

Review of an Environmental Permit for an Installation subject to Chapter II of the Industrial Emissions Directive under the Environmental Permitting (England & Wales) Regulations 2016 (as amended)

Decision document recording our decision-making process following review of a permit

The Permit number is: EPR/GP3793FY
The Operator is: Eco Sustainable Solutions Limited
The Installation is: Parley Waste Management Facility
This Variation Notice number is: EPR/GP3793FY/V018

What this document is about

Article 21(3) of the Industrial Emissions Directive (IED) requires the Environment Agency to review conditions in permits that it has issued and to ensure that the permit delivers compliance with relevant standards, within four years of the publication by the European Commission of updated decisions on BAT Conclusions.

We have reviewed the permit for this installation against the revised BAT Conclusions for the Waste Treatment industry sector published on 10 August 2018 in the Official Journal of the European Union. In this decision document, we set out the reasoning for the consolidated variation notice that we have issued.

It explains how we have reviewed and considered the techniques used by the Operator in the operation and control of the plant and activities of the installation. This review has been undertaken with reference to the decision made by the European Commission establishing Best Available Techniques (BAT) Conclusions (BATc) for Waste Treatment as detailed in document reference C(2018) 5070. It is our record of our decision-making process and shows how we have taken into account all relevant factors in reaching our position. It also provides a justification for the inclusion of any specific conditions in the permit that are in addition to those included in our generic permit template.

As well as considering the review of the operating techniques used by the Operator for the operation of the plant and activities of the installation, the consolidated variation notice takes into account and brings together in a single document all previous variations that relate to the original permit issue. Where this has not already been done, it also modernises the entire permit to reflect the conditions contained in our current generic permit template.

The introduction of new template conditions makes the Permit consistent with our current general approach and with other permits issued to Installations in this sector. Although the wording of some conditions has changed, while others have been deleted because of the new regulatory approach, it does not reduce the level of environmental

protection achieved by the Permit in any way. In this document, we therefore address only our determination of substantive issues relating to the new BAT Conclusions.

We try to explain our decision as accurately, comprehensively and plainly as possible. Achieving all three objectives is not always easy, and we would welcome any feedback as to how we might improve our decision documents in future.

How this document is structured

1. Our decision
2. How we reached our decision
3. The legal framework
4. Annex 1 – Review of operating techniques within the Installation against BAT Conclusions.
5. Annex 2 – Review and assessment of changes that are not part of the BAT Conclusions derived permit review
6. Annex 3 – Improvement Conditions
7. Annex 4 – Pre-operational Condition

1 Our decision

We have decided to issue the Variation Notice to the Operator. This will allow the Operator to continue to operate the Installation, subject to the conditions in the Consolidated Variation Notice that updates the whole permit.

We consider that, in reaching our decision, we have taken into account all relevant considerations and legal requirements and that the varied permit will ensure that a high level of protection is provided for the environment and human health.

The Consolidated Variation Notice contains many conditions taken from our standard Environmental Permit template including the relevant annexes. We developed these conditions in consultation with industry, having regard to the legal requirements of the Environmental Permitting Regulations and other relevant legislation. This document does not therefore include an explanation for these standard conditions. Where they are included in the Notice, we have considered the techniques identified by the operator for the operation of their installation, and have accepted that the details are sufficient and satisfactory to make those standard conditions appropriate. This document does, however, provide an explanation of our use of “tailor-made” or installation-specific conditions, or where our Permit template provides two or more options.

2 How we reached our decision

2.1 Requesting information to demonstrate compliance with BAT Conclusion techniques

We issued a Notice under Regulation 61(1) of the Environmental Permitting (England and Wales) Regulations 2016 (a Regulation 61 Notice) on 20/01/2020 requiring the Operator to provide information to demonstrate where the operation of their installation currently meets, or how it will subsequently meet, the revised standards described in the relevant BAT Conclusions document.

The Notice required that where the revised standards are not currently met, the operator should provide information that:

- describes the techniques that will be implemented before 17 August 2022, which will then ensure that operations meet the revised standards, or
- justifies why standards will not be met by 17 August 2022, and confirmation of the date when the operation of those processes will cease within the Installation or an explanation of why the revised BAT standards are not applicable to those processes, or
- justifies why an alternative technique will achieve the same level of environmental protection equivalent to the revised BAT standards described in the BAT Conclusions.

Where the Operator proposed that they were not intending to meet a BAT standard that also included a BAT Associated Emission Level (BAT-AEL) described in the BAT Conclusions Document, the Regulation 61 Notice required that the Operator make a formal request for derogation from compliance with that BAT-AEL (as provisioned by Article 15(4) of IED). In this circumstance, the Notice identified that any such request for derogation must be supported and justified by sufficient technical and commercial information that would enable us to determine acceptability of the derogation request.

The Regulation 61 Notice response from the Operator was received on 20/08/2020.

We considered it was in the correct form and contained sufficient information for us to begin our determination of the permit review.

The Operator made no claim for commercial confidentiality. We have not received any information in relation to the Regulation 61 Notice response that appears to be confidential in relation to any party.

2.2 Review of our own information in respect to the capability of the Installation to meet revised standards included in the BAT Conclusions document

Based on our records and previous experience in the regulation of the installation we consider that the Operator will be able to comply with the techniques and standards described in the BAT Conclusions other than for those techniques and requirements described in BAT Conclusion 1, 2, 3, 12, 13 and 19. In relation to these BAT Conclusions, we do not fully agree with the Operator in respect of their current stated capability as recorded in their response to the Regulation 61 Notice. We have therefore included Improvement Conditions IC8 to IC13 in the Consolidated Variation Notice to ensure that the requirements of the BAT Conclusions are delivered before 17 August 2022. In addition, as the anaerobic digestion facility is not yet operational, we have also included preoperational condition PO11 to ensure a complete BAT assessment is undertaken prior to commencement of the activity.

3 The legal framework

The Consolidated Variation Notice will be issued under Regulations 18 and 20 of the EPR. The Environmental Permitting regime is a legal vehicle which delivers most of the relevant legal requirements for activities falling within its scope. In particular, the regulated facility is:

- an *installation* as described by the IED;
- subject to aspects of other relevant legislation which also have to be addressed.

We consider that, in issuing the Consolidated Variation Notice, it will ensure that the operation of the Installation complies with all relevant legal requirements and that a high level of protection will be delivered for the environment and human health.

We explain how we have addressed specific statutory requirements more fully in the rest of this document.

Annex 1: decision checklist regarding relevant BAT Conclusions

BAT Conclusions for Waste Treatment were published by the European Commission on 10 August 2018. There are 53 BAT Conclusions. This annex provides a record of decisions made in relation to each relevant BAT Conclusion applicable to the installation. This annex should be read in conjunction with the Consolidated Variation Notice.

The overall status of compliance with the BAT conclusion is indicated in the table as:

NA – Not Applicable

CC – Currently Compliant

FC – Compliant in the future (within 4 years of publication of BAT conclusions)

NC – Not Compliant

BAT Conclusion No	Summary of BAT Conclusion requirement for Waste Treatment	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
1	<p>In order to improve the overall environmental performance, BAT is to implement and adhere to an environmental management system (EMS) that incorporates all of the following features:</p> <ul style="list-style-type: none"> I. commitment of the management, including senior management; II. definition, by the management, of an environmental policy that includes the continuous improvement of the environmental performance of the installation; III. planning and establishing the necessary procedures, objectives and targets, in conjunction with financial planning and investment. IV. implementation of procedures paying particular attention to: <ul style="list-style-type: none"> (a) structure and responsibility, (b) recruitment, training, awareness and competence, (c) communication, (d) employee involvement, (e) documentation, (f) effective process control, (g) maintenance programmes, (h) emergency preparedness and response, (i) safeguarding compliance with environmental legislation; 	FC	<p><u>Environment Agency assessment</u></p> <p>The operator has provided information to support compliance with BATc 1. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 1 except for 1 X odour management plan (see BATc 12 below) and 1 XI waste stream inventory (see BATc 3 below).</p> <p>We consider that the operator will be future compliant with BATc 1. Improvement condition IC8 has been included in the permit to achieve compliance (see Annex 3).</p>

BAT Conclusion No	Summary of BAT Conclusion requirement for Waste Treatment	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
	<p>V. checking performance and taking corrective action, paying particular attention to:</p> <ul style="list-style-type: none"> (a) monitoring and measurement (see also the JRC Reference Report on Monitoring of emissions to air and water from IED installations – ROM), (b) corrective and preventive action, recruitment, training, awareness and competence, (c) maintenance of records, (d) independent (where practicable) internal or external auditing in order to determine whether or not the EMS conforms to planned arrangements and has been properly implemented and maintained <p>VI. review, by senior management, of the EMS and its continuing suitability, adequacy and effectiveness;</p> <p>VII. following the development of cleaner technologies;</p> <p>VIII. consideration for the environmental impacts from the eventual decommissioning of the plant at the stage of designing a new plant, and throughout its operating life;</p> <p>IX. application of sectoral benchmarking on a regular basis;</p> <p>X. waste stream management (see BAT 2);</p> <p>XI. an inventory of waste water and waste gas streams (see BAT 3);</p> <p>XII. residues management plan (see description in Section 6.5);</p>		

BAT Conclusion No	Summary of BAT Conclusion requirement for Waste Treatment	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
	XIII. accident management plan (see description in Section 6.5); XIV. odour management plan (see BAT 12) XV. noise and vibration management plan (see BAT 17).		
2	In order to improve the overall environmental performance of the plant, BAT is to use all of the techniques listed below: (a) Set up and implement waste characterisation and pre-acceptance procedures; (b) Set up and implement waste acceptance procedures; (c) Set up and implement a waste tracking system and inventory; (d) Set up and implement an output quality management system; (e) Ensure waste segregation; (f) Ensure waste compatibility prior to mixing or blending of waste; (g) Sort incoming solid waste	FC	<p><u>Environment Agency assessment</u></p> <p>The operator has provided information to support compliance with BATc 2. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 2 except for 2(a) & (b).</p> <p>The current permit contains EWC 02 03 01 sludges from washing, cleaning, peeling, centrifuging and separation for the composting activity, which is not in our current biowaste composting templates. It also contains the following EWC codes for the AD facility which are not in our current biowaste anaerobic digestion templates:</p> <ul style="list-style-type: none"> • 03 03 02 • 03 03 10 • 04 01 01

BAT Conclusion No	Summary of BAT Conclusion requirement for Waste Treatment	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
			<ul style="list-style-type: none"> • 04 01 05 • 04 01 07 • 19 05 01 • 19 05 02 • 19 05 03 • 20 01 38 <p>The operator needs to undertake waste characterisation for these waste types if they wish to carry on accepting these waste types at the site.</p> <p>In addition the operator has identified the following with respect to BATc 2(b) “The current Waste Acceptance Procedure doesn’t specify waste acceptance criteria for the various permitted waste streams. This procedure is currently under review as part of the current business improvement process. This is a deviation from BAT.”</p> <p>We consider that the operator will be future compliant with BATc 2. Improvement condition</p>

BAT Conclusion No	Summary of BAT Conclusion requirement for Waste Treatment	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
			IC8 has been included in the permit to achieve compliance (see Annex 3).
3	<p>In order to facilitate the reduction of emissions to water and air, BAT is to establish and to maintain an inventory of waste water and waste gas streams, as part of the environmental management system (see BAT 1), that incorporates all of the following features:</p> <p>(i) information about the characteristics of the waste to be treated and the waste treatment processes, including:</p> <p>(a) simplified process flow sheets that show the origin of the emissions;</p> <p>(b) descriptions of process-integrated techniques and waste water/waste gas treatment at source including their performances;</p> <p>(ii) information about the characteristics of the waste water streams, such as:</p> <p>(a) average values and variability of flow, pH, temperature, and conductivity;</p> <p>(b) average concentration and load values of relevant substances and their variability (e.g. COD/TOC, nitrogen species, phosphorus, metals, priority substances /micropollutants);</p> <p>(c) data on bioeliminability (e.g. BOD, BOD to COD ratio, Zahn-Wellens test, biological inhibition potential (e.g. inhibition of activated sludge)) (see BAT 52);</p> <p>(iii) information about the characteristics of the waste gas streams, such as:</p>	FC	<p><u>Environment Agency assessment</u></p> <p>The operator has provided information to support compliance with BATc 3.</p> <p>The operator has identified that, “there is currently no process description within the EMS. This is a deviation from BAT. Written descriptions of the waste treatment processes are to be added to the EMS Manual.”</p> <p>The waste water streams are sampled and analysed monthly and records kept.</p> <p>[Note: Currently the AD facility and associated air extraction and abatement plant has not been built so there is not a discharge of waste air from emission points A2, A3 and A4. Preoperational condition 11 ensures the AD facility will be BAT compliant in the future should it be commissioned].</p>

BAT Conclusion No	Summary of BAT Conclusion requirement for Waste Treatment	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
	(a) average values and variability of flow and temperature; (b) average concentration and load values of relevant substances and their variability (e.g. organic compounds, POPs such as PCBs); (c) flammability, lower and higher explosive limits, reactivity; (d) presence of other substances that may affect the waste gas treatment system or plant safety (e.g. oxygen, nitrogen, water vapour, dust).		We consider that the operator will be future compliant with BATc 3. Improvement condition IC8 has been included in the permit to achieve compliance (see Annex 3).
4	In order to reduce the environmental risk associated with the storage of waste, BAT is to use all of the techniques given below: (a) Optimised storage location; (b) Adequate storage capacity; (c) Safe storage operation; (d) Separate area for storage and handling of packaged hazardous waste.	CC	<u>Environment Agency assessment</u> The operator has provided information to support compliance with BATc 4. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 4.
5	In order to reduce the environmental risk associated with the handling and transfer of waste, BAT is to set up and implement handling and transfer procedures. Handling and transfer procedures aim to ensure that wastes are safely handled and transferred to the respective storage or treatment. They include the following elements: <ul style="list-style-type: none"> • handling and transfer of waste are carried out by competent staff; 	CC	<u>Environment Agency assessment</u> The operator has provided information to support compliance with BATc 5. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 5.

BAT Conclusion No	Summary of BAT Conclusion requirement for Waste Treatment	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
	<ul style="list-style-type: none"> • handling and transfer of waste are duly documented, validated prior to execution and verified after execution; • measures are taken to prevent, detect and mitigate spills; • operation and design precautions are taken when mixing or blending wastes (e.g. vacuuming dusty/powdery wastes). <p>Handling and transfer procedures are risk-based considering the likelihood of accidents and incidents and their environmental impact.</p>		
6	<p>For relevant emissions to water as identified by the inventory of waste water streams (see BAT 3), BAT is to monitor key process parameters (e.g. waste water flow, pH, temperature, conductivity, BOD) at key locations (e.g. at the inlet and/or outlet of the pre-treatment, at the inlet to the final treatment, at the point where the emission leaves the installation).</p>	CC	<p><u>Environment Agency assessment</u></p> <p>The operator has provided information to support compliance with BATc 6. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 6.</p> <p>The operator monitors their discharge from the green waste lagoons and street sweeping lagoon prior to discharge to sewer.</p>
7	<p>BAT is to monitor emissions to water with at least the frequency given in BATc 7, and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.</p>	NA (but see Note)	<p><u>Environment Agency assessment</u></p> <p>The operator has provided information to support compliance with BATc 7. We have</p>

BAT Conclusion No	Summary of BAT Conclusion requirement for Waste Treatment	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
			<p>assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 7.</p> <p>The parameters identified under biological treatment of waste (COD, total nitrogen and total phosphorus) are excluded, as under Note 6 there is no monitoring requirement if the discharge is not a direct discharge to a receiving water body, or under Note 3 if the substance concerned (PFOA & PFOS) is not identified as relevant in the waste water inventory mentioned in BATc 3.</p> <p>[NOTE: Although currently all contaminated surface water discharges to foul sewer, potentially the Operator can make a direct discharge to water via SW1 from the soils yard and site entrance. We have therefore added the relevant monitoring frequencies and standards for this discharge in Table S3.2 of the permit with the proviso that no discharge shall take place until preoperational condition</p>

BAT Conclusion No	Summary of BAT Conclusion requirement for Waste Treatment	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
			PO12 has been completed and agreed. PO12 requires the operator to demonstrate they will meet these conditions]
8	BAT is to monitor channelled emissions to air with at least the frequency given in BATc 8, and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.	FC	<p><u>Environment Agency assessment</u></p> <p>The operator has provided information to support compliance with BATc 8. We have assessed the information provided.</p> <p>Currently the AD facility with associated air extraction and abatement has not yet been built. Pre operational condition PO11 requires the operator to complete a BAT assessment at least 6 months prior to starting the anaerobic digestion operation.</p> <p>However, the channelled emissions from the odour abatement plant used from the AD building will need to be monitored in line with the requirements of BATc 8 when the AD facility becomes operational. We have therefore added the relevant monitoring requirements and standards to the permit with regards the AD process. [Note: There is a</p>

BAT Conclusion No	Summary of BAT Conclusion requirement for Waste Treatment	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
			<p>biofilter used in the old IVC hall but the hall is now used for the bulking up and transfer of food waste. As this is not a biowaste treatment activity BATc 8 does not apply to this emission point].</p> <p>We are satisfied the Operator will be future compliant with BATc 8.</p>
10	<p>BAT is to periodically monitor odour emissions.</p> <p>Odour emissions can be monitored using:</p> <ul style="list-style-type: none"> • EN standards (e.g. dynamic olfactometry according to EN 13725 in order to determine the odour concentration or EN 16841-1 or -2 in order to determine the odour exposure); • when applying alternative methods for which no EN standards are available (e.g. estimation of odour impact), ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality. <p>The monitoring frequency is determined in the odour management plan (see BAT 12).</p>	CC	<p><u>Environment Agency assessment</u></p> <p>The operator has provided information to support compliance with BATc 10. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 10.</p>

BAT Conclusion No	Summary of BAT Conclusion requirement for Waste Treatment	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
11	<p>BAT is to monitor the annual consumption of water, energy and raw materials as well as the annual generation of residues and waste water, with a frequency of at least once per year.</p> <p>Monitoring includes direct measurements, calculation or recording, e.g. using suitable meters or invoices. The monitoring is broken down at the most appropriate level (e.g. at process or plant/installation level) and considers any significant changes in the plant/installation.</p>	CC	<p><u>Environment Agency assessment</u></p> <p>The operator has provided information to support compliance with BATc 11. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 11.</p>
12	<p>In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to set up, implement and regularly review an odour management plan, as part of the environmental management system (see BAT 1), that includes all of the following elements:</p> <ul style="list-style-type: none"> • a protocol containing actions and timelines; • a protocol for conducting odour monitoring as set out in BAT 10; • a protocol for response to identified odour incidents, e.g. complaints; • an odour prevention and reduction programme designed to identify the source(s); to characterise the contributions of the sources; and to implement prevention and/or reduction measures. 	FC	<p><u>Environment Agency assessment</u></p> <p>The operator has identified that their current odour management plan does not include all of the elements identified in BATc 12.</p> <p>We consider that the operator will be future compliant with BATc 12. Improvement condition IC8 has been included in the permit to achieve compliance (see Annex 3).</p>

BAT Conclusion No	Summary of BAT Conclusion requirement for Waste Treatment	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
13	<p>In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to use one or a combination of the techniques given below:</p> <p>(a) Minimising residence times; (b) Using chemical treatment; (c) Optimising aerobic treatment</p>	FC	<p><u>Environment Agency assessment</u></p> <p>The operator has identified that although the residence times for the street sweeping waste is managed, it does not work on the first in, first out principle, and has committed to addressing this.</p> <p>We consider that the operator will be future compliant with BATc 13. Improvement condition IC8 has been included in the permit to achieve compliance (see Annex 3).</p>
14	<p>In order to prevent or, where that is not practicable, to reduce diffuse emissions to air, in particular of dust, organic compounds and odour, BAT is to use an appropriate combination of the techniques given below:</p> <p>(a) Minimising the number of potential diffuse emission sources; (b) Selection and use of high-integrity equipment; (c) Corrosion prevention; (d) Containment, collection and treatment of diffuse emissions; (e) Dampening; (f) Maintenance; (g) Cleaning of waste treatment and storage areas;</p>	CC	<p><u>Environment Agency assessment</u></p> <p>The operator has provided information to support compliance with BATc 14. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 14.</p>

BAT Conclusion No	Summary of BAT Conclusion requirement for Waste Treatment	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
	(h) Leak detection and repair (LDAR) programme		
15	<p>BAT is to use flaring only for safety reasons or for non-routine operating conditions (e.g. start-ups, shutdowns) by using both of the techniques given below:</p> <p>(a) Correct plant design; (b) Plant management</p>	FC	<p><u>Environment Agency assessment</u> Currently the AD facility with associated emergency flare has not yet been built. Pre operational condition PO11 requires the operator to complete a BAT assessment at least 6 months prior to starting the anaerobic digestion operation.</p>
16	<p>In order to reduce emissions to air from flares when flaring is unavoidable, BAT is to use both of the techniques given below:</p> <p>(a) Correct design of flaring devices; (b) Monitoring and recording as part of flare management</p>	FC	<p><u>Environment Agency assessment</u> Currently the AD facility with associated emergency flare has not yet been built. Pre operational condition PO11 requires the operator to complete a BAT assessment at least 6 months prior to starting the anaerobic digestion operation.</p>
17	<p>In order to prevent or, where that is not practicable, to reduce noise and vibration emissions, BAT is to set up, implement and regularly review a noise and vibration management plan, as part of the environmental management system (see BAT 1), that includes all of the following elements:</p>	NA	<p><u>Environment Agency assessment</u> We are satisfied that BATc 17 is not applicable to this Installation.</p>

BAT Conclusion No	Summary of BAT Conclusion requirement for Waste Treatment	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
	<ul style="list-style-type: none"> I. a protocol containing appropriate actions and timelines; II. a protocol for conducting noise and vibration monitoring; III. a protocol for response to identified noise and vibration events, e.g. complaints; IV. a noise and vibration reduction programme designed to identify the source(s), to measure /estimate noise and vibration exposure, to characterise the contributions of the sources and to implement prevention and /or reduction measures. 		<p>The applicability is restricted to cases where a noise or vibration nuisance at sensitive receptors is expected and/or substantiated.</p> <p>However condition 3.4.2 of the permit means a noise and vibration management can be required in the future, should the need arise.</p>
18	<p>In order to prevent or, where that is not practicable, to reduce noise and vibration emissions, BAT is to use one or a combination of the techniques given below:</p> <ul style="list-style-type: none"> (a) Appropriate location of equipment and buildings; (b) Operational measures; (c) Low noise-equipment; (d) Noise and vibration equipment; (e) Noise attenuation 	CC	<p><u>Environment Agency assessment</u></p> <p>The operator has provided information to support compliance with BATc 18. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 18</p>
19	<p>In order to optimise water consumption, to reduce the volume of waste water generated and to prevent or, where that is not practicable, to reduce emissions to</p>	FC	<p><u>Environment Agency assessment</u></p> <p>The operator has provided information to support compliance with BATc 19 but has</p>

BAT Conclusion No	Summary of BAT Conclusion requirement for Waste Treatment	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
	<p>soil and water, BAT is to use an appropriate combination of the techniques given below:</p> <ul style="list-style-type: none"> (a) Water management; (b) Water recirculation; (c) Impermeable surface; (d) Techniques to reduce the likelihood and impact of overflows and failures from tanks and vessels; (e) Roofing of waste storage and treatment areas; (f) Segregation of water streams (g) Adequate drainage infrastructure; (h) Design and maintenance provisions to allow detection and repair of leaks (i) Appropriate buffer storage capacity 		<p>identified that they are not fully compliant with BATc 19d as outlined below:</p> <p>“The street sweeping lagoon does not currently operate with a set freeboard. Overflow from lagoon is onto concrete area with sealed sump, float switch and pump to lagoon. If the system is inundated with rainwater then there is a potential for this system to overflow to the wider environment”.</p> <p>In addition we do not consider that the Operator is compliant with (f) segregation of water streams and (g) adequate drainage infrastructure. Water streams (i.e. clean surface water/contaminated surface water/process water/composting leachate) are not separated (all water currently goes to foul sewer) and the drainage infrastructure is not adequate. We have therefore included improvement condition IC8 and more</p>

BAT Conclusion No	Summary of BAT Conclusion requirement for Waste Treatment	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
			<p>specifically IC9 which requires a site drainage strategy for managing water from all permitted activities on site.</p> <p>We consider that the operator will be future compliant with BATc 19. Improvement conditions IC8 & 9 has been included in the permit to achieve compliance (see Annex 3).</p>
20	<p>In order to reduce emissions to water, BAT is to treat waste water using an appropriate combination of the techniques given below:</p> <p><i>Preliminary and primary treatment, e.g.</i></p> <ul style="list-style-type: none"> (a) Equalisation (b) Neutralisation (c) Physical separation, e.g. screens, sieves, grit separators, grease separators, oil-water separation or primary settlement tanks <p><i>Physico-chemical treatment, e.g.</i></p> <ul style="list-style-type: none"> (d) Adsorption (e) Distillation /rectification (f) Precipitation 	FC	<p><u>Environment Agency assessment</u></p> <p>The operator has provided information to support compliance with BATc 20.</p> <p>The Operator uses primary treatment (physical separation via settlement tanks) for site drainage from the composting operation and street sweeping area prior to discharge of waste water to two lagoons.</p>

BAT Conclusion No	Summary of BAT Conclusion requirement for Waste Treatment	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
	<p>(g) Chemical oxidation (h) Chemical reduction (i) Evaporation (j) Ion exchange (k) Stripping</p> <p>Biological treatment, e.g. (l) Activated sludge process (m) Membrane bioreactor (n) Nitrification / denitrification when the treatment includes a biological treatment</p> <p>Solids removal, e.g. (o) Coagulation and flocculation (p) Sedimentation (q) Filtration (e.g. sand filtration, microfiltration, ultrafiltration) (r) Flotation</p> <p>See also: Table 6.1: BAT-associated emission levels (BAT-AELs) for direct discharges to a receiving water body</p> <p>See also:</p>		<p>The lagoons are then aerated prior to discharge to sewer.</p> <p>This represents an indirect discharge to water and Table 6.2 BAT-AELs may apply. However we consider the BAT-AELs do not apply (see BATc 7)</p> <p>In addition there is a permitted discharge point SW1 which is not currently used but would be regarded as a direct discharge under BATc20. We have included the relevant determinants and BAT-AELs from Table 6.1 with the provision that no discharge can take place under preoperational condition PO12 until it has been completed and agreed. PO12 requires that a BAT assessment against BATc20 is undertaken prior to any discharge commencing.</p>

BAT Conclusion No	Summary of BAT Conclusion requirement for Waste Treatment	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
	Table 6.2: BAT-associated emission levels (BAT-AELs) for indirect discharges to a receiving water body		
21	<p>In order to prevent or limit the environmental consequences of accidents and incidents, BAT is to use all of the techniques given below, as part of the accident management plan (see BAT 1):</p> <p>(a) Protection measures; (b) Management of incidental /accidental emissions; (c) Incident /accident registration and assessment system</p>	CC	<p><u>Environment Agency assessment</u></p> <p>The operator has provided information to support compliance with BATc 21. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 21.</p>
22	<p>In order to use materials efficiently, BAT is to substitute materials with waste.</p> <p>Waste is used instead of other materials for the treatment of wastes (e.g. waste alkalis or waste acids are used for pH adjustment, fly ashes are used as binders).</p>	CC	<p><u>Environment Agency assessment</u></p> <p>The operator has provided information to support compliance with BATc 22. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 22.</p>
23	<p>In order to use energy efficiently, BAT is to use both of the techniques given below:</p> <p>(a) Energy efficiency plan; (b) Energy balance record</p>	CC	<p><u>Environment Agency assessment</u></p> <p>The operator has provided information to support compliance with BATc 23. We have assessed the information provided and we are</p>

BAT Conclusion No	Summary of BAT Conclusion requirement for Waste Treatment	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
			satisfied that the operator has demonstrated compliance with BATc 23.
24	<p>In order to reduce the quantity of waste sent for disposal, BAT is to maximise the reuse of packaging, as part of the residues management plan (see BAT 1).</p> <p>Packaging (drums, containers, IBCs, pallets, etc.) is reused for containing waste, when it is in good condition and sufficiently clean, depending on a compatibility check between the substances contained (in consecutive uses). If necessary, packaging is sent for appropriate treatment prior to reuse (e.g. reconditioning, cleaning).</p>	CC	<p><u>Environment Agency assessment</u></p> <p>The operator has provided information to support compliance with BATc 24. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 24.</p>
33	<p>In order to reduce odour emissions and to improve the overall environmental performance, BAT is to select the waste input.</p> <p>The technique consists of carrying out the pre-acceptance, acceptance and sorting of the waste input (see BAT 2) so as to ensure the suitability of the waste input for the waste treatment, e.g. in terms of nutrient balance, moisture or toxic compounds which may reduce the biological activity.</p>	CC	<p><u>Environment Agency assessment</u></p> <p>The operator has provided information to support compliance with BATc 33. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 33.</p>
34	<p>In order to reduce channelled emissions to air of dust, organic compounds and odorous compounds, including H₂S and NH₃, BAT is to use one or a combination of the techniques given below:</p> <p>(a) Adsorption;</p>		<p><u>Environment Agency assessment</u></p> <p>The operator provided information to support compliance with BATc 34.</p>

BAT Conclusion No	Summary of BAT Conclusion requirement for Waste Treatment	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
	<p>(b) Biofilter; (c) Fabric filter; (d) Thermal oxidation; (e) Wet scrubbing</p> <p>See also: Table 6.7: BAT-associated emission levels (BAT-AELs) for channelled NH₃, odour, dust and TVOC emissions to air from the biological treatment of waste.</p>	<p>BATc 34, Table 6.7 FC</p>	<p>The operator states the only channelled emission (which is treated using a biofilter) is from the food bulking and transfer hall, which doesn't come under the Biowaste review remit. However, although the AD process has not been commissioned yet, the listed activity is permitted, and has recognised channelled emission points to air (A2, A3 and A4). If and when this process is commissioned the channelled emissions will need to comply with the relevant BAT-AELs. These emission limits have therefore been added to the permit, Table 3.1. We have also included preoperational condition PO11 which requires a BAT assessment against the BAT conclusions for Waste Treatment current at the time, prior to commencement of operations.</p>

BAT Conclusion No	Summary of BAT Conclusion requirement for Waste Treatment	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
35	<p>In order to reduce the generation of waste water and to reduce water usage, BAT is to use all of the techniques given below:</p> <p>(a) Segregation of water streams; (b) Water recirculation; (c) Minimisation of the generation of leachate</p>	CC	<p><u>Environment Agency assessment</u></p> <p>The operator has provided information to support compliance with BATc 35. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 35.</p>
36	<p>In order to reduce emissions to air and to improve the overall environmental performance, BAT is to monitor and/or control the key waste and process parameters.</p> <p>Monitoring and/or control of key waste and process parameters, including:</p> <ul style="list-style-type: none"> • waste input characteristics (e.g. C to N ratio, particle size); • temperature and moisture content at different points in the windrow; • aeration of the windrow (e.g. via the windrow turning frequency, O₂ and/or CO₂ concentration in the windrow, temperature of air streams in the case of forced aeration); • windrow porosity, height and width. 	CC	<p><u>Environment Agency assessment</u></p> <p>The operator has provided information to support compliance with BATc 36 for the open composting activities. We are satisfied the Operator is compliant with BATc 36 in this regard.</p>
37	<p>In order to reduce diffuse emissions to air of dust, odour and bioaerosols from open-air treatment steps, BAT is to use one or both of the techniques given below:</p>	CC	<p><u>Environment Agency assessment</u></p> <p>The operator has provided information to support compliance with BATc 37 for the open</p>

BAT Conclusion No	Summary of BAT Conclusion requirement for Waste Treatment	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
	(a) Use of semi permeable membrane covers; (b) Adaptation of operations to the meteorological conditions		composting activities. We are satisfied the Operator is compliant with BATc 37.
38	<p>In order to reduce emissions to air and to improve the overall environmental performance, BAT is to monitor and/or control the key waste and process parameters.</p> <p>This includes monitoring and/or control of key waste and process parameters:</p> <ul style="list-style-type: none"> • pH and alkalinity of the digester feed; • digester operating temperature; • hydraulic and organic loading rates of the digester feed; • concentration of volatile fatty acids (VFA) and ammonia within the digester and digestate; • biogas quantity, composition (e.g. H₂S) and pressure; • liquid and foam levels in the digester. 	FC	<p><u>Environment Agency assessment</u></p> <p>Although the AD process is yet to be operational, we have updated the process monitoring table to reflect the requirements of BATc 38. We have also included preoperational condition PO11 which requires a full BAT assessment against the current Waste Treatment BREF prior to the AD plant becoming operational.</p>
39	<p>In order to reduce emissions to air, BAT is to use both of the techniques given below:</p> <p>(a) Segregation of the waste gas streams; (b) Recirculation of waste gas</p>	NA	<p><u>Environment Agency assessment</u></p> <p>We are satisfied that BATc 39 is not applicable to this Installation as it relates to the mechanical biological treatment of waste.</p>

Annex 2: Review and assessment of changes that are not part of the BAT Conclusions derived permit review

Existing Medium Combustion Plant

We asked the Operator to provide information on all combustion plant on site in the Regulation 61 Notice as follows:

- Number of combustion plant (CHP engines, back-up generators, boilers);
- Size of combustion plant – rated thermal input (MWth)
- Date each combustion plant came into operation
- Confirmation as to whether or not the combustion plant is subject to a capacity market agreement (2014 or 2015 auction) or whether or not a Feed-in Tariff preliminary accreditation application was received prior to 1 December 2016

The operator confirmed that there are no combustion plants or generators associated with the permitted activity.

Bioaerosols monitoring requirements

We asked the Operator to confirm the following aspects regarding the site operations in the Regulation 61 Notice:

- Whether or not the operational processes of biodegradable waste are in open processes within 250 metres of human receptors.
- Whether or not there is a channelled or point source release within 250 metres that are open sources e.g. biofilters within 250 metres of human receptors; and
- The existing permit contains bioaerosols monitoring requirements, the microbiological markers, associated bioaerosols limits and the monitoring standards

The Operator provided information regarding bioaerosols monitoring in their response to the Regulation 61 Notice and confirmed the current permit monitoring requirements. We carried out an assessment of the site location and the distance of site processes from sensitive receptors as part of this determination.

There are external site operational processes within 250 metres of a sensitive receptor. We therefore consider it appropriate to retain the bioaerosols monitoring requirements in the permit in accordance with our guidance TGN M9 Environmental monitoring of bioaerosols at regulated facilities (version 2, July 2018).

Soil & groundwater risk assessment (baseline report)

The IED requires that the operator of any IED installation using, producing or releasing “relevant hazardous substances” (RHS) shall, having regarded the possibility that they might cause pollution of soil and groundwater, submit a “baseline report” with its permit application. The baseline report is an important reference document in the assessment of contamination that might arise during the operational lifetime of the regulated facility

and at cessation of activities. It must enable a quantified comparison to be made between the baseline and the state of the site at surrender.

At the definitive cessation of activities, the Operator has to satisfy us that the necessary measures have been taken so that the site ceases to pose a risk to soil or groundwater, taking into account both the baseline conditions and the site's current or approved future use. To do this, the Operator has to submit a surrender application to us, which we will not grant unless and until we are satisfied that these requirements have been met.

The Operator submitted a site condition report which includes a report on the baseline conditions as required by Article 22 of the IED in their 2016 application. The baseline monitoring results for soil and groundwater were from site investigations undertaken in 2012. These results however do not sufficiently cover the full extent of the Installation, including the site extension as proposed in the 2016 Application.

We have therefore retained a pre-operational conditions and associated improvement conditions on the reviewed Permit. Pre-operational condition PO1 requires the Operator to provide an updated baseline report prior to the commencement of commissioning. Improvement condition IC5 requires the Operator to submit an updated Site Condition Report which references the additional ground investigations required under PO1 and which includes a full list of permitted activities.

In addition we were not satisfied that the appropriate measures will be in place for the closure and decommissioning of the Installation, as outlined in the Operator's BATOT document, (v2, Jan 2015). The Operator has committed to submitting a Site Closure Plan for approval prior to the commencement of new operations. Preoperational condition PO2 requires that the Operator submits their Site Closure Plan prior to the commencement of any of the additional activities applied for in application reference EPR/GP3793FY/V010. We are therefore also retaining these pre-operational conditions in the reviewed permit.

Waste types

We have specified the permitted waste types, descriptions and quantities, which can be accepted at the regulated facility in relation to the anaerobic digestion activity, open air composting activity and street sweeping activity. The wastes are specified in Table S2.2, S2.3 and S2.6 in the permit.

We are satisfied that the Operator can accept these wastes for the following reasons:

- they are suitable for the proposed activities
- the proposed infrastructure is appropriate
- the environmental risk assessment is acceptable.

Other wastes (non-standard waste codes)

The wastes EWC 02 03 01 sludges from washing, cleaning, peeling, centrifuging and separation and EWC 17 02 01 wood (untreated) for the composting activity, are not in our current biowaste composting template. We have retained these wastes in the

current permit provided the Operator undertakes a detailed characterisation of the wastes prior to acceptance for treatment at the site in accordance with BATc 2a.

The following wastes for the AD activity are not in our current biowaste anaerobic digestion template. We have retained these wastes in the current permit provided the Operator undertakes a detailed characterisation of the wastes prior to acceptance for treatment at the site in accordance with BATc 2a.

Waste code	Description
03 03 02	green liquor sludge
03 03 10	fibre rejects, fibre-, filler- and coating-sludges from mechanical separation
04 01 01	fleshings and lime split wastes
04 01 05	tanning liquor free of chromium
04 01 07	sludges not containing chromium
19 05 01	non-composted fraction of municipal and similar wastes – acceptable only if derived solely from input types allowed by the AD Quality Protocol and remains segregated from, and uncontaminated by, any other waste type
19 05 02	non-composted fraction of animal and vegetable waste – acceptable only if derived solely from input types allowed by the AD Quality Protocol and remains segregated from, and uncontaminated by, any other waste type
19 05 03	off-specification compost – acceptable only if derived solely from input types allowed by the AD Quality Protocol and remains segregated from, and uncontaminated by, any other waste type
20 01 38	untreated wood other than that mentioned in 20 01 37 – excluding wood with non-biodegradable coating or preserving substance present. No chemical additives or preservatives, and no persistent organics present. Untreated wood only

We consider that the Operator will be future compliant with BATc 2a. Improvement condition has been included in the permit to achieve compliance (see Annex 3).

We made this decision with respect to waste types in accordance with the Framework Guidance Note – *Framework for assessing suitability of wastes going to anaerobic digestion, composting and biological treatment* (July 2013).

Secondary containment and lagoon storage infrastructure design

We asked the Operator via the Regulation 61 Notice to:

- describe any secondary containment and whether it currently meets the relevant standard in the “Containment systems for the prevention of pollution (C736)” report, where there are above-ground storage or primary containment on site; or
- explain why the current site infrastructure design and construction is fit for purpose, where it is concluded that secondary containment is not required or

- does not need to meet the standards in the C736 report, to enable a baseline standard so as to establish a quantified comparison; and
- describe how the construction of the lagoons meets the relevant standard in CIRIA C736 report, where there are storage lagoons used for the storage of digestate on site.

The operator states there is no primary containment or above ground storage. There are two compost leachate lagoons, constructed of concrete, and a street sweepings lagoon constructed of earth banks lined with HDPE liner. The operator has confirmed that there aren't any reports confirming the lagoons were designed to an appropriate industry standard. We have set improvement conditions in the permit to address the deficiencies in the existing site secondary containment (IC10) and lagoon storage infrastructure (IC11). See Improvement conditions in Annex 3 of this decision document.

Currently the AD facility with associated containment has not yet been built. Pre operational condition PO11 requires the operator to complete a BAT assessment at least 6 months prior to starting the anaerobic digestion operation and this will include containment to the appropriate industrial standards.

Primary containment infrastructure design (tanks /vessels used for storage and/or treatment activities)

We assessed primary containment as part of the permit review. This information was not requested in the Regulation 61 Notice issued to the Operator, however, it was considered prudent to address this aspect as part of the permit review process. In this instance, the required information relating to the review of primary containment infrastructure against CIRIA C736 was not previously submitted to the Environment Agency, nor was it included in the supporting documentation submitted by the Operator in their Regulation 61 response.

We have therefore set an Improvement Condition (IC10) in the permit to address this aspect of the permit review (see Annex 3).

Lagoon cover and digestate storage capacity

We asked the Operator via the Regulation 61 Notice to:

- confirm if storage lagoons are covered to prevent emission loss; and
- confirm whether or not the operational lagoon storage capacity provides a minimum of two months storage

The Operator confirmed in their response that the storage lagoons are not covered. We have therefore set an improvement condition (IC12) in the permit to address this aspect of the permit review (see Annex 3).

The Operator provided the dimensions of the storage lagoons and the storage capacity. The operator confirmed that there is the facility to discharge to the leachate from both the compost leachate lagoons and street sweepings lagoon to foul sewer. We are satisfied with the site operational storage capacity in this case.

Annex 3: Improvement Conditions

Based on the information in the Operator's Regulation 61 Notice response and our own records of the capability and performance of the installation at this site, we consider that we need to set improvement conditions so that the outcome of the techniques detailed in the BAT Conclusions are achieved by the installation. These improvement conditions are set out below - justifications for them is provided at the relevant section of the decision document (Annex 1 or Annex 2).

If the consolidated permit contains existing improvement conditions that are not yet complete or the opportunity has been taken to delete completed improvement conditions then the numbering in the table below will not be consecutive as these are only the improvement conditions arising from this permit variation.

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
Improvement condition for progress report to achieve Narrative BAT		
IC8	<p>The operator shall submit, for approval by Environment Agency, a report which demonstrates that the "Narrative BAT" have been achieved where BAT is currently not achieved but will be achieved before 17 August 2022.</p> <p>The report shall address the BAT Conclusions for Waste Treatment with respect to BATc 1, 2, 3, 12, 13 and 19 (refer to IC 9 regarding BATc 19).</p> <p><i>Refer to BAT Conclusions for a full description of the BAT requirement.</i></p>	17/07/2022
Improvement condition for site drainage		
IC9	<p>The operator shall submit, for approval by the Environment Agency, a report setting out a strategy for managing water from all permitted activities on site.</p> <p>The report shall include the proposed containment, storage, treatment, and discharge of surface water and contaminated water from site activities.</p> <p>The report shall include a review of existing arrangements and how BAT and appropriate measures will be achieved for managing water across the site, to ensure compliance with BAT and appropriate measures. This will take into account: -</p> <ul style="list-style-type: none"> • Evolution of the activities and changes on site including a program of works with timescales for the implementation of BAT 19. • Measures in place to ensure changes on site as they are constructed, operated and decommissioned do not lead to pollution of water courses or pollution of the environment • Existing discharge points • Plans and drawings of drainage by suitably qualified engineers ahead of construction 	17/07/2022 or other date as agreed in writing with the Environment Agency

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
	<ul style="list-style-type: none"> • Management of change of documents with timescales • Rainfall calculations for the catchments with additional calculations to include the latest climate change projections for adaptation at each stage of the strategy. <p>The report shall include target dates and progress to achieving compliance with 'Narrative' BAT and appropriate measures. The plan shall be implemented in accordance with the Environment Agency's written approval.</p>	
Improvement condition for primary and secondary containment		
IC10	<p>The Operator shall undertake an inspection and works programme to ensure that all primary and secondary containment is fit for purpose which shall include:</p> <p>(a) an assessment and inspection of all primary containment, using a Written Scheme of Examination devised and undertaken by an appropriately qualified engineer</p> <p>(b) an assessment and inspection of all secondary containment against the standards set out in CIRIA 736 shall be done by a competent structural engineer</p> <p>(c) written reports of the findings of a) and b) shall be submitted to the Environment Agency. Where the reports do not demonstrate that critical primary and secondary containment is fit for purpose, the reports shall contain detailed proposals to bring the containment up to the required standards including timescales for the implementation of individual measures ('the measures') or shall propose alternative appropriate measures to ensure all polluting materials will be contained on site.</p> <p>(d) where it contains proposals for works, the report recommendations shall be implemented by the operator in accordance with the Environment Agency's written approval.</p>	17/07/2022 or other date as agreed in writing with the Environment Agency
Improvement condition for storage lagoons design		
IC11	<p>The operator shall submit a written 'storage lagoon plan' and shall obtain the Environment Agency's written approval to it. The plan shall contain the results of an inspection and program of works undertaken by a competent structural engineer, in accordance with the risk assessment methodology detailed within CIRIA C736 (2014) guidance, of the condition and extent of the site lagoon(s) where digestate or compost leachate are being stored, treated, and/or handled.</p> <p>The inspection shall consider, but not be limited to, the transfer pipework/pumps, and liners underlying the storage lagoon/s.</p>	17/07/2022 or other date as agreed in writing with the Environment Agency

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
	<p>The plan shall include:</p> <ul style="list-style-type: none"> • an assessment of the physical condition of the storage lagoon, using a Written Scheme of Examination and the suitability for providing containment when subjected to the dynamic and static loads caused by the digestate or compost leachate; • a program of works with timescales for the implementation of individual improvement measures necessary for the storage lagoon to comply with CIRIA C736 (2014) guidance, or equivalent. • a preventative maintenance and inspection regime <p>The plan shall be implemented in accordance with the Environment Agency's written approval.</p>	
Improvement condition for lagoon cover		
IC12	<p>The operator shall provide a written "lagoon cover plan" and shall obtain the Environment Agency's written approval to it.</p> <p>The plan shall include:</p> <ul style="list-style-type: none"> • existing cover arrangements on storage lagoons used to store digestate and/or compost liquor to minimise odour, ammonia and methane emissions; and • improvements required to meet Waste Treatment BREF/BAT conclusions published 10 August 2018. <p>The plan shall be implemented in accordance with the Environment Agency's written approval.</p>	17/07/2022 or other date as agreed in writing with the Environment Agency
Improvement condition for the review of effectiveness of abatement plant		
IC13	<p>Following the installation of the AD facility including any abatement plant (see PO11), the operator shall carry out a review of the abatement plant on site, in order to determine whether the measures have been effective and adequate to prevent and where not possible minimise emissions released to air including but not limited to odour and ammonia.</p> <p>The operator shall submit a written report to the Environment Agency following this review for assessment and approval. The report shall include but not limited to the following aspects:</p> <ul style="list-style-type: none"> • Full investigation and characterisation of the waste gas streams. • Abatement stack monitoring results (not limited to odour and ammonia) • Abatement process monitoring results (not limited to odour and ammonia) 	Within six months of commissioning of the AD facility or other date as agreed with the Environment Agency

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
	<ul style="list-style-type: none"> • Details of air quality quantitative impact assessment including modelling and a proposal for site-specific “action levels” (not limited to odour concentration, hydrogen sulphide and ammonia). • Odour monitoring results at the site boundary • Records of odour complaints and odour related incidents • Recommendations for improvement including the replacement or upgrading the abatement plant • Timescales for implementation of improvements to the abatement plant <p>The operator shall implement the improvements in line with the timescales as approved by the Environment Agency.</p>	

Annex 4: Pre-operational Conditions

We have included preoperational condition PO11 for the Anaerobic Digestion listed activity which has not yet commenced (as confirmed by the Operator in their Regulation 61 Response). PO11 requires a full BAT report against the Waste Treatment BAT Conclusions prior to the commencement of operations.

We have included preoperational condition PO12 for the surface water discharge via SW1 which is not currently used. PO12 requires an assessment against BATc 20, Table 6.1 (compliance with BAT-AELs for direct discharges to a receiving water body) prior to any discharge taking place.

Table S1.4 Preoperational measures for future development (extract)		
PO11	All proposed additional biowaste activities contained in variation application EPR/GP3793FY/V010	<p>At least 6 months prior to starting the anaerobic digestion operation the operator shall submit a BAT report to the Environment Agency for review and approval.</p> <p>The report shall include, but not limited to, an assessment to demonstrate compliance of the anaerobic digestion operation against the Waste Treatment BAT Conclusions (current at the time).</p> <p>The anaerobic digestion operation shall not be started until agreed and approved by the Environment Agency.</p>
PO12	Discharge to SW1 as detailed in variation application EPR/GP3793FY/V010	<p>At least 3 months prior to discharge via SW1, the operator shall submit, for approval by Environment Agency, a report which confirms that the BAT-AELs will be achieved.</p> <p>The report shall address the BAT Conclusions for Waste Treatment with respect to the following:</p> <ul style="list-style-type: none"> BAT 20 Table 6.1 (compliance with BAT-AELs for direct discharges to a receiving water body) <p>Refer to BAT Conclusions for a full description of the BAT requirement.</p>