Environment Agency



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

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

The Permit number is: The Operator is: The Installation is: This Variation Notice number is: EPR/NP3338SZ/V006

EPR/NP3338SZ Reneco Ltd Goosey Lodge

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 of updated decisions on best available techniques (BAT) conclusions.

We have reviewed the permit for this installation against the revised BAT Conclusions for waste incineration and waste treatment. This is our decision document, which explains the reasoning for the consolidated variation notice that we are issuing. This review has been undertaken with reference to the decision made by the European Commission establishing best available techniques (BAT) conclusions ('BAT conclusions') for incineration as detailed in document reference C(2019) 7987; and BAT conclusions for waste treatment 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.

It explains how we will ensure that the installation complies with the BAT conclusions by 3rd December 2023. 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 ensuring that the Installation complies with the BAT conclusions the consolidated variation notice takes into account and brings together in a single document all previous variations that relate to the original permit issued. 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 philosophy and with other permits issued to installations in this sector. Although the wording of some conditions has changed, while others have been removed 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 mainly our determination of substantive issues relating to the new BAT Conclusions.

Throughout this document we will use a number of expressions. These are as referred to in the glossary.

We try to explain our decision as accurately, comprehensively and plainly as possible. We would welcome any feedback as to how we might improve our decision documents in future. The use of technical terms and acronyms are inevitable in a document of this nature: we provide a glossary of acronyms near the front of the document, for ease of reference.

How this document is structured

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1 Glossary of acronyms used in this document

(Please note that this glossary is standard for our decision documents and therefore not all these acronyms are necessarily used in this document.)

APC	Air Pollution Control
BAT	Best Available Technique(s)
BAT-AEEL	BAT Associated Energy Efficiency Level
BAT-AEPL	BAT Associated environmental performance level
BAT-AEL	BAT Associated Emission Level
BATc	BAT conclusion
BREF	Best available techniques reference document
CEM	Continuous emissions monitor
СНР	Combined heat and power
CV	Calorific value
DAA	Directly associated activity – Additional activities necessary to be carried out to allow the principal activity to be carried out
ELV	Emission limit value derived under BAT or an emission limit value set out in IED
EMS	Environmental Management System
EPR	Environmental Permitting (England and Wales) Regulations 2016 (SI 2016 No. 1154)
EWC	European waste catalogue
FSA	Food Standards Agency
IC	Improvement Condition
IED	Industrial Emissions Directive (2010/75/EU)
NOx	Oxides of nitrogen (NO plus NO ₂ expressed as NO ₂)
PHE	Public Health England
SAC	Special Area of Conservation
SGN	Sector guidance note
TGN	Technical guidance note
тос	Total Organic Carbon
WFD	Water Framework Directive (2000/60/EC)

2 Our decision

We have decided to issue the consolidated variation notice to the operator. This will allow it to continue to operate the Installation, subject to the conditions in the consolidated variation notice.

We consider that, in reaching that 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 consider that those conditions are appropriate.

3 How we reached our decision

3.1 Requesting information to demonstrate compliance with BAT Conclusions for incineration Plant

We issued a Notice under Regulation 61(1) of the Environmental Permitting (England and Wales) Regulations 2016 (a Regulation 61 Notice) on 15/06/2022 requiring the Operator to provide information to demonstrate how the operation of their installation currently meets, or will subsequently meet, the revised standards described in the incineration BAT Conclusions document. The Notice also required that where the revised standards are not currently met, the operator should provide information that:

- Describes the techniques that will be implemented before 3rd December 2023, which will then ensure that operations meet the revised standard, or
- Justifies why standards will not be met by 3rd December 2023, and confirmation of the date when the operation of those processes will cease within the installation or an explanation of why the revised BAT standard is not applicable to those processes, or
- Justifies why an alternative technique will achieve the same level of environmental protection equivalent to the revised standard 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 requested that the Operator make a formal request for derogation from compliance with that 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 12/12/2022

We considered that the response did not contain sufficient information for us to commence the permit review. We therefore issued a further information request to the Operator on 16/03/2023. Suitable further information was provided by the Operator on 11/07/2023.

We have not received any information in relation to the Regulation 61 Notice response that appears to be confidential in relation to any party.

Note that the Operators name has changed from Ancillary Components Limited to Reneco Ltd, the company registration number is unchanged therefore transfer of the permit is not required.

3.2 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 regulatory activities with the facility we have no reason to consider that the operator will not be able to comply with the conditions that we include in the permit.

4 The legal framework

The consolidated variation notice will be issued under Regulation 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 the consolidated variation notice 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.

5 The key issues

The key issues arising during this permit review are:

- Ensuring the Installation complies with the BAT conclusions.
- Setting emission limits (including BAT AELs) for emissions to air,
- The energy efficiency levels associated with the Best Available Techniques (BAT-AEELs)

5.1 Ensuring the Installation complies with the BAT conclusions

We have reviewed the operator's response to the regulation 61 notice and we are satisfied that the Installation will meet the requirements of the BAT conclusions by 3rd December 2023. Further detail on our assessment is in annex 1 of this decision document.

Based on our records and previous regulatory activities with the Installation we have no reason to consider that the operator will not be able to comply with the conditions that we have included in the permit.

5.2 Emissions to air and the emission limits applied to the plant

The consolidated permit includes new emission limits for emissions to air, and water. These limits ensure that the installation will comply with the relevant BAT-AELs, as specified in the BAT conclusions, and the relevant limits from IED Annex VI.

A number of general principles were applied during the permit review, including those set out in the UK Waste Incineration BAT Conclusions Interpretation Document . These included:

- The upper value of the BAT-AELs ranges specified were used unless use of the tighter limit was justified.
- The principle of no backsliding where if existing limits in the permit were already tighter than the upper end of the BAT-AEL ranges, the existing permit limits were retained.
- Where a limit was specified in both IED Annex VI and the BAT Conclusions for a particular reference period, the tighter limit was applied and in the majority of cases this was from the BAT Conclusions.

We have set the emissions limit values at the top end of the BAT-AEL range in line with section 4.35 of Defra's Industrial emissions Directive EPR Guidance on Part A installations which states: *Where the BAT AELs are expressed as a range, the ELV should be set on the basis of the top of the relevant BAT-AEL range – that is to say, at the highest associated emission level - unless the installation is demonstrably capable of compliance with a substantially lower*

ELV, based on the BAT proposed by the operator, or exceptional environmental considerations compel a tighter ELV.

We are satisfied that environmental considerations do not require tighter ELVs to be set, and the operator has not proposed any lower ELVs, and so we have set the ELVs at the top end of the BAT-AEL ranges.

We have set IC1 which requires the operator to assess options to reduce NO_X emissions below the top of the BAT AEL range.

5.3 Energy efficiency

The BAT conclusions specify an energy efficiency level associated with the best available techniques (BAT-AEEL). The BAT AEEL is based on gross electrical efficiency, gross energy efficiency or boiler efficiency depending on the type of plant.

The relevant BAT AEEL for this installation is gross electrical efficiency.

The Applicant stated that gross electrical efficiency is 21.2%. This is within the range specified in the BAT conclusions.

5.4 Monitoring

The monitoring requirements for mercury and dioxins/furans are dependent on whether the waste has low a low and stable mercury content and whether emissions of dioxins are stable respectively. Improvement conditions IC2 and IC3 require the operator to submit information to enable us to require the correct monitoring.

5.5 <u>Containment and bunding (Waste Treatment Activities)</u>

The Operator submitted a report detailing the suitability of the of the existing primary and secondary containment for the waste treatment activities on site. Based on the information provided we are satisfied that the containment is appropriate.

We have included improvement IC4 and IC5 in the permit requiring the Operator to submit a written 'primary containment plan' and 'secondary and tertiary containment plan' to detail the results of an inspection and program of works carried out by a competent structural engineer in accordance with relevant standards (CIRIA 535 and CIRIA 736). The plan shall include a program of works with timescales for the implementation of individual improvement measures necessary to demonstrate that the primary containment is fit for purpose or alternative appropriate measures to ensure all polluting materials will be contained on site.

5.6 Abatement (Waste Treatment Activities)

We have included improvement conditions IC7 in the permit requiring the Operator to review the waste treatment activities abatement and ventilation systems. The Operator shall implement any improvements identified in the review as approved by the Environment Agency.

5.7 Emissions from gas engines (Waste Treatment Activities)

We have included an improvement condition in the permit (IC9) requiring the Operator quantify methane emissions from the gas engines utilising the biogas produced by the AD treatment process to ensure that they are within benchmark levels. If they are found not be within benchmark levels the Operator will be required to take corrective actions to reduce the methane emissions.

5.8 Appropriate Measures (Physico-chemical Treatment)

The Operator has stated that the permitted physico- chemical treatment activity complies with all the appropriate measures given in the nonhazardous and inert waste: appropriate measures for permitted facilities guidance.

Annex 1

Decision checklist regarding relevant BAT Conclusions for Incineration Plant

This annex provides a record of decisions made in relation to each relevant BAT Conclusion applicable to the installation.

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

- NA Not Applicable
- CC Currently Compliant
- FC Compliant in the future (by 3rd December 2023)
- NC Not Compliant

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
1	EMS	Improve overall performance via use of a compliant EMS.	. There is an EMS in place that complies with all the points listed in BAT 1	CC

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
2	Energy efficiency	Determine gross electrical efficiency, gross energy efficiency or boiler efficiency (depending on plant type).	Energy efficiency has been calculated using BAT - AEELs method and report describing how it was calculated is attached. Please find attached 'ACL Goosey Lodge Biomass Combustion Plant Cycle Efficiency Calculation 2021' Calculation is based on the MBM LHV determined on a monthly basis and the total mass input. Output is the power generated. Average efficiency calculated as 21.2% waste input, not just MBM. The Operator has stated that the fluidised bed combustion technology is designed to combust pre-conditioned materials with a GCV of circa 9-11 MJ/kg. This is currently achieved using automated control processes which control the ratio of MBM and bioliquids being mixed dependant of setpoints and dynamically on conditions and measured parameters within the combustor. If other fuels were to be used in the future these would be subject to the above control regime meaning the GCV entering the combustor would be as above and hence the thermal efficiency be similar to that currently MBM as fuel.	CC

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
3	Process Monitoring	Monitor key process parameters for emissions to air and water specified in the corresponding table.	Process monitoring is carried out in line with BAT 3 requirements for the following relevant parameters. Oxygen Content Temperature Pressure Water Vapour Content Combustion Chamber Temperature	CC
4	Air emissions monitoring	Monitor emissions to air with at least the frequency in the corresponding table and in accordance with the EN standards.	Monitoring is carried out in line with BAT 4 requirements	CC
	PBDD/F	Monitor emissions to air of brominated dioxins and furans periodically if waste streams are known to contain brominated flame retardants are burned	PBDD/F monitoring is not required as no waste containing brominated flame retardants are/will be burned.Bute we have worded the permit so that it will be required in the event that such wastes are burned in the future.	NA

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
	PCDD/F	Monitor emissions to air of dioxins and furans using a continuous sampler unless emissions are sufficiently stable.	Attempts will be made to demonstrate via the PCCD/F Monitoring Protocol that emissions to air of PCDD/F are sufficiently stable and that a continuous sampler (long-term monitoring) is not required by 03/12/23; if these are unsuccessful, continuous sampling will be installed as soon as reasonably practical.	FC
	Mercury	Monitor emissions to air of mercury using continuous monitoring if required.	Attempts will be made to demonstrate via the Mercury Monitoring Protocol that emissions to air of mercury are low and stable and that a continuous sampler is not required by 03/12/23; if these are unsuccessful, continuous monitoring will be installed as soon as reasonably practical.	FC

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
5	OTNOC monitoring	Appropriately monitor emissions during OTNOC. Monitor PCCD/F and dioxin-like PCB mass emissions during a planned start-up and shut-down following the successful commissioning of the plant; already- operational plants must carry out this monitoring every 3 years; emissions profiles of continuously monitored pollutants must also be established following successful commissioning and for existing plants; consider further monitoring for plants that use abatement-system bypasses during start-up and/or shut-down.	Plant has been successfully commissioned, or is likely to be before 03/12/23. Emissions profiles of continuously monitored pollutants have been established during start-up and shut-down or will be established by 03/12/23. Monitoring of PCCD/F and dioxin-like PCB mass emissions during a planned start-up and shut-down will be carried within 3 years of 03/12/23.	FC
6	Water emissions monitoring	Monitor emissions from FGC and/or bottom ash treatment. Monitor to frequencies and standards in corresponding table.	Not applicable as no emissions to water from FGC or bottom ash treatment.	NA

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
		Reduced monitoring frequency permitted if emissions can be shown to be sufficiently stable.	Not applicable as no emissions to water from FGC or bottom ash treatment.	NA
7	Ash monitoring	Monitor LOI or TOI content of bottom ash to the frequencies and standards in corresponding table .	Monitoring carried out for TOC	CC
8	POP monitoring	For hazardous waste containing POPs, monitor POP content of waste streams (applicable to dedicated hazardous waste incinerators only). After commissioning and then after significant change that could affect POP content.	Not applicable - plant is not a dedicated hazardous waste incinerator	NA

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
9	Waste input controls	Pre-acceptance / acceptance procedures. Use all techniques (a) to (c) in corresponding table, and where relevant (d), (e) and (f).	Techniques set out in BAT 9 (a)-(c) are in place. Techniques (d)-(f) are not relevant	CC
10	Bottom ash treatment	Quality output management system part of EMS where bottom ash treatment is carried out.	IBA treatment is not carried out.	NA
11	Waste delivery, storage and handling	Monitor waste deliveries in line with corresponding table, depending on the risk posed by the waste type.	Measures in line with BAT 11 are in place	CC

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
		Radioactivity detection	Not required - no increased risk identified	NA
12		Storage and handling. Use both techniques listed in corresponding table.	Measures in line with BAT 12 are in place	CC
13		Storage and handling of clinical waste. Combination of techniques listed in corresponding table.	Not applicable as clinical waste not received at the installation	NA
14	Overall environment performance	Reduce unburnt substances in slags / bottom ash and reduce emissions. Use a combination of techniques listed in corresponding table	The following measures listed in the table of BAT 14 are used: [list technique reference letters] A B and C techniques are employed.	CC

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
		BAT-AEPL for TOC or LOI	The installation meets the BAT-AEPL for [TOC or LOI] as shown by historic monitoring data	CC
15		Control plant settings to reduce emissions to air. Use techniques such as an advanced control system.	An advanced control system is in place to achieve the requirements of BAT 15.	CC
16		Procedures to limit shutdown and start-up. Set up and implement procedures such as continuous rather than batch operation	Start-up and shut-down is minimised by Continuous supply chain of meat and bone meal with onsite storage to take into account seasonal variations. PPM utilised to minimise unplanned shutdowns. Major works planned in advance of shut downs to maximise best use of time off and hence minimise unplanned shutdowns.	CC
17	Emission to air and water	Design of FGC system and waste water treatment plant. Appropriate design, operated in design range, maintained to ensure optimal availability.	Flue gas system is designed appropriately and is operated within those design parameters	CC

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
18	OTNOC	Reduce frequency of OTNOC by setting up and implementing an OTNOC management plan.	An OTNOC management plan which meets the requirements of BAT 18 will be implemented by 03/12/23. A description of how critical equipment has been designed to minimise occurrence of abnormal operation (AO) and minimise impacts from AO and start-up and shut-down periods is included with this submission.	FC
19		Increase efficiency by using a heat recovery boiler.	A heat recovery boiler is used to generate electricity and steam and hot water	CC
20	Energy efficiency	Increase efficiency by using a combination of techniques listed in corresponding table.	A heat recovery boiler is used to generate electricity and steam and hot water. Techniques C D E and F are used. (F is 46barg 355 degC) G and I are all employed.	CC
20		BAT-AEEL is within the BAT – AEEL range	The gross electrical efficiency 21.2%	CC

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
21		Prevent or reduce diffuse emissions (including odour) using the listed techniques.	Measures in line with BAT 21 are in place	CC
22	Diffuse	Prevent diffuse emissions of VOCs from gaseous and liquid wastes by direct feed to furnace.	Measures in line with BAT 22 are in place. Liquid Waste and Animal By Product streams are stored in enclosed tanks under negative pressure with odours directed to combustor.	CC
23	emissions to air	Prevent or reduce diffuse emissions to air from treatment of slags and bottom ashes by including listed measures in the EMS.	Not applicable - bottom ash treatment is not carried out.	NA
24		Prevent or reduce diffuse emissions to air from treatment of slags and bottom ashes. Use one or a combination of techniques in corresponding table	Not applicable - bottom ash treatment is not carried ou	NA

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
0.5		Reduce emissions of metals and metalloids from incineration of waste. Use one or a combination of techniques in corresponding table.	The following measures listed in the table of BAT 25 are used: Technique A	CC
25	Channelled emissions to	BAT-AELs for dust and metals	The plant is currently able to achieve an emission limit value set at the top end of the BAT-AEL range.	CC
26	air	Reduce emissions of dust from treatment of slags and bottom ashes. Use a bag filter if treating air from treatment of IBA under sub-atmospheric conditions.	Not applicable - bottom ash treatment is not carried out	NA
26		BAT-AEL for dust from IBA treatment. Applies if using a bag filter to treat air from treatment of IBA under sub-atmospheric conditions	Not applicable - bottom ash treatment is not carried out	NA

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
27		Reduce emissions of HCl, HF and SO ₂ using one or a combination of techniques in corresponding table.	The following measures listed in the table of BAT 27 are used: Technique C	CC
		Reduce peak emissions of HCl, HF and SO ₂ and amount of residue produced, using technique (a) or both techniques in corresponding table.	The following measures listed in the table of BAT 28 are used: Technique A	CC
28		BAT-AELs for HCI, HF and SO2	The plant is currently able to achieve an emission limit value set at the top end of the BAT-AEL range.	CC
29		Reduce emissions of NOx while limiting emissions of CO, N ₂ O and NH ₃ using appropriate combination of techniques in corresponding table.	The following measures listed in the table of BAT 29 are used: Technique A	CC

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
		BAT-AELs for NOx, CO and NH₃	The plant is currently able to achieve an emission limit value set at the top end of the BAT-AEL range.	CC
		Reduce emissions of organic compounds including PCDD/F and PCBs using techniques (a), (b), (c), (d) and one or a combination of techniques (e) to (i) in corresponding table	The following measures listed in the table of BAT 30 are used: Technique A B C and D are employed.	CC
30		BAT-AELs for PCDD/F	The plant is currently able to achieve an emission limit value set at the top end of the BAT-AEL range.	CC

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
31		Reduce mercury emissions using one or a combination of techniques in the corresponding table.	The Operator has stated that Animal By Product mono waste streams are combusted not containing related compounds which form mercury. The installation is accredited under the Renewables Obligations and hence currently limited to biomass fuels. Routine monthly sampling of fuels is undertaken for GCV, ultimate and proximate analysis. Before any future fuels would be considered an array of sampling .	CC
		BAT-AEL for mercury	The plant is currently able to achieve an emission limit value set at the top end of the BAT-AEL range.	CC
32	Emissions to water	Reduce contamination of uncontaminated water, reduce emissions to water and increase resource efficiency. Segregate waste water streams and treat them separately.	The measures listed under BAT 32 are used.	CC

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
33	Water usage	Reduce water usage, prevent waste water generation using one or a combination of techniques in the corresponding table	The following measures listed in the table of BAT 33 are used: Techniques C and D	CC
34	Emissions	Reduce emissions to water from FGC and/or from storage and treatment of slags and bottom ashes using one or a combination of techniques in the corresponding table and use secondary techniques as close to source as possible.	Not applicable - no direct or indirect emissions to water from FGC or bottom ash treatment	NA
34	to water	BAT-AELs	Not applicable - no direct or indirect emissions to water from FGC or bottom ash treatment	NA
35	Resource efficiency	Resource efficiency. Handle and treat bottom ashes separately from FGC residues.	Bottom ashes are handled and treated separately from FGC residues.	NA

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
36		Resource efficiency for treatment of slags and bottom ashes. Use appropriate combination of techniques in corresponding table depending on hazardous properties of the slags and bottom ashes.	Not applicable - bottom ash treatment is not carried out	NA
37	Noise	Reduce noise emissions using one or a combination of techniques in the corresponding table.	The following measures listed in the table of BAT 37 are used: Techniques A B C D and E	CC

Decision checklist regarding relevant BAT Conclusions for Anaerobic Digestion Plant & physico-chemical treatment plant.

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

- NA Not Applicable
- CC Currently Compliant
- FC Compliant in the future (by 3rd December 2023)
- NC Not Compliant

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)		
1. G	1. General BAT Conclusions					
1.1 – Ov	1.1 – Overall environmental performance					

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
1	EMS	Improve overall performance via use of a compliant EMS.	The Operator has stated that they are currently operating to BAT and no derogation is needed. All to current IMS Procedures • QMS08 – Management Review Procedure • QMS07 – Evaluation of Compliance Procedure • ACLEMS09 Environmental Aspects and Impacts • QMS03 – Internal Audit Procedure • QMS05 – Competence, Training and awareness	CC

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
2	Environmental performance	Techniques for improvement of the overall performance of the plant.	The Operator has stated that they are currently operating to BAT and no derogation is needed. All to current IMS Procedures • ACLQMS05 – Business Winning • ACLEMS02 – Acceptance of materials for processing • ACLEMS02F1 – Audit report for companies supplying material Appendix 4 - Waste treatment interface diagram Appendix 5 - Biosolids & Liquids quality plan	CC

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
3	Process Monitoring	Monitor key process parameters for emissions to air and water specified in the corresponding table.	The Operator has stated that they are currently operating to BAT and no derogation is needed. Appendix 4 - Waste treatment interface diagram Appendix 5 - Biosolids & Liquids quality plan No waste to water on site	CC
4	Waste Storage	Environmental risks associated with the storage of waste	The Operator has stated that they are currently operating to BAT and no derogation is needed. ACL Integrated Management System • ACLEMS16 – Site liquid storage and secondary containment	CC

5 Handling and transfer of waste Environmental risks associated with the handling and transfer of waste. The Operator has stated that they are currently operating to BAT and no derogation is needed. All to current IMS Procedures - ACLEMS07 - Emergency preparedness and response - Burst Liquid Tank - ACLEMS08 - Emergency Preparedness and response - Burst Currently operating and awareness Environmental risks associated with the handling and transfer of waste CC	BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
1.2 - Monitoring		transfer of waste	•	that they are currently operating to BAT and no derogation is needed. All to current IMS Procedures • ACLEMS07 – Emergency preparedness and response - Burst Liquid Tank • ACLEMS08 – Emergency Preparedness and response Tanker spillage procedure QMS05 - Competence	CC

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
6	Waste water	Waste water monitoring	The Operator has stated that they are currently operating to BAT and no derogation is needed. All to current IMS Procedures There is no emissions to water from the processes • ACLOP26 – Effluent Treatment Plant Operational Procedure • LAB01 - Weekly Routine Laboratory Work Schedule • LAB19 - Methodology for the Determination of Suspended Solids (TSS) • LAB22 - Waste Water Treatment Plant Monitoring Procedure • LAB22F1 - Waste Water Treatment Plant Monitoring Form • ACLOP26F1 - Daily Sample Record	CC

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
7	Waste water	Periodic waste water monitoring	GLPP does not discharge any liquid to a water source - all liquid is pumped directly to sewer where limits are set in a trade effluent discharge agreement	NA
8	Channelled emissions	Periodic Air emissions in accordance with EN standards:	The Operator has stated that they are currently operating to BAT and no derogation is needed. EMS01 - Emissions monitoring and Scope of roles and responsibilities	CC
		Brominated flame retardants (mechanical treatment in shredders of metals waste)	NA	NA
		CFCs (treatment of WEEE containing VFCs and/or VHCs) Dioxin-like PCBs (Mechanical treatment in shredders of metal waste; Decontamination of equipment containing PCBs)	NA NA	NA NA
		Dust (Mechanical treatment of waste; Mechanical biological treatment of waste; Physico-chemical treatment of solid and/or pasty waste; Thermal treatment of spent activated carbon, waste catalysts and excavated contaminated soil; Water washing of excavated contaminated soil)	NA	NA

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
		HCI (Thermal treatment of spent activated carbon, waste catalysts and excavated contaminated soil; Treatment of water-based liquid waste)	NA	NA
		HF (Thermal treatment of spent activated carbon, waste catalysts and excavated contaminated soil)	NA	NA
		Hg (Treatment of WEEE containing mercury)	NA	NA
		H ₂ S(Biological treatment of waste)	NA	
		Metals and metalloids except mercury (Mechanical treatment in shredders of metal waste)	NA	NA
		NH ₃ (Biological treatment of waste; Physico-chemical treatment of solid and/or pasty waste; Treatment of water-based liquid waste)	NA	NA
		Odour concentration (Biological treatment of waste)	NA	NA
		PCDD/F (Mechanical treatment in shredders of metal waste)	NA	NA
		TVOC (Mechanical treatment in shredders of metal waste; Treatment of WEEE containing VFCs and/or VHCs; Mechanical treatment of waste with calorific value; Mechanical biological treatment of waste; Physico-chemical treatment of solid and/or pasty waste; Refining of waste oil; Physico- chemical treatment of waste with calorific value; Regeneration of spent solvents; Thermal treatment of spent activated carbon, waste catalysts and excavated contaminated soil; Water washing of excavated contaminated soil; Treatment of water-based liquid waste; Decontamination of equipment containing PCBs)	NA	NA

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
9	Solvents	Monitor diffuse emissions from spent solvents regeneration.	NA	NA
10	Ash monitoring	Odour emissions monitoring	The Operator has stated that they are currently operating to BAT and no derogation is needed. All to current IMS Procedures • ACLEMS30 – GLPP Odour Management Plan ACLEMS20 - GLPP SPMP	CC
11	Annual consumption	Annual resources consumption	The Operator has stated that they are currently operating to BAT and no derogation is needed. All to current IMS Procedures Requirements of NP3338SZ/V0005 PI Reporting	CC

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
12	Odour	Odour management	The Operator has stated that they are currently operating to BAT and no derogation is needed. All to current IMS Procedures • ACLEMS30 – GLPP Odour Management Plan • QM03 – Internal Audit Procedure • QMS07 – Evaluation of Compliance Procedure • QMS04 – Consultation and communication procedure	CC
13	Odour	Odour reduction	The Operator has stated that they are currently operating to BAT and no derogation is needed. All to current IMS Procedures Appendix 5 - Biosolids & Liquids quality plan	CC

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
14	Air emissions	Prevent or reduce diffuse emissions to air, in particular of dust, organic compounds and odour.	The Operator has stated that they are currently operating to BAT and no derogation is needed. All to current IMS Procedures Appendix 5 - Biosolids & Liquids quality plan	CC
15	Flare	Flaring only used for safety reasons or non-routine operations	The Operator has stated that they are currently operating to BAT and no derogation is needed. Meets BAT 15	CC
16	Flare emissions	Reduce emissions to air from flares when flaring is unavoidable.	The Operator has stated that they are currently operating to BAT and no derogation is needed. Meets BAT 16	CC

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
17	Noise and vibration	Noise and vibration management plan	The Operator has stated that they are currently operating to BAT and no derogation is needed. All to current IMS Procedures TT-RA05 – Risk assessment • Control of Noise at Work H&S02 - Hazzard ID Risk assessment and control measures H&S02-F3 - Noise level report	CC

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC NC)
18	Noise and vibration	Techniques to reduce noise and vibration	The Operator has stated that they are currently operating to BAT and no derogation is needed. All to current IMS Procedures TT-RA05 – Risk assessment • Control of Noise at Work H&S02 - Hazzard ID Risk assessment and control measures H&S02-F3 - Noise level report	CC

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
19	Emissions to water	Water use reduction	The Operator has stated that they are currently operating to BAT and no derogation is needed. All to current IMS Procedures No waste water discharged from site Requirements of NP3338SZ/V0005 PI Reporting	CC
20	Emissions to water	Water treatment to reduce emissions to water	The Operator has stated that they are currently operating to BAT and no derogation is needed. No discharge to water course from any onsite process. Trade Effluent agreement in place with Anglian Water for final liquid from onsite WWTP	CC

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
21	Accidents and incidents	Prevent or limit the environmental consequences of accidents and incidents	The Operator has stated that they are currently operating to BAT and no derogation is needed. ACLEMS09F1- Environmental aspects and impacts EMS07 - Emergency preparedness and response - Burst Liquor tank H&S01 - Fire and evacuation procedures H&S04 - Emergency preparedness and response ACLOP05 - Emergency Fire MBM/Wood EMS04 - Emergency preparedness and response - oil spills EMS05 - Emergency preparedness procedure	CC

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC NC)
22	Materials	Substitute materials with waste	The Operator has stated that they are currently operating to BAT and no derogation is needed.	CC
			All to current IMS Procedures	
23	3 Energy efficiency	Reduce energy consumption	The Operator has stated that they are currently operating to BAT and no derogation is needed.	CC
			Requirements of NP3338SZ/V0005 PI Reporting	
l.9 Re-ι	use of packaging			
24	Re-use of packaging	Maximise the use of packaging	The Operator has stated that they are currently operating to BAT and no derogation is needed.	CC
			All to current IMS Procedures	

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
2.1 Gen	eral BAT conclusions	for the mechanical treatment of waste		
25	Air emissions	Reduce emissions to air of dust, and of particulate-bound metals, PCDD/F and dioxin-like PCBs	The Operator has stated that they are currently operating to BAT and no derogation is needed.	NA
		BAT AEL for channelled dust emissions to air for mechanical treatment of waste: Dust: 2 -5 mg/Nm ³ *When a fabric filter is not applicable, the upper end of the range is 10 mg/Nm ³	The Operator has stated that they are currently operating to BAT and no derogation is needed.	NA
2.2 BAT	conclusions for the m	nechanical treatment in shredders of metal waste		
2.2.1 ov	erall environmental pe	erformance		

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
26	Overall environmental performance	Improve the overall environmental performance, and to prevent emissions due to accidents and incidents	The Operator has stated that they are currently operating to BAT and no derogation is needed. ACLEMS04 - Acceptance of material ACLEMS04F1 - Incoming material audit report ACLEMS04F2 - Waste sample form	NA
2.2.2 Def	flagrations	·		
27	Deflagrations	Prevent deflagrations and to reduce emissions when deflagrations occur	The Operator has stated that they are currently operating to BAT and no derogation is needed.	NA
2.2.3 End	ergy efficiency		I	I
28	Energy efficiency	Keep shredder feed stable	The Operator has stated that they are currently operating to BAT and no derogation is needed.	NA

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC NC)
2.3 BAT	conclusions for the t	reatment of WEEE containing VFCs and/or VHCs		
2.3.1 Em	nissions to air			
29	Emissions of organic compounds	Prevent or reduce emissions of organic compounds to air	Not applicable	NA
2.3.2 Ex	plosions	·		
30	Emissions due to explosions	Prevent emissions due to explosions when treating WEEE containing VFCs and/or VHCs	Not applicable	NA
		hanical treatment of waste with calorific value		
2.4.1 Em	nissions to air			
31	Emissions to air	Reduce emissions of organic compounds	Not applicable	NA
2.5 BAT	conclusions for the I	nechanical treatment of WEEE containing mercury		
2.5.1 Em	nissions to air			
32	Reduce mercury emissions to air	Collect mercury emissions at source, to send them to abatement and to carry out adequate monitoring	Not applicable	NA
		he biological treatment of waste		<u> </u>

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC NC)
3.1.1 Ove	erall environmental p	erformance		
33	Environmental Performance	Reduce odour emissions and to improve the overall environmental performance	The Operator has stated that they are currently operating to BAT and no derogation is needed. All to current IMS Procedures • ACLQMS05 – Business Winning • ACLEMS02 – Acceptance of materials for processing • ACLEMS02F1 – Audit report for companies supplying material	NA

34	Channelled emissions	Reduce channelled emissions to air of dust, organic compounds and odorous compounds, including H ₂ S and NH ₃	The Operator has stated that they are currently operating to BAT and no derogation is needed. All to current IMS Procedures No channelled emissions. Odourous air used as combustion air within adjacent biomass combustion facility. The Incinerator plant is split into 2 streams A and B. A and B streams are maintained regularly but separately throughout the year – this minimises the risk of both streams being shutdown at the same time. ACL are in the process of constructing the	CC
			shutdown at the same	
			•	
			permitted bio bed to treat	
			potentially odorous	
			building air in times if and	
			when both incinerator	
			lines are shutdown. ACL	
			are in the process of	
			installing a Regenerative	
			Thermal Oxidiser (RTO)	
			to treat concentrated	
			odours such as storage	

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
			tanks / receptions bins and process non condensable in times if and when both incinerator lines are shutdown. A permit variation is being prepared for this contingency addition. It has been decided to complete the above two projects within the 2023 year. This is to allow for a longer shutdown of one of the incinerator lines likely in 2024 for potential boiler section	
			refurbishment / replacement.	

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
35	Waste water	Reduce the generation of waste water and to reduce water usage	The Operator has stated that they are currently operating to BAT and no derogation is needed. No direct or indirect emissions to water from AD and composting processes. All to current IMS Procedures. • ACLOP26 – Effluent Treatment Plant Operational Procedure GLTP monitors and report on BOD, COD, Ammonium, PH and Suspended solids to demonstrate no accidental emissions to water - Permit DP3136LC requirement	CC

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
3.2.1 Ov	erall environmental p	erformance		
36	Environmental performance	Reduce emissions to air and to improve the overall environmental performance	Not applicable	NA
3.2.2 Od	our and diffuse emiss	sions to air	I	
37	Odour and diffuse emissions to air	Reduce diffuse emissions to air of dust, odour and bioaerosols from open-air treatment steps	Not applicable	NA
3.3 BAT	conclusions for anae	robic treatment of waste		
3.3.1 Em	nissions to air			

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
38	Environmental performance	Reduce emissions to air and to improve the overall environmental performance	The Operator has stated that they are currently operating to BAT and no derogation is needed. All to current IMS Procedures LAB42 - AD Biogas Compositions analysis LAB23 - FOS/TAC Titrations procedures LAB40 - Analysis of ammonia LAB08 - Treatability procedure	CC
		nechanical biological treatment (MBT) of waste		
3.4.1 En	nissions to air			
39	Emissions to air	Reduce emissions to air	The Operator has stated that they are currently operating to BAT and no derogation is needed.	NA
4.	BAT conclusions for t	he physico-chemical treatment of solid and/or pasty wa	aste	

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
40	Environmental performance	Waste input monitoring		NA
4.1.2 Em	hissions to air			
41	Emissions to air	Reduce emissions to air of dust, organic compounds and NH_3		NA
		BAT AEL for channelled dust emissions to air from physico chemical treatment of solid and/or pasty waste:		
		Dust: 2 -5 mg/Nm ³		
4.2 BAT	conclusions for the	re-refining of waste oil		
4.2.1 Ov	erall environmental	performance		
42	Environmental performance	Reduce emissions		NA
43	Environmental performance	Reduce waste disposal		NA

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC NC)
44	Emissions to air	Reduce emissions of organic compounds to air		NA
		physico-chemical treatment of waste with calorific value		
4.3.1 Em	issions to air			
45	Emissions to air	Reduce emissions of organic compounds to air		NA
	conclusions for the g erall environmental p	generation of spent solvents performance		
46	Environmental performance	Improve the overall environmental performance of the regeneration of spent solvents		NA
4.4.2 Em	issions to air			
47	Emissions to air	Reduce emissions of organic compounds to air		NA
		f organic compounds to air from the re-refining of waste o egeneration of spent solvents	il, the physico chemical trea	tment of waste

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
-	-	BAT AEL		NA
4.6 BAT	conclusions for the t	hermal treatment of spent activated carbon, waste catalysts a	nd excavated contamina	ted soil
4.6.1 Ov	verall environmental p	performance		
48	Environmental performance	Improve the overall environmental performance of the regeneration of spent activated carbon, waste catalysts and excavated contaminated soil		NA
4.6.2 En	nissions to air			
49	Emissions to air	Reduce emissions of HCI, HF, dust and organic compounds to air.		NA
	conclusions for the v	water washing of excavated contaminated soil		
4.7 BAT				
	nissions to air			

BAT No.	Торіс	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
4.8.1 Ov	erall environmental p	erformance		
51	Environmental performance	Reduce channelled emissions of PCBs and organic compounds to air		NA
	all environmental per	ne treatment of water-based liquid waste formance		
52	Environmental performance	Monitor the waste input as part of the waste pre-acceptance and acceptance procedures		NA
5.2 Emis	ssions to air			1
53	Emissions to air	Reduce emissions of HCI, NH3 and organic compounds to air		NA

6 Review and assessment of derogation requests made by the operator in relation to BAT Conclusions which include an associated emission level (AEL) value

The IED enables a competent authority to allow derogations from BAT AELs stated in BAT Conclusions under specific circumstances as detailed under Article 15(4):

By way of derogation from paragraph 3, and without prejudice to Article 18, the competent authority may, in specific cases, set less strict emission limit values. Such a derogation may apply only where an assessment shows that the achievement of emission levels associated with the best available techniques as described in BAT conclusions would lead to disproportionately higher costs compared to the environmental benefits due to:

(a) the geographical location or the local environmental conditions of the installation concerned; or

(b) the technical characteristics of the installation concerned.

As part of their Regulation 61 Note response, the operator has not requested a derogation from compliance with any AEL values.

7 Summary checklist

Aspect considered	Decision
Receipt of application	
Confidential information	A claim for commercial or industrial confidentiality has not been made.
Identifying confidential information	We have not identified information provided as part of the application that we consider to be confidential.
	The decision was taken in accordance with our guidance on confidentiality.
Operating techniques	
General operating techniques	We have reviewed the techniques used by the operator where they are relevant to the BAT Conclusions and compared these with the relevant guidance notes.
	The permit conditions ensure compliance with the relevant BREF, BAT Conclusions. The ELVs deliver compliance with the BAT-AELs.
Permit conditions	
Updating permit conditions during consolidation	We have updated permit conditions to those in the current generic permit template as part of permit consolidation. The conditions will provide at least the same level of protection as those in the previous permit and in some cases will provide a higher level of protection to those in the previous permit.
Changes to the permit conditions due to an Environment Agency initiated variation	We have varied the permit as stated in the variation notice.
Improvement programme	Based on the information on the application, we consider that we need to impose an improvement programme.
	We have imposed an improvement programme to see key issues section for further information.
	We have also removed the completed improvement conditions from the permit.
Emission limits	We have decided that emission limits should be set for the parameters listed in the permit.
	These are described in the relevant BAT Conclusions in Section 5 of this document.

Aspect considered	Decision
	It is considered that the ELVs/equivalent parameters or technical measures described above will ensure that significant pollution of the environment is prevented and a high level of protection for the environment is secured.
Monitoring	We have decided that monitoring should be carried out for the parameters listed in the permit, using the methods detailed and to the frequencies specified.
	These are described in the relevant BAT Conclusions in Section 5 of this document.
Operator competence	
Management system	There is no known reason to consider that the operator will not have the management system to enable it to comply with the permit conditions.
Growth Duty	
Section 108 Deregulation Act 2015 – Growth duty	We have considered our duty to have regard to the desirability of promoting economic growth set out in section 108(1) of the Deregulation Act 2015 and the guidance issued under section 110 of that Act in deciding whether to grant this permit.
	Paragraph 1.3 of the guidance says: "The primary role of regulators, in delivering regulation, is to achieve the regulatory outcomes for which they are responsible. For a number of regulators, these regulatory outcomes include an explicit reference to development or growth. The growth duty establishes economic growth as a factor that all specified regulators should have regard to, alongside the delivery of the protections set out in the relevant legislation."
	We have addressed the legislative requirements and environmental standards to be set for this operation in the body of the decision document above. The guidance is clear at paragraph 1.5 that the growth duty does not legitimise non- compliance and its purpose is not to achieve or pursue economic growth at the expense of necessary protections.
	We consider the requirements and standards we have set in this permit are reasonable and necessary to avoid a risk of an unacceptable level of pollution. This also promotes growth amongst legitimate operators because the standards applied to the operator are consistent across businesses in this sector and have been set to achieve the required legislative standards.