance Document IPPC S5.06, Guidance for the Recovery and Disposal of Hazardous and Non-Hazardous Waste, Environment Agency Document 'How to Comply with your Environmental Permit, Additional Guidance for Specialty Organic Chemicals Sector (EPR 4.02) and The Production of Large Volume Organic Chemicals (EPR4.01). Reference has also been made to Environment Agency Draft Consultation Document July 2020 'Appropriate Measures for the Biological Treatment of Waste', in view of the fact that the plant generates feedstock materials that are sent to Anaerobic Digestion for further processing.



## 1.2. Site Setting, Surrounding Land Uses and Location of Receptors

- 1.2.1. The site is located at at Crosslands Lane, North Cave, East Riding of Yorkshire, HU15 2PG, NGR SE 88124 32281. The site lies within the southern section of Crosslands Quarry, operated by Breedons Aggregates and Excavations Ltd. Crosslands Quarry is a closed landfill, which took non-biodegradable waste. Directly north of the proposed plant is the existing Brocklesby Biogas Anaerobic Digestion Facility which is a permitted site operated by Advantage Biogas Limited. The surrounding land is low lying agricultural land, cut by drains and which has been variously quarried for sand and gravel. The mineral workings in some places have subsequently become flooded and there are ponds to the west and southeast as a result, with a more extensive area of ponds approximately 500m to the north and also to the south. There are a number of residential properties within 500m of the site, mostly along the B1230 to the south. The B1230 runs approximately northeastwards from the site into North Cave, which is centred approximately 1km east of the site.
- 1.2.2. The site is located over drift deposits of Quaternary sands and gravels. The underlying solid geology comprises Triassic mudstones. The Environment Agency classifies both the drift and solid geology as Secondary aquifers, with the overlying soils considered to have high leaching potential and vulnerability. Groundwater is abstracted from sand and gravel pits for spray irrigation, the closest being 330 m. The site does not lie in a source protection zone, or area of flood risk. A flood risk zone exists within 50m of the eastern boundary of the site, associated with an area of ponds and the lngs Drain approximately 200m to the north.
- 1.2.3. The nearest SSSI is Everthorpe Quarry, which is situated approximately 3.3km to the east of the site.
- 1.2.4. The closest sensitive receptors to the site are the adjacent Brocklesby Biogas AD Facility, the nearby sand and gravel pits and occupants of the houses and businesses along the B1230, approximately 400m south of the site.
- 1.2.5. The control measures and operating techniques employed at the Facility detailed below are designed to prevent any harm to sensitive receptors and the risk assessment provides information on the likelihood of that harm happening.

## 1.3. Fugitive Emissions Risk Assessment

- 1.3.1. In accordance with Environment Agency Guidance, this report assesses the risks posed by fugitive emissions to air, land, water, and members of the public. This Plan demonstrates that the risk of fugitive emission arising from the site has been fully considered and that appropriate controls will be established during the construction, maintenance, monitoring and operation of the plant to manage these within acceptable limits. This plan will be used in conjunction with the Odour Management Plan and Noise Management Plan for the site, which provide a detailed account of how these specific areas of risk will be managed. It also makes reference to the site wide qualitative environmental risk assessment and associated impact modelling reports submitted with the most recent permit variation application for the site in May 2021.

1.3.2. A qualitative risk assessment considering all aspects of environmental risk for the whole site is submitted with the permit application, document reference HC1676-08. This assessment has included consideration of the potential impact of fugitive emission from the site. Sections from this document relevant to assessment of risk from fugitive emissions have been re-produced in this document for ease of consideration. The risk rating matrix associated with the original assessment and submitted under document reference HC1676-08 is included in this document for ease of reference.

1.3.3. Table 1 Fugitive Emissions Risk Assessment is provided below:

Severity ↑	5	5	10	15	20	25
	4	4	8	12	16	20
	3	3	6	9	12	15
	2	2	4	6	8	10
	1	1	2	3	4	5
		1	2	3	4	5
Likelihood →						

Final calculated risk level rating bands are as follows:

Insignificant	1 – 5
Low	6 – 10
Medium	11 – 15
High	16 – 20
Very High	20 - 25

**Table 1 Fugitive Emissions Risk Assessment**

What do you do that can harm and what could be harmed?			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the overall risk?
What has the potential to cause harm?	What is at risk, what do I want to protect?	How can the hazard get to the receptor	What measures will you take to reduce the risk – Who is responsible for what?	How likely is this contact? (1-5)	What is the harm that can be caused? (1-5)	What is the risk that still remains? The balance of probability and consequence (Likelihood x Severity) (1-25)
			<p>The Site Manager is responsible for implementing all risk management measures described below at the Facility.</p> <p>The Site Manager is also responsible for ensuring that if the appropriate mitigation measures cannot be employed due to adverse weather or unexpected conditions, that site operations will be ceased until they can be carried out with all necessary mitigation measures in place.</p>			
Dust from vehicle movements to and from the Facility.	The adjacent Brocklesby AD Plant, users of Crosslands Lane close to the western boundary of the site and users of the sand and gravel pits directly west of Crosslands Lane.	Air - Wind-blown dispersion in atmosphere.	<p>Site Manager is responsible for checking wind strength and direction and taking corrective action if necessary.</p> <p>Road surfaces are concrete, so low likelihood of generation of materials on site. Hose facilities are available for wheel washing/damping down. If the road surface becomes dry and dust is generated. Surface will be kept swept clean. All wastes stored and processed in enclosed buildings or closed tanks.</p>	2- Dust could reach the adjacent highway or if a strong wind blew on a dry summer day. However this would be unlikely and minimised by management actions, if necessary. Local residential properties too far away to be impacted.	2 - Nuisance - dust on cars, clothing, and inhalation of dusts.	4 – Insignificant. The nature of wastes received and stored on site, and nature of storage facilities mean that there is a low risk of these releases from being generated from the site.
Dust from boiler exhaust.	Users of adjacent highway, local	Emission to air from boilers.	Release of dusts is not a significant risk factor associated with burning	1 - Unlikely as not associated risk with	3 - Nuisance, impact on	3 – Insignificant.

What do you do that can harm and what could be harmed?			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the overall risk?
What has the potential to cause harm?	What is at risk, what do I want to protect?	How can the hazard get to the receptor	What measures will you take to reduce the risk – Who is responsible for what?	How likely is this contact? (1-5)	What is the harm that can be caused? (1-5)	What is the risk that still remains? The balance of probability and consequence (Likelihood x Severity) (1-25)
	dwellings, workplaces, and local habitats.		of natural gas fuels in this type of appliance. Annual emissions monitoring to be carried out in accordance with permit requirements. Ongoing maintenance schedule for boilers. Boilers are newly fitted units that comply with current legislative requirements with respect to emissions to atmosphere.	type of fuel used or appliance.	amenity, and impact on local habitats.	
Release of particulate matter and micro-organisms from wastes delivered to, stored, and dispatched from the site.	The adjacent Brocklesby AD Plant, users of Crosslands Lane close to the western boundary of the site and users of the sand and gravel pits directly west of Crosslands Lane.	Air. Wind-blown dispersion in atmosphere.	<p>Wastes will be delivered to the site via tankers, curtain sided trailers, and bulk skips. Liquid wastes delivered by tanker will be offloaded directly into reception tanks in the tank farm via a closed pipe system. All storage and treatment of waste takes place in enclosed secure buildings or closed tanks. Cat 3 ABP material stored and handled in line with requirements of APHA approval and regulated by local APHA officers. All wastes leaving site are dispatched in closed tankers or skips. Waste dispatched to adjacent Brocklesby AD site is via direct closed pipeline.</p> <p>A bioaerosols risk assessment has been carried out with respect to the potential for emissions of this nature. This assessment has</p>	1 – unlikely due to the facilities and measures in place for storage and handling of wastes.	2 – nuisance to operators of the adjacent Brocklesby AD Plant and potential health impacts.	2 – Insignificant. The nature of wastes received and stored on site, and nature of storage and treatment facilities mean that there is a low risk of these releases from being generated from the site



What do you do that can harm and what could be harmed?			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the overall risk?
What has the potential to cause harm?	What is at risk, what do I want to protect?	How can the hazard get to the receptor	What measures will you take to reduce the risk – Who is responsible for what?	How likely is this contact? (1-5)	What is the harm that can be caused? (1-5)	What is the risk that still remains? The balance of probability and consequence (Likelihood x Severity) (1-25)
			concluded that associated risks are low or very low and that no additional control measures are required.			
Litter.	The adjacent Brocklesby AD Plant, users of Crosslands Lane close to the western boundary of the site and users of the sand and gravel pits directly west of Crosslands Lane. Adjacent farmland.	Air, wind-blown, dispersion in atmosphere.	Majority of wastes received at the site in bulk tankers, skips or intermediate sized containers such as drums or IBC's. Automatic packaging removal associated with butter product wastes, and packaging is removed and diverted via an automatic process which takes place inside a building. All packaging wastes dispatched from site in bulk containers and dispatched periodically to prevent large volumes from accumulating at the site. Small amounts of raw material and office wastes stored in skips pending removal. Daily site inspections for litter, dusts, and odours etc will trigger immediate corrective actions if litter is found at the site.	2 – Potentially litter generating wastes unlikely to be generated in anything other than small amounts that are generated inside and stored securely.	2 – Nuisance, loss of amenity, harm to animal health and potential impact on adjacent farmland.	4 – Insignificant due to such volumes of packaging waste generated and facilities in place for handling, storage and removal.
Mud on Roads from movement of vehicles to and from the facility.	Access to the adjacent Brocklesby AD Plant, users of Crosslands Lane close to the western boundary of the site	Deposited on the ground by vehicles accessing and leaving the site.	Road surfaces on site are concrete, so low risk of mud being generated from roads within the site. Hose facilities are available for wheel washing in the waste reception area. Roads and concrete reception/yard areas will be swept and kept clean on a regular basis. An inspection	2 – Mud is unlikely to get onto the local roads as a result of generation on the site, due to nature of road surfacing, road maintenance activities, wheel wash facilities on	2 – Road safety and amenity for local residents and road uses on roads external to the site.	4 – Insignificant due to control measures available on site, and low risk of mud generation from the site itself.

What do you do that can harm and what could be harmed?			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the overall risk?
What has the potential to cause harm?	What is at risk, what do I want to protect?	How can the hazard get to the receptor	What measures will you take to reduce the risk – Who is responsible for what?	How likely is this contact? (1-5)	What is the harm that can be caused? (1-5)	What is the risk that still remains? The balance of probability and consequence (Likelihood x Severity) (1-25)
			will be made of all vehicles entering the site at the weigh bridge, and any concerns over mud on the wheels of incoming vehicles can be recorded and addressed with the supplier/hauler in question. Daily site inspections for mud, dusts, and odours etc will trigger immediate corrective actions if mud is found on roads at the site.	site. Potentially contaminated vehicles entering the site will be checked, and wheel washing facilities made available if needed.		
Odour from a range of activities on site.	The adjacent Brocklesby Biogas AD Site, users of Crosslands Lane close to the western boundary of the site and users of the sand and gravel pits directly west of Crosslands Lane.	Release to air via venting, and subsequent wind blown dispersion.	The operator has undertaken a full odour impact modelling exercise and produced a comprehensive odour management plan based on the outcome of these modelling exercises.	Probability of exposure variable depending on the source item on site in question. Overall rating of this area is 2. Reference should be made to the odour model and management plan for a full account of the potentially odour generating activities on site and their various predicted levels of impact.	Overall rating in this area is 3. Reference should be made to the odour model and management plan for a full account of the potentially odour generating activities on site and their various predicted levels of impact.	Overall rating is 6 – Low risk. Reference should be made to the odour model and management plan for a full account of the potentially odour generating activities on site and an account of how these will be managed to maintain low risk status for impacts from the site.
Emissions of Volatile Organic Compounds	Emissions to air and subsequent sensitive human and habitat receptors	Vent/dispersion in atmosphere	All materials that have the potential to emit VOCs are stored in fit for purpose storage containers that are indoors or banded. Esterification process takes place indoors and	2 – low due to the installation of abatement, venting arrangements, short term nature of	2 – impacts on air quality unlikely due to volume emissions and	4 - Insignificant

What do you do that can harm and what could be harmed?			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the overall risk?
What has the potential to cause harm?	What is at risk, what do I want to protect?	How can the hazard get to the receptor	What measures will you take to reduce the risk – Who is responsible for what?	How likely is this contact? (1-5)	What is the harm that can be caused? (1-5)	What is the risk that still remains? The balance of probability and consequence (Likelihood x Severity) (1-25)
			<p>emissions extracted and vented through a vapour adsorber via a 10.5m stack. Emissions estimated to take place for limited periods of up to 2 hours a day.</p> <p>DSEAR assessment undertaken for esterification plant and recommendations implemented at site in management system.</p>	emissions, and wider assessment and management of risk associated with the process.	controls	
Pests (rodents, birds, flies, scavenging animals)	Impact on amenity and risk of health impacts/infection of local human population and animal health.	Infestation in waste prior to receipt on site, or secondary infestation on site. Scavenging animals may run between the site and neighbouring properties and carry material off site.	<p>Wastes received on site will be in the form of pumpable slurries or solid wastes. Wastes stored in secure sealed vessels or waste reception bays in enclosed building.</p> <p>Wastes are inspected on receipt according to the incoming waste procedure for evidence of contamination and infestation. Rejection and quarantine procedures for non-conforming wastes are included in this management system. Stated turnaround times for solid materials in bays. The site operates under an APHA approval and implements a full regime of cleaning and hygiene measures as required by the site approval. The operator has a contract with an</p>	2 – Infrequent due to nature of wastes received, and nature of storage and containment facilities.	2 – nuisance and harm to human health from wastes carried off site.	2 – insignificant risk due to nature of operations on site.

What do you do that can harm and what could be harmed?			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the overall risk?
What has the potential to cause harm?	What is at risk, what do I want to protect?	How can the hazard get to the receptor	What measures will you take to reduce the risk – Who is responsible for what?	How likely is this contact? (1-5)	What is the harm that can be caused? (1-5)	What is the risk that still remains? The balance of probability and consequence (Likelihood x Severity) (1-25)
			external pest control provider and can instruct services from this provider to address issues if required.			
Noise from a range of activities on site	Users of public highway, local businesses and residents	Sounds may be detected by nearby receptors.	The operator has undertaken a noise impact modelling risk assessment exercise encompassing all of the potential sources of noise arising from the site. The operator has produced a comprehensive noise management plan based on the outcome of this assessment.	Overall risk rating is 2. Reference should be made to the specific noise assessment for a detailed breakdown of the probability of exposure from different aspects of the site.	Overall rating is 2. Reference should be made to the specific noise assessment for a detailed breakdown of the potential impacts from different aspects of the site.	4 – Overall insignificant risk from this area resulting from management measures outlined in the specific noise management plan.
Spillages of wastes, foot dips, or oil from vehicles during access to the site, and offloading and loading of wastes. Containment of small spills in delivery area.	Surface water, ground water and soils.	Seepage of spillages to ground, to sewer, or to aquifer.	All deliveries will be supervised and will take place during normal working hours. Deliveries will take place in a sealed, impermeable concrete area that drains to a sealed drainage system. Sealed catch pits are provided to retain pipe drain down material after filling and these are emptied on a regular basis for storage in the tank farm. Tanker offload area has secondary containment and has the capacity to retain large spills should a whole tanker spill a load. Spill kits and wash facilities are situated in this area. State of repair of surfacing is monitored on a regular basis, and	1 -Low as supervised delivery procedure in place, and delivery area has impermeable surfacing, draindown catch pits, and containment for larger spillages. Ongoing maintenance and monitoring procedures are in place to maintain this infrastructure.	4 – site is located over soils which are likely to be permeable and provide hydraulic connection with the underlying secondary aquifer and nearby sand and gravel pits. Loss of containment could impact on the underlying groundwater regime, in addition to	4 – Insignificant

What do you do that can harm and what could be harmed?			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the overall risk?
What has the potential to cause harm?	What is at risk, what do I want to protect?	How can the hazard get to the receptor	What measures will you take to reduce the risk – Who is responsible for what?	How likely is this contact? (1-5)	What is the harm that can be caused? (1-5)	What is the risk that still remains? The balance of probability and consequence (Likelihood x Severity) (1-25)
			proactive maintenance carried out if necessary. Any loss of waste from reception tanks will be contained in the dedicated tank farm bund. Main pumping line from the FAME plant to the AD site is included in AD plant permit, is below ground and has leak detection that interfaces with the AD Plant SCADA control system.		potential surface water contamination.	
Small spillages/leaks of process liquids due to breach of pipework or tanks in the waste treatment areas of the site.	Surface water, ground water and soils.	Seepage to ground, sewer, or aquifer following small releases from breaches in tanks or pipework.	All process material is moved between tanks via a closed pipework system. Tanks and pipework are contained within impermeable bunds that will contain both small and large spillages from tanks and pipework. Process and storage tanks are checked on a daily basis for evidence of small leaks arising from the tanks. All tanks and pipework are subject to a structured maintenance programme, that includes proactive periodic checks of the integrity of tanks, valves, seals, and pipework. Methanol detection system installed in esterification plant to detect leaks. The sub surface pumping line to the Biogas site has a leak detection system in place that can be checked on an ongoing basis – under the control of the AD	2 – low likelihood due to construction of tanks, and proactive maintenance programme that will be implemented.	3 – site is located over soils which are likely to be permeable and provide hydraulic connection with the underlying secondary aquifer and nearby sand and gravel pits. Loss of containment could impact on the underlying groundwater regime, in addition to potential surface water contamination.	6 – low risk due to containment of all tanks and pipework within bunded area, and ongoing maintenance and monitoring programme.



What do you do that can harm and what could be harmed?			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the overall risk?
What has the potential to cause harm?	What is at risk, what do I want to protect?	How can the hazard get to the receptor	What measures will you take to reduce the risk – Who is responsible for what?	How likely is this contact? (1-5)	What is the harm that can be caused? (1-5)	What is the risk that still remains? The balance of probability and consequence (Likelihood x Severity) (1-25)
			operator. All pipework routed above ground to allow for visual checks, and site fitted with tertiary containment measures. Regular monitoring of surface water releases, and test and release regime for water released from tank farm process bund. Surface water from eastern side of the site is collected and pumped to a tank where it is used within the process. Pipework labelled to show content and direction of flow.			
Catastrophic failure of tanks and pipework in the main treatment area of site.	Surface water, ground water and soils.	Release to ground, sewer, or aquifer following significant loss of containment of a large section of pipework, or vessel.	Tanks and pipework are contained within bunds that will contain both small and large spillages from tanks and pipework. All pipework routed above ground for ease of maintenance and inspection. Tanks are fit for purpose and have been checked and verified at the point of installation. Tanks fitted with internal monitoring sensors with transmit data to the SCADA control interface system. Staff can monitor tanks from the SCADA interface and respond to alarms in the same way. All tanks, bunds, pipework and concrete surface subject to regular checks and maintenance. Surface water system fitted with shut off valve to maintain spills on site. Surface water drains to swale	1 – low likelihood due to construction of tanks, secondary and tertiary containment measures in place, and proactive maintenance programme that will be implemented.	4 – site is located over soils which are likely to be permeable and provide hydraulic connection with the underlying secondary aquifer and nearby sand and gravel pits. Loss of containment could impact on the underlying groundwater regime, in addition to potential surface water contamination.	4 – low risk due to containment of all tanks and pipework within bunded area, and ongoing maintenance and monitoring programme.

What do you do that can harm and what could be harmed?			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the overall risk?
What has the potential to cause harm?	What is at risk, what do I want to protect?	How can the hazard get to the receptor	What measures will you take to reduce the risk – Who is responsible for what?	How likely is this contact? (1-5)	What is the harm that can be caused? (1-5)	What is the risk that still remains? The balance of probability and consequence (Likelihood x Severity) (1-25)
			<p>where water will soak away over time and so there is some potential to retrieve material if needs be for a short period after release before soakaway. Site is fitted with tertiary containment measures and there are points on the drainage system where spills will collect in a sump and can be pumped to above ground storage tanks.</p> <p>The management of larger catastrophic events of this nature have been considered in more detail within the site's accident management plan.</p>			

## 2. FUGITIVE EMISSIONS MANAGEMENT PLAN

### 2.1. Introduction

- 2.1.1. H&C Consultancy have prepared the Fugitive Emissions Management Plan for the proposed facility. The Plan describes the control measures outlined in the risk assessment tables above that will be implemented to manage risks arising from the Brocklesby Limited site within acceptable limits. This plan does not detail the measures in place to manage odours, noise, or impacts arising from accidents that may occur on site. These measures are outlined further in detail in the Odour Management Plan, Noise Management Plan, and Accident Management Plan in place within the site's environmental management system. Further reference should be made to these documents.
- 2.1.2. It should also be noted that the effectiveness of many of the control measures for managing fugitive emissions on site rely on the design, construction, and control measures that have been installed during the construction of the facility. Information regarding these aspects are detailed in the BAT assessment document, and on accompanying appendices and site plans. Details of the routine proactive maintenance schedule and leak detection and containment measures for tanks and ancillary pipework is outlined in the site Environmental Management System.
- 2.1.3. Table 2 Fugitive Emissions Management Plan is provided below:

**Table 2 Fugitive Emissions Management Plan**

Potential Source	Infrastructure Control	Maintenance Control	Monitoring and Reporting Control
Releases of dusts and litter from the site including entry/exit roads.	<p>Road surfaces are concrete and so the potential for generation of mud and dusts on the site is low.</p> <p>Wheel washing facilities are available for cleaning of wheels if needed and hoses on site for damping down of dusts if needed.</p>	<p>Daily maintenance checks to be carried out on concrete surfaces.</p> <p>Roads to be kept clean and free of debris.</p> <p>Litter picking to be instigated should litter be present on site.</p>	<p>Daily checks of the site for mud/dusts/litter about the site. In the event that dusts are generated from roads, surfaces will be damped down prevent release, or mud cleaned from surfaces.</p> <p>Staff supervising waste deliveries to monitor vehicles entering the site to report to site manager in circumstances where vehicles have accessed the site with excessive amounts of mud on wheels.</p>
Small spillages from tankers, pipes, and vehicles in the tank farm reception area.	<p>All tanker deliveries take place in a sealed concrete area that drains to a sealed sump with an automatic pump to a storage tank in the tank farm. All surface water in the tanker loading area also drains to this sump/tank and so any larger spills from tankers in the loading area also contained in this way.</p> <p>All surface water run-off from roads on the wider site drain off site via an oil interceptor.</p> <p>Spill kits are available in the yard area if needed to clean small spillages.</p> <p>All incoming waste sampling activities to take place in the sealed area and so containment is in place should small spills occur during sampling.</p> <p>All pipework is routed above ground to facilitate inspection and maintenance.</p> <p>Whole site surfacing is impermeable concrete with drainage system that has tertiary containment measures in place and shut off valve on interceptor to allow retention of site drainage if needed.</p>	<p>Daily maintenance checks to be carried out on concrete surfaces and containment structures in tanker delivery area – surfaces to be kept clean and free of debris, and drainage channels to be maintained to be free flowing.</p> <p>Regular weekly visual inspection and function check of the shut off valve for the site to be undertaken.</p> <p>Interceptor to be maintained per manufacturer's recommendations.</p> <p>Sealed drain down pit in tanker offload area is managed on an ongoing basis by the supervising operative during waste deliveries/digestate removal. Automatic pump will pump to storage tank. Regular maintenance on automatic pump and inline fat trap.</p> <p>Regular weekly visual inspection to be made of the</p>	<p>Tank/pipework inspection. Regular checks to be carried out for tank and bund integrity.</p> <p>Surface water stored in the tank farm to be tested prior to release. No release to take place unless stated benchmarks are achieved. Water to be used within the process if suitable as an alternative to release.</p> <p>Outlet from main site Interceptor to be checked on a weekly basis for visible oil and grease.</p> <p>If the contents of spill kits are used, site operatives will report this to the plant manager, and contents will be replaced from items in store.</p> <p>Spill kits will be checked on a weekly basis to ensure that they have the necessary contents in place, and that this is in a suitable state of repair to be used.</p> <p>Spent samples to be disposed of in an appropriate manner.</p>

Potential Source	Infrastructure Control	Maintenance Control	Monitoring and Reporting Control
		<p>internal surfaces of pits where access is possible.</p> <p>Site operative supervises all deliveries and so will monitor and implement cleaning if needed.</p> <p>Site operatives supervising incoming waste activities to ensure that sampling takes place in this area.</p>	
Small spills of waste materials in the solid waste reception/waste process building area.	<p>Deliveries in this area take place in a sealed concrete area. Drainage in this area drains to a sump to the north east of the site. This sump has an automatic pump that will transfer water to an above ground storage tank for harvesting for use in the process.</p> <p>Waste processing building has sealed concrete floor with sealed internal drainage.</p> <p>Any sampling activities to take place in this area so small spills will be contained.</p> <p>All deliveries supervised by a trained member of staff.</p> <p>Spill kits available in area if needed to clean small spills.</p> <p>Tertiary containment kerbing in this area will ensure containment of small and large spills.</p>	<p>Daily maintenance checks to be carried out on concrete surfaces and containment structures – surfaces to be kept clean and free of debris, and drainage channels to be maintained to be free flowing.</p> <p>Site operative supervises all deliveries and so will monitor and implement cleaning if needed.</p> <p>Site operatives supervising incoming waste activities to ensure that sampling takes place in this area.</p> <p>Regular maintenance and checks on the pump and drainage sump to the north east of the site.</p>	<p>If the contents of spill kits are used, site operatives will report this to the plant manager, and contents will be replaced from items in store.</p> <p>Spill kits will be checked on a weekly basis to ensure that they have the necessary contents in place, and that this is in a suitable state of repair to be used.</p> <p>Spent samples to be disposed of in an appropriate manner.</p>
Pests and Scavenging animals	Wastes are delivered to the site in the form of liquids and solids. Site to be managed in accordance with recommendations from pest control specialist to reduce access to	All tanks and pipework are maintained according to the proactive maintenance plan for the site. Solid waste	<p>External company to lay and maintain bait traps for management of pests on site.</p> <p>Monitoring and maintenance activities will be and</p>



Potential Source	Infrastructure Control	Maintenance Control	Monitoring and Reporting Control
	building and creation of refuges.	reception/storage areas are inspected and cleaned regularly in accordance with APHA requirements. Solid wastes are used within stated turnover times on a 'first in first out' basis.  Buildings subject to general maintenance and repair as needed.	documented by the external contractor following site visits, and a record of this activity will be kept at the plant for inspection if required.
Small spillages of waste from tanks and pipework in the processing area.	<p>All process tanks are indoors or contained within bunds that are designed to contain large spillages, and to prevent any small spills or leaks from tanks/pipework from being released.</p> <p>All process tanks are above ground and will be inspected visually on a daily basis for evidence of leaks. Material is transferred between processing tanks via a closed, above ground pipework system, that can be checked for integrity via visual inspection.</p> <p>Processing buildings have sealed concrete floor with sealed internal drainage.</p> <p>Sampling of process material takes place from specified sample points in accordance with sampling procedures.</p> <p>Spill kits provided for cleaning of spills.</p> <p>AD soup pumped to adjacent site via below ground closed pumping line that is in the control of the AD operator. This pipeline has leak detection.</p>	<p>Programme of regular proactive maintenance to be implemented, including checks on the integrity of pipework, tanks, and joints.</p> <p>Daily visual integrity checks of bunds, pipework and tank integrity included within this proactive maintenance schedule.</p>	Tank/pipework inspection. Regular checks to be carried out for tank and bund integrity.
Releases to air from waste	Liquid wastes delivered via closed pumping	Programme of regular proactive	Any uncontrolled releases of waste during delivery

Potential Source	Infrastructure Control	Maintenance Control	Monitoring and Reporting Control
when delivered to store, and when in store.	<p>line from tankers to storage tanks. Storage tanks fitted with odour abatement systems as outlined in odour management plan.</p> <p>Solid waste either tipped directly into storage areas inside shed or offloaded in intermediate containers and unloaded from these inside shed.</p> <p>Shed is fitted with extraction and odour abatement systems as outlined in odour management plan.</p>	<p>maintenance to be implemented, including checks on the integrity of pipework, tanks, and joints, and seals.</p>	<p>to be cleaned up immediately to minimise impacts.</p> <p>Additional measures outlined in odour management plan.</p>
Releases of VOCs to atmosphere from the Esterification process.	<p>All processing and storage of waste takes place in closed/covered tanks. Process tanks, pipework and connections designed and installed according to good practice to minimise potential leaks/releases. Under/over pressure relief valves are installed on tanks, but these are for emergency use only and vent inside the process building. Process takes place inside building. Extraction system installed in building which vents to atmosphere via vapour adsorber (carbon filter). Methanol detection system in place for detection of leaks – linked to SCADA system.</p> <p>Process monitored and controlled by inline monitors with SCADA interface system. Raw materials associated with the esterification plant stored in fit for purpose closed containers.</p>	<p>Programme of regular proactive maintenance to be implemented, including checks on the integrity of pipework, tanks, and joints and under/over pressure relief valves of process tanks and equipment.</p> <p>Regular maintenance of vapour absorber and regular testing and maintenance of methanol detection system.</p>	<p>Regular maintenance programme includes regular checks of pressure relief valves, and integrity of pipework, tanks, and covers for evidence of leaks.</p> <p>Methanol detection system will alert operator to leaks to allow further inspection and programme of repair to be carried out.</p> <p>Daily boundary odour monitoring to be carried out as outlined in odour management plan.</p>

## **2.2. Staff Training**

- 2.2.1. The Site Manager will be responsible for ensuring staff receive proper and adequate training in respect of fugitive emissions management.
- 2.2.2. Site staff will undergo a training programme to ensure that they understand how their actions and the site operations can affect fugitive emissions. The staff will be trained so that they understand where spillages occurring in various parts of the site will run to. The staff will be trained in how to carry out the necessary maintenance and monitoring activities required. The staff will be trained to ensure that they are competent to supervise all waste deliveries to the site in accordance with the feedstock acceptance procedure. The staff will be trained to visually inspect for small gas leaks, and leaks on tanks and pipework. Staff will be instructed to report fugitive emissions to the Site Manager with immediate effect.
- 2.2.3. Staff training records will be updated and stored within the site office.

## **2.3. Contact with the Environment Agency and Complainants**

- 2.3.1. The operator will encourage any complainant wishing to complain about the impact of fugitive emissions to liaise directly with them but acknowledges that the complainant may wish to pursue a complaint through the Environment Agency or the Local Authority.
- 2.3.2. In the event that a complaint is received, the operator will record the time, date, weather conditions, and severity and duration of the emission. This will enable site operations to be thoroughly investigated. The operator will monitor all fugitive emissions and complaints



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