Receptor	Source	Harm	Pathway	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
What is at risk? What do I wish to protect?	**What is the agent or process with potential to cause harm?**	**What are the harmful consequences if things go wrong?**	**How might the receptor come into contact with the source?**	**How likely is this contact?**	**How severe will the consequences be if this occurs?**	**What is the overall magnitude of the risk?**	**On what did I base my judgement?**	**How can I best manage the risk to reduce the magnitude?**	**What is the magnitude of the risk after management?**
1.1 Local human population.	Releases of NOx, SOx, NH_3, H_2S, CO and TVOCs, PM10 and PM2.5	Harm to human health - respiratory irritation and illness.	Air transport then inhalation.	Medium	Medium	**Medium**	There is potential for exposure to local human population close to the site and to members of the public at locations where they could be regularly exposed. There is a permitted abattoir adjacent to the site to the south. Staff there are present on site 24 hours a day, seven days a week but predominantly within the building. To the north of the site is a wastewater treatment works, where staff are present on site for up to 7 hours per day. The closest residential receptor is approximately 100m southwest of the site. The closest receptor is located approximately 15m of the proposed Site boundary and 100m from the CHP stacks. The CHP stack heights are 11.14m. The proposed site is not within an Air Quality Management Area for NOx. Air quality impacts from the operation on human receptors have been predicted through an AQIA. Straw is treated using a dedicated enclosed piece of equipment (I-	Activities will be managed and operated in accordance with a written management system which will include the following measures: • Planned preventative inspection and maintenance programme including engine management systems by third party contractor in accordance with the management of premise, equipment and machinery procedure. • The emissions abatement plant for the reception building and digestate separation area and feedstock reception tanks will be inspected and maintained and recorded on Computerised Maintenance Management System (Limble). • Emissions monitoring will be carried out as per permit requirements. • Emissions to air from the CHPs and emergency boiler stacks are monitored annually by a MCERTS contractor in accordance with the permit. All monitoring required by the permit will be reported as per the permit requirements. • Leak detection and repair (LDAR) programme will be in place to mitigate and prevent fugitive emissions of biogas.	**Low**

Receptor	Source	Harm	Pathway	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
What is at risk? What do I wish to protect?	What is the agent or process with potential to cause harm?	What are the harmful consequences if things go wrong?	How might the receptor come into contact with the source?	How likely is this contact?	How severe will the consequences be if this occurs?	What is the overall magnitude of the risk?	On what did I base my judgement?	How can I best manage the risk to reduce the magnitude?	What is the magnitude of the risk after management?
							GRIND) within the silage clamp, the straw is moistened when processed. The prepared extruded straw is fed into the large external feed hopper throughout the day as its produced. Solid manures are stored within the Manure Reception Building (MRB) fitted with air handling and emissions abatement. Digestate fibre will be stored inside the Separation Hall, part of the MRB, Separated Digestate liquor is stored in Separated liquid storage tank (inner tank of Digester 5) which is covered and the roof void is connected to the main gas line. Extended retention times (over 54 days) reduces residual biogas potential to produce stable digestate. Effective process monitoring further ensures emissions are minimised.	• Gas pressure is continuously monitored by SCADA system and process controlled to minimise emissions from pressure relief systems and use of the emergency flare. • All pressure relief systems will be inspected and calibrated as per manufacturers recommendations and recorded on Limble.	
1.2 Local human population.	Release of microorganisms (bio-aerosols).	Harm to human health - respiratory irritation and illness.	Air transport then inhalation.	Medium	Low	**Low**	The permitted 2 Sisters Group abattoir is adjacent to the site to the south. Staff are present on site 24 hours a day, seven days a week but predominantly within the building. To the north of the site is	Activities will be managed and operated in accordance with a written management system which will include the following measures: • The emissions abatement plant for the reception building will be	**Low**

Receptor	Source	Harm	Pathway	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
What is at risk? What do I wish to protect?	What is the agent or process with potential to cause harm?	What are the harmful consequences if things go wrong?	How might the receptor come into contact with the source?	How likely is this contact?	How severe will the consequences be if this occurs?	What is the overall magnitude of the risk?	On what did I base my judgement?	How can I best manage the risk to reduce the magnitude?	What is the magnitude of the risk after management?
							a wastewater treatment works, where staff are present on site for up to 7 hours per day. The closest residential receptor is approximately 100m southwest of the site. There is the potential for bioaerosol release when waste is received, from straw/silage and during storage of digestate. Straw is treated using a dedicated enclosed piece of equipment (I-GRIND) within the silage clamp, the straw is moistened when processed. The prepared extruded straw is fed into the large external feed hopper throughout the day as its produced. Silage is stored covered and within the silage clamps. Liquid feedstocks are stored within a covered tank; displaced air is captured and treated via the odour control system. Manures are stored and treated within an enclosed building within a dedicated area with air handling and emissions abatement. Separated Digestate liquor is stored in Separated liquid storage	inspected and maintained in accordance with the management of premise, equipment and machinery procedure and recorded on the CMMS system, Limble. Emissions monitoring will be carried out as per permit requirements. Silage is managed in accordance with the Feedstock Pre-acceptance, acceptance and rejection procedure **(ACP 009)** and the Work Instruction: Feedstock Management & Loading **(WI 009b)**. Process monitoring to ensure the production of a stable digestate with low residual biogas in accordance with the Process & Product Monitoring & Management Procedure **(ACP 011)** and Work Instruction: Process Monitoring **(WI 011e)**. Management systems to ensure that digestate fibre doesn't accumulate on site; Digestate Management Plan **(ACD 011d)** and Work Instruction: Digestate Handling **(WI 011f).**	

Receptor	Source	Harm	Pathway	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
What is at risk? What do I wish to protect?	What is the agent or process with potential to cause harm?	What are the harmful consequences if things go wrong?	How might the receptor come into contact with the source?	How likely is this contact?	How severe will the consequences be if this occurs?	What is the overall magnitude of the risk?	On what did I base my judgement?	How can I best manage the risk to reduce the magnitude?	What is the magnitude of the risk after management?
							tank (inner tank of Digester 5) which is covered and the roof void is connected to the main gas line. Extended retention times (over 54 days) reduces residual biogas potential to produce stable digestate. Effective process monitoring further ensures emissions are minimised. Digestate fibre will be stored within the Separation Hall of the MRB which benefits from odour abatement and is moved off-site continuously. A Site Specific Bioaerosol Risk Assessment[1] (SSBRA) has been carried out and indicates that residual risk from all sources was determined as low or very low with no further control measures (other than those detailed in the assessment) required to reduce potential impacts at sensitive receptors.		
1.3 Local human population	Odour	Nuisance, loss of amenity	Air transport then inhalation.	Medium	Medium	**Medium**	There is the 2 Sisters Food Group permitted abattoir adjacent to the site to the south. Staff are present on site 24 hours a day seven	An Odour Management Plan (**ACD 014c**) is in place. Crops are ensiled on site and remain covered with the open face of the clamp minimised in accordance with	**Low**

[1] Reference 10945r1 - SSBRA - Devon Anaerobic Digestion Plant, Cullompton,

Receptor	Source	Harm	Pathway	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
What is at risk? What do I wish to protect?	What is the agent or process with potential to cause harm?	What are the harmful consequences if things go wrong?	How might the receptor come into contact with the source?	How likely is this contact?	How severe will the consequences be if this occurs?	What is the overall magnitude of the risk?	On what did I base my judgement?	How can I best manage the risk to reduce the magnitude?	What is the magnitude of the risk after management?
							days a week but predominantly within the building. To the north of the site is a wastewater treatment works, where staff are present on site for up to 7 hours per day. Both the abattoir and wastewater treatment works are not deemed sensitive receptors from an odour perspective. The closest sensitive receptor is approximately 100m southwest of the site. Local residents are often sensitive to odour. Odour can result from: • a wide range of different waste types, particularly when the site receives it. • The release of biogas • digestate Manures are stored and treated within an enclosed building (MRB) within a dedicated area with air handling and emissions abatement. Liquid feedstocks are stored within two covered tanks; displaced air is captured and treated via the odour control system of the MRB.	the Feedstock pre-acceptance, acceptance and rejection procedure **(ACP 009)** and Feedstock Management & Loading Work Instruction **(WI 009b)**. The residence time of waste feedstocks will be minimised as far is possible, with older waste being fed prior to newer. Feedstock acceptance and loading is undertaken in accordance with the Feedstock Pre-acceptance, acceptance and rejection procedure **(ACP 009)** and Feedstock Management & Loading Work Instruction **(WI 009b)**. The emissions abatement plant for the reception building will be inspected and maintained in accordance with the management of premise, equipment and machinery procedure and recorded on the CMMS system, Limble. Minimisation of biogas loss as per 1.1 above. Control of emissions from digestate storage as per 1.2 above. To reduce emissions to air and to improve the overall environmental performance (BAT 38), process monitoring will be undertaken and digestate samples will be analysed periodically to verify that process	

Receptor	Source	Harm	Pathway	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
What is at risk? What do I wish to protect?	What is the agent or process with potential to cause harm?	What are the harmful consequences if things go wrong?	How might the receptor come into contact with the source?	How likely is this contact?	How severe will the consequences be if this occurs?	What is the overall magnitude of the risk?	On what did I base my judgement?	How can I best manage the risk to reduce the magnitude?	What is the magnitude of the risk after management?
							Separated Digestate liquor is stored in Separated liquid storage tank (inner tank of Digester 5) which is covered and the roof void is connected to the main gas line. Extended retention times (over 54 days) reduces residual biogas potential to produce stable digestate. Effective process monitoring further ensures emissions are minimised. Digestate fibre will be within the Separation Hall (part of the MRB which benefits from odour abatement). The digesters and ancillary tanks are all covered and gas tight. The AQIA has shown that predicted odour concentrations are well below the 3ouE/m³ adopted standard for predicted impacts. Therefore, odour impacts due to site should not be a constraint to operation.	controls have been effective in producing stable digestates; Process & Product Monitoring & Management Procedure **(ACP 011)**	
1.4 Local human population.	Noise and vibration.	Nuisance, loss of amenity, loss of sleep.	Noise through the air and vibration through the ground.	Medium	Medium	**Medium**	Local residents can be sensitive to noise and vibration. There is medium potential for exposure. There is a permitted abattoir adjacent to the site to the south. Staff are present on site 24 hours	The Environment Agency's (EA) Noise Advisory Tool has been completed for the site which concluded a Noise Impact Assessment (NIA) be undertaken. The Noise Impact	**Low**

Receptor	Source	Harm	Pathway	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
What is at risk? What do I wish to protect?	What is the agent or process with potential to cause harm?	What are the harmful consequences if things go wrong?	How might the receptor come into contact with the source?	How likely is this contact?	How severe will the consequences be if this occurs?	What is the overall magnitude of the risk?	On what did I base my judgement?	How can I best manage the risk to reduce the magnitude?	What is the magnitude of the risk after management?
							a day seven days a week but predominantly within the building. To the north of the site is a wastewater treatment works, where staff are present on site for up to 7 hours per day. The closest residential receptor is approximately 100m southwest of the site. Although the AD system will operate continuously, the normal operational hours for vehicle movements are 0700 to 1900, Monday to Sunday inclusive, avoiding nighttime vehicle movements. The planning permission restricts deliveries or removal of digestate between 2000 and 0700 hours, with maximum 35 HGV movements per day, (averaged over 12 months.)	Assessment (NIA)[2] concludes that operational noise impacts will be low, with a maximum BS 4142 rating level difference of +4 dB under a conservative worst-case night-time operational scenario. As such, a Noise Management Plan is not required, and operational noise is not expected to result in significant impacts at sensitive receptors. Noise and vibration are minimised so as not to cause nuisance. All critical plant and equipment (including fans, extraction equipment, and condensate sumps) shall be maintained to ensure proper operation and reduce the likelihood of noise resulting from inadequate maintenance, any issues will be recorded on Limble. Emergency flare use will be minimised with operating hours recorded on SCADA.	
2.1 Local human population, livestock and	Gaining unauthorised access to	There is a risk of direct physical contact with all	Direct physical contact.	Low	Low	**Low**	Direct physical contact is minimised by the activity being carried out within enclosed tanks,	Activities are managed and operated in accordance with a management system which includes site security measures (Section 3.7, EMS Manual	**Low**

[2] Reference: 26-188 Devon AD Plant Cullompton – NIA Issue (20 July, 2026)

Receptor	Source	Harm	Pathway	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
What is at risk? What do I wish to protect?	**What is the agent or process with potential to cause harm?**	**What are the harmful consequences if things go wrong?**	**How might the receptor come into contact with the source?**	**How likely is this contact?**	**How severe will the consequences be if this occurs?**	**What is the overall magnitude of the risk?**	**On what did I base my judgement?**	**How can I best manage the risk to reduce the magnitude?**	**What is the magnitude of the risk after management?**
wildlife after gaining unauthorised access to the installation.	the installation.	on-site hazards such as wastes, machinery and vehicles. There is a risk of causing injury to humans or livestock.					pipework, and digesters, so a low magnitude risk is estimated.	**(DVGP-ETL-EMS-MAN-P1)** to prevent unauthorised access. The site will benefit from: • 2.4m high anti-climb mesh fencing installed around the core site, in addition to a safety fence around the Process Water lagoon. • Double leaf vehicle access gates and a pedestrian access gate. • CCTV installed and operational remote cameras. The site will be manned from 0700 to 1900, and the CCTV will be remotely monitored out of hours. • The main gate will be locked when the site is not manned. • Any security breaches will be reported to Management. The site specific DSEAR risk assessment will cover unauthorised access to site. Maintenance workers and contractors will only be permitted on site if suitably qualified for planned tasks and in accordance with Permit to Work requirements if applicable.	
3.1 Local human population and	Arson and / or vandalism causing the release of polluting	Respiratory irritation, illness and nuisance to local	Air transport of smoke. Spillages and contaminated firewater by	Low	Medium	**Medium**	The consequences of an incident whereby substances are released to air, water or land may be serious, affecting both human	As above. An Accident Management Plan Manual **(ACD 008f)** forms part of management system (includes fire, biogas release	**Low**

Receptor	Source	Harm	Pathway	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
What is at risk? What do I wish to protect?	**What is the agent or process with potential to cause harm?**	**What are the harmful consequences if things go wrong?**	**How might the receptor come into contact with the source?**	**How likely is this contact?**	**How severe will the consequences be if this occurs?**	**What is the overall magnitude of the risk?**	**On what did I base my judgement?**	**How can I best manage the risk to reduce the magnitude?**	**What is the magnitude of the risk after management?**
local environment.	materials to air (smoke or fumes), water or land.	population. Injury to staff, fire fighters or arsonists/ vandals. Pollution of water or land.	direct run-off from site and via surface water drains and ditches.				health and the environment, through loss of containment. The tanks containing polluting substances all sit within the secondary containment system for the site or are integrally bunded. Biogas is flammable, risk of direct physical contact is reduced by activities being carried out within enclosed systems.	and spillages) which is built upon within the Emergency Scenarios Document (**ACD 008b**). The site specific DSEAR risk assessment will identify all areas of risk. Fire control measures and procedures will be set out in the DSEAR plan and will be communicated to the local fire service. A HAZOP study will be produced, which will identify operational hazards and their appropriate controls. Any controls, along with manufacturers guidance will inform the schedule of planned maintenance to be in place and managed in accordance with the management of premise, equipment and machinery procedure and recorded on the CMMS system, Limble. Warning signs including ATEX zone signage will be clearly displayed, and operatives will be fully trained in gas alarm procedures. All visitors will be accompanied by trained staff. LDAR programme will be in place to mitigate and to prevent fugitive emissions of biogas. Contingency measures will be considered in the event of loss of plant and are detailed in the Accident	

Receptor	Source	Harm	Pathway	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
What is at risk? What do I wish to protect?	**What is the agent or process with potential to cause harm?**	**What are the harmful consequences if things go wrong?**	**How might the receptor come into contact with the source?**	**How likely is this contact?**	**How severe will the consequences be if this occurs?**	**What is the overall magnitude of the risk?**	**On what did I base my judgement?**	**How can I best manage the risk to reduce the magnitude?**	**What is the magnitude of the risk after management?**
								Management Plan Manual **(ACD 008f).** This will include contingencies for waste diversion and digestate storage in the absence of critical plant.	
3.2 Local human population and local environment.	Accidental explosion of biogas risks causing fire and smoke to travel through the air.	Respiratory irritation, illness and nuisance to local population. Injury to staff, fire fighters or arsonists/ vandals. Pollution of water or land.	Air transport. Spillages and digestate direct run-off from site and via surface water drains and ditches.	Low	Medium	**Medium**	The risk of occurrence is reduced by effective management systems. Biogas is flammable, and the consequences are likely to be serious, including risk to the safety and wellbeing of those working or in close proximity to the site and loss of containment may be detrimental to the environment.	Risks will be managed as per 2.1 and 3.1. The management system will include the risk management measures specified in the HAZOP **and** DSEAR risk assessment including planned maintenance schedules in accordance with the management of premise, equipment and machinery procedure and recorded on the CMMS system, Limble. An Accident Management Plan Manual **(ACD 008f)** forms part of management system (includes fire, biogas release and spillages) which is built upon within the Emergency Scenarios Document (**ACD 008b**). A Training matrix **(ACD 005g)** and Overarching Skills and Competency form part of the EMS and include training for emergency situations and incident preparedness, at prescribed training intervals. Details of the site's secondary containment, including tank bunding design is included within Section 6.2 of	**Low**

Receptor	Source	Harm	Pathway	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
What is at risk? What do I wish to protect?	**What is the agent or process with potential to cause harm?**	**What are the harmful consequences if things go wrong?**	**How might the receptor come into contact with the source?**	**How likely is this contact?**	**How severe will the consequences be if this occurs?**	**What is the overall magnitude of the risk?**	**On what did I base my judgement?**	**How can I best manage the risk to reduce the magnitude?**	**What is the magnitude of the risk after management?**
								the EMS Manual **(DVGP-ETL-EMS-MAN-P1).**	
3.3 Local human population and local environment.	Accidental fire causing the release of polluting materials to air (smoke or fumes), water or land.	Respiratory irritation, illness and nuisance to local population. Injury to staff or fire fighters. Pollution of water or land.	As above.	Low	Medium	**Medium**	The risk is reduced by control measures in place and an effective management system.	This risk is managed in the same way as risks 2.1, 3.1 and 3.2. A Lightning Risk Assessment will be undertaken to determine the requirement of any lightning conduction equipment. Equipment identified as necessary by the risk assessment will be installed. Activated carbon and other combustible materials will be stored safely and in accordance with any manufacturers' recommendations.	**Low**
4. Risk of land bank contamination	Plastic in digestate and chemicals of concern contaminating the land bank	Risk of long-term impact on soil and crop quality.	Direct application to soils through land spreading, uptake of contaminants from crops.	Low	Low	**Low**	There is a risk of impact on soil and crop quality. However, slurry, non-hazardous liquid waste and manures should not contain plastic.	Feedstock materials are unlikely to contain plastics due to nature and origin. Feedstocks are to be visually inspected prior to use in accordance with the Feedstock Pre-acceptance, Acceptance and Rejection Procedure **(ACP 009)** and Work Instruction:	

Receptor	Source	Harm	Pathway	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
What is at risk? What do I wish to protect?	**What is the agent or process with potential to cause harm?**	**What are the harmful consequences if things go wrong?**	**How might the receptor come into contact with the source?**	**How likely is this contact?**	**How severe will the consequences be if this occurs?**	**What is the overall magnitude of the risk?**	**On what did I base my judgement?**	**How can I best manage the risk to reduce the magnitude?**	**What is the magnitude of the risk after management?**
	Operators land spreading contaminated digestate.							Feedstock Management & Loading **(WI 009b)**. Visible plastics will be removed prior to processing and where not possible, the feedstock will be rejected. Digestate liquor and fibre will be routinely tested as per the Work Instruction: Digestate Sampling and Analysis **(WI 011c)** to ensure it is suitable for application to land, and it is applied at an appropriate rate (Digestate Management Plan **(ACD 011d)**). Quarterly waste returns will include the details of any recovered outputs.	
5.1 All surface waters close to and downstream of site.	Spillage of liquids, including oil and digestate.	Acute effects: fish kill. Water supply pollution	Direct run-off from site across ground surface, via surface water drains, ditches etc.	Medium	Medium	**Medium**	There is the potential for spillage from containment infrastructure holding polluting substances on site e.g. Digesters, liquid feedstock tanks and digestate and other polluting substances such as oil from storage vessels on site. The site is within the Clyst and Culm Catchment and there is a watercourse 4.5m northwest of the site boundary (Spratford stream) which feeds into the Lower Culm Water Body. There is a sealed drainage system in place with any run-off	Construction Quality Assurance validation will be undertaken on all anaerobic digestion tanks and ancillary tanks where appropriate and reports will be retained. In the case of abnormal excess water levels due to an extreme rainfall event clean water from the secondary containment system may be released to the wider environment following pre-determined checks as per the Discharge of Flood Water Procedure within the Emergency Scenarios document (**ACD 008b).** All staff will be trained and conversant with the site's Accident Management Plan Manual **(ACD 008f),** which is built	**Medium**

Receptor	Source	Harm	Pathway	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
What is at risk? What do I wish to protect?	What is the agent or process with potential to cause harm?	What are the harmful consequences if things go wrong?	How might the receptor come into contact with the source?	How likely is this contact?	How severe will the consequences be if this occurs?	What is the overall magnitude of the risk?	On what did I base my judgement?	How can I best manage the risk to reduce the magnitude?	What is the magnitude of the risk after management?
							captured and retained within the AD process as a feedstock or process water. There will be a documented drainage plan for the site. Penstocks are incorporated within the clean surface water drainage system to enable runoff to be isolated in the event of an accidental spill prior to discharge from site. All storage areas and containment are designed and constructed to the relevant industry standard (SSAFO for silage clamps & CIRIA 736 for primary and secondary containment). Manure is stored on concrete surfacing within the manure reception building with sealed drainage. Run-off is restricted to clean surface water and under normal operating conditions, there will be no point source emissions. Digestate is stored within sealed concrete tanks within the containment bund. Ancillary tanks: The liquid feedstock tanks are constructed	upon within the Emergency Scenarios Document (**ACD 008b**).	

Receptor	Source	Harm	Pathway	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
What is at risk? What do I wish to protect?	**What is the agent or process with potential to cause harm?**	**What are the harmful consequences if things go wrong?**	**How might the receptor come into contact with the source?**	**How likely is this contact?**	**How severe will the consequences be if this occurs?**	**What is the overall magnitude of the risk?**	**On what did I base my judgement?**	**How can I best manage the risk to reduce the magnitude?**	**What is the magnitude of the risk after management?**
							from glass-lined steel, whereas the process water tank is of concrete construction. Both are located within the secondary containment system. Oil storage tanks are to be provided with the CHP Engines and are bunded within the container.		
5.2 All surface waters close to and downstream of site.	As above	Chronic effects: deterioration of water quality.	As above. Indirect run-off via the soil layer.	Medium	Medium	**Medium**	As above	As above. All storage areas and containment are designed and constructed to the relevant industry standard (SSAFO for silage clamps & CIRIA 736 for primary and secondary containment). A validation report for all critical infrastructure (primary and secondary containment) will be provided prior to commencing operation to ensure all elements have been designed and built to the relevant standard. An inspection, maintenance and repair schedule of the facility's critical infrastructure, including the impermeable surfacing and drainage system will be implemented in accordance with the management of premise, equipment and machinery procedure and Work Instruction: Secondary Containment Checking & Emptying **(WI 011f).**	**Medium**

Receptor	Source	Harm	Pathway	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
What is at risk? What do I wish to protect?	**What is the agent or process with potential to cause harm?**	**What are the harmful consequences if things go wrong?**	**How might the receptor come into contact with the source?**	**How likely is this contact?**	**How severe will the consequences be if this occurs?**	**What is the overall magnitude of the risk?**	**On what did I base my judgement?**	**How can I best manage the risk to reduce the magnitude?**	**What is the magnitude of the risk after management?**
								The Process Water lagoon will be inspected daily and recorded on Limble and a freeboard of 750mm maintained within each at all times. The transfer of digestate will be supervised and undertaken in accordance with the Work Instruction: Digestate Handling **(WI 011f).**	
6. Abstraction from watercourse downstream of facility (for agricultural or potable use).	As above	Acute effects, closure of abstraction intakes.	Direct run-off from site across ground surface, via surface water drains, ditches etc. then abstraction.	Medium	Medium	**Medium**	As above	This risk is managed in the same way as risks 5.1 and 5.2 above. Impermeable surfacing is in place to prevent potential pathways for any pollution, spills for example, to groundwater. Visual integrity checks of all primary containment will be undertaken daily and the digesters are subject to integrity testing every 5 years. All inspections are recorded on Limble. Leak detection systems will be checked daily and recorded on Limble.	**Medium**
7. Groundwater	As above	Chronic effects: contamination of groundwater, requiring treatment of water or	Transport through soil/groundwater then extraction at borehole.	Medium	Medium	**Medium**	As above The site is no longer located within a Groundwater Source Protection Zone, or within 50 metres of any well, spring or borehole used for the supply of water for human consumption.	Risk management is as set out in 5.1, 5.2 and 6.1. The primary and secondary containment infrastructure is checked daily and recorded on Limble. The secondary containment sump is inspected daily in accordance	**Low**

Receptor	Source	Harm	Pathway	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
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		closure of borehole.					Dirty areas benefit from an impermeable concrete surface with sealed drainage back to the AD process. Penstocks are incorporated within the clean surface water drainage system to enable runoff to be isolated in the event of an accidental spill prior to discharge from site.	with the Work Instruction for Secondary Containment Checking & Emptying **(WI 011f).** Process parameters, such as volumes within tanks and digestate stores will be monitored daily by site operatives and recorded on Limble. Underground pipework has been avoided except for drainage pipework The only underground tank is the Cellular Crate System which stores clean water prior to use as process water or discharge to surface water. Leak detection systems will be checked daily and recorded on Limble. Leak detection inspection will be carried out as per **(ACD 014h).**	
8. Risk of diffuse emissions from polluting and greenhouse gases such as methane and ammonia	Fugitive releases of volatile organic compounds such as methane from storage of gas bags, lagoons, tanks, vents	Acute effects and long-term effects on air quality, longer term effects of volatile organic compound releases and adding to global climate change	Airborne fugitive emissions from site	Medium	Medium	**Medium**	Biogas contains high levels of methane and carbon dioxide. The digesters and ancillary tanks are all covered and gas tight. Digestate and digestate storage may release ammonia which can impact air quality. Burning biogas and biomethane can produce harmful pollutants.	There will be controls in place to mitigate the risk of diffuse emissions from the site which include: • The emissions abatement plant for the reception building will be inspected and maintained in accordance with the management of premise, equipment and machinery procedure and recorded on the CMMS system, Limble.	**Low**

Receptor	Source	Harm	Pathway	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
What is at risk? What do I wish to protect?	What is the agent or process with potential to cause harm?	What are the harmful consequences if things go wrong?	How might the receptor come into contact with the source?	How likely is this contact?	How severe will the consequences be if this occurs?	What is the overall magnitude of the risk?	On what did I base my judgement?	How can I best manage the risk to reduce the magnitude?	What is the magnitude of the risk after management?
	and pipe work.						Manures are stored and treated within an enclosed reception building with air handling and emissions abatement. Separated Digestate liquor is stored in Separated liquid storage tank (inner tank of Digester 5) which is covered and the roof void is connected to the main gas line. Extended retention times (over 54 days) reduces residual biogas potential to produce stable digestate. Effective process monitoring further ensures emissions are minimised.	• Venting to air from digester tanks will be minimised by the correct fitting and configuration of PVRVs in accordance with the management of premise, equipment and machinery procedure and recorded on the CMMS system, Limble. • Process monitoring of the AD plant will minimise excess biogas production and the likelihood of an overpressure event – Process & Product Monitoring & Management Procedure **(ACP011**) and Work Instruction: Process Monitoring (**WI 011e**). • The emergency flare has a set point lower than that of the PVRVs minimising emissions of unburnt biogas. The operation of the PVRVs will be recorded as an abnormal event. • Gas pressures will be continually measured and monitored within SCADA. • LDAR programme will be actioned to mitigate and prevent fugitive emissions. • The Gas holders will be maintained as per manufacturer's recommendations and in accordance with the management of premise, equipment and	

Receptor	Source	Harm	Pathway	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
What is at risk? What do I wish to protect?	**What is the agent or process with potential to cause harm?**	**What are the harmful consequences if things go wrong?**	**How might the receptor come into contact with the source?**	**How likely is this contact?**	**How severe will the consequences be if this occurs?**	**What is the overall magnitude of the risk?**	**On what did I base my judgement?**	**How can I best manage the risk to reduce the magnitude?**	**What is the magnitude of the risk after management?**
								machinery procedure and recorded on the CMMS system, Limble.	
9. Protected Sites, including National Parks and Areas of Outstanding Natural Beauty, Marine Conservation Zones, Sites of Special Scientific Interest, Special Areas of Conservation, Special Protection Areas & Ramsar wetland sites	Any, but principally NOx and NH_3.	Harm to protected sites: - contamination -nutrient enrichment -leachate - surface water run-off -smothering -disturbance -predation from pests and vermin	Any	Low	Low	**Low**	Anaerobic digestion operations may cause harm to and deterioration of nature conservation sites. The site is located: >500m from any European site (defined within Regulation 8 of the Conservation of Habitats and Species Regulations 2017) or a Site of Special Scientific Interest. > 250 metres of the presence of great crested newts, and >50 metres of a Local Nature Reserve, Local Wildlife Site, Ancient Woodland, Scheduled Monument. There are several areas of Priority Habitat Inventory Coastal and Floodplain grazing marsh depicted within close proximity (<50m) to the site, specifically an area designated as Priority Habitat (PHI) Coastal and Floodplain grazing marsh adjacent to the west of the AD site area and a further PHI	Control measures as detailed under 1.1, 3.1, 3.2, 3.3, 5.1, 5.2, 6 and 8 above. The emissions abatement plant for the reception building will be inspected and maintained in accordance with the management of premise, equipment and machinery procedure and recorded on the CMMS system, Limble. An ammonia reduction plan will be implemented where necessary. A fugitive emission plan will be implemented where necessary.	**Low**

Receptor	Source	Harm	Pathway	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
What is at risk? What do I wish to protect?	What is the agent or process with potential to cause harm?	What are the harmful consequences if things go wrong?	How might the receptor come into contact with the source?	How likely is this contact?	How severe will the consequences be if this occurs?	What is the overall magnitude of the risk?	On what did I base my judgement?	How can I best manage the risk to reduce the magnitude?	What is the magnitude of the risk after management?
							Deciduous woodland area approximately 460m northeast of the site. There will be no composting of digestate fibre on site. Emission limits for stack gases are specified within the permit. Manure is handled in a dedicated building with air handling and emissions abatement including ammonia abatement. All tanks are covered and the digestate liquor is stored in a covered tank, extended retention times (over 54 days) reduces residual biogas potential to produce stable digestate. Effective process monitoring further ensures emissions are minimised. Digestate fibre will be stored in a concrete bunker within the separation hall which benefits from odour abatement and is moved off-site continuously. Air quality impacts from the operation on ecological receptors have been predicted through an AQIA which concluded that the long and short-term impacts at all		

Receptor	Source	Harm	Pathway	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
What is at risk? What do I wish to protect?	What is the agent or process with potential to cause harm?	What are the harmful consequences if things go wrong?	How might the receptor come into contact with the source?	How likely is this contact?	How severe will the consequences be if this occurs?	What is the overall magnitude of the risk?	On what did I base my judgement?	How can I best manage the risk to reduce the magnitude?	What is the magnitude of the risk after management?
							receptors can be screen out as not significant.		

Magnitude of Risk	Consequence		
Probability of Exposure	Low	Medium	High
Low	Very Low	Low	Medium
Medium	Low	Medium	Medium
High	Medium	Medium	High