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/XP3506LZ
The Operator is:	Aqua Operations Limited
The Installation is:	Selby Sauces and Pickles Effluent Treatment Plant
This Variation Notice number is:	EPR/XP3506LZ/V003

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 best available techniques (BAT) Conclusions.

We have reviewed the permit for this installation against the BAT Conclusions for the Food, Drink and Milk Industries published on 4th December 2019 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. It is our record of our decision-making process and shows how we have taken into account all relevant factors in reaching our position.

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.

There was a variation application made by the Operator (V003) which submitted on 31/07/2023 which is in direct correlation with review of the extant permit. Therefore, the variation (V002) also incorporates that variation application, together with the permit consolidation now bearing the new suffix (V003).

The scope of V003 is to correct updated the permit with an already permitted Effluent Treatment Plant (ETP) activity, inlet screen for the primary screening stage of effluent treatment, and the addition of a Direct Air Flotation (DAF) plant that is replacing the Swirflow Tank to better remove suspended solids from the effluent stream, in order to meet the requirements of the trade effluent emissions limit values set by the Environment Agency.
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

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 09/06/2022 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 4 December 2023, which will then ensure that operations meet the revised standards, or
- justifies why standards will not be met by 4 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 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 07/10/2022.

We considered it was in the correct form and contained sufficient information for us to begin our determination of the permit review but not that it necessarily contained all the information we would need to complete that determination.

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 6 of FDM and 15 of the Waste Treatment sector. In relation to this BAT Conclusions, the operator has committed compliance by 4 December 2023. We have therefore included Improvement Conditions IC8 and IC10 in the Consolidated Variation Notice to ensure that the requirements of the BAT Conclusions are delivered before 4 December 2023.

2.3 Requests for further information during determination

Although we were able to consider the Regulation 61 Notice response generally satisfactory at receipt, we did in fact need more information in order to complete our permit review assessment and issued a further information request on 26/09/2023 concerning BATcs 6, 8, 9, 11, 12, AELs for water, EPL for energy, MCPs, SCR, containment, cooling towers, product lines, updated site plan, number of anaerobic digestion tanks, flaring, biogas storage tanks, type of waste used in digestors. A copy of the further information request was placed on our public register.

Our assessment of variation application V003

As part of this permit review process, we have decided to grant the concurrent permit variation application.

The scope of this variation is to install a DAF plant to better remove suspended solids from the waste water, in order for the Operator to meet the requirements of the emission limits set in the permit for parameters monitored in the treated effluent discharged to Tiver Ouse.

The DAF plant, associated equipment and materials are enclosed and/or bunded to minimise their impacts.

2.4.1 Decision considerations for V003

The key issues are potential noise and odour from the DAF plant and the demonstration of Best Available Techniques.

The DAF plant will result in a better quality of effluent for discharge to sewer, and there is no increase to the flows or discharge parameters as a result.

We consider in reaching our decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

Confidential information
A claim for commercial or industrial confidentiality has not been made.

The decision was taken in accordance with our guidance on confidentiality.

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.

Consultation
This is a normal variation, so no consultation is required.

General operating techniques

We have reviewed the techniques used by the operator and compared these with the relevant guidance notes and we consider them to represent appropriate techniques for the facility.

The operating techniques that the applicant must use are specified in table S1.2 in the environmental permit.

The Site

There is no change to the installation boundary as a result of this variation.

Noise impacts

The Operator completed a noise assessment of the centrifuge proposal. The conclusion of the assessment is that it is unlikely that the operation of the DAF plant would have a significant noise impact.

Based on the location and operation of the proposal, we also conclude that the proposal is unlikely to have a significant impact and as such no additional controls are required beyond the conditions in the permit.

Odour Impacts

The Operator completed an odour screening assessment of the DAF plant proposal. The conclusion of the assessment is that the operation of the DAF plant and additional sludge produced from the flocculation process is unlikely to have a significant odour impact.

Based on the location and operation of the proposal, we also conclude that the proposal is unlikely to have a significant impact and as such no additional controls are required beyond the conditions in the permit.

Management System

We are not aware of any reason to consider that the operator will not have the management system to enable it to comply with the permit conditions.

The decision was taken in accordance with the guidance on operator competence and how to develop a management system for environmental permits.

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.

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 the Food, Drink and Milk Industries, were published by the European Commission on 4 December 2019.

There are 37 BAT Conclusions.

BAT 1 – 15 are General BAT Conclusions (Narrative BAT) applicable to all relevant Food, Drink and Milk Installations in scope.

BAT 16 – 37 are sector-specific BAT Conclusions, including Best Available Techniques Associated Emissions Levels (BAT-AELs) and Associated Environmental Performance Levels (BAT-AEPLs):

BAT 16 & 17	BAT Conclusions for Animal Feed
BAT 18 – 20	BAT Conclusions for Brewing
BAT 21 – 23	BAT Conclusions for Dairies
BAT 24	BAT Conclusions for Ethanol Production
BAT 25 & 26	BAT Conclusions for Fish and Shellfish Processing
BAT 27	BAT Conclusions for Fruit and Vegetable Processing
BAT 28	BAT Conclusions for Grain Milling
BAT 29	BAT Conclusions for Meat Processing
BAT 30 – 32	BAT Conclusions for Oilseed Processing and Vegetable Oil Refining
BAT 33	BAT Conclusions for Soft Drinks and Nectar/Fruit Juice Processed from Fruit and Vegetables
BAT 34	BAT Conclusions for Starch Production
BAT 35 – 37	BAT Conclusions for Sugar Manufacturing

In addition to the BAT Conclusions for the Food, Drink and Milk Industries; the following BAT Conclusions also apply (as “secondary” BREF BAT Conclusions) due to the site activities:

- Waste Treatment BAT Conclusions published 10th August 2018 (relevant to FDM sites undertaking Anaerobic Digestion).

BAT 15, 16, 21 & 38.

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

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	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
GENERAL BAT CONCLUSIONS (BAT 1-15)			
1	**Environmental Management System - Improve overall environmental performance.** Implement an EMS that incorporates all the features as described within BATc 1.	**CC**	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. Although the Operator identified two sub-BAT points where compliance will be achieved by 04/12/2023, namely (xvi) – application of sectorial benchmarking and (iv) – energy efficiency plan, because the Operator has an EMS externally accredited to the ISO14001 standard, we do not consider that an improvement condition is needed at this time.
2	**EMS Inventory of inputs & outputs. Increase resource efficiency and reduce emissions.** Establish, maintain and regularly review (including when a significant change occurs) an inventory of water, energy and raw materials consumption as well as of waste water and waste gas streams, as part of the environmental management system (see BAT 1), that incorporates all of the features as detailed within the BATCs.	**CC**	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. The Operator has an EMS externally accredited to ISO14001. The Operator declared: • Using a simplified process flow diagram • Provided a description of the process-integrated techniques • Having information about the water consumption in the installation • Volume and characteristics of the wastewater • Monitorisation of waste gas streams and characteristics

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	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
			• Energy consumption, raw materials used, and waste generated monitored to identify efficiency opportunities • Appropriate monitoring strategy to increase efficiency based on BATcs and internal KPIs
3	**Monitoring key process parameters at key locations for emissions to water.** For relevant emissions to water as identified by the inventory of waste water streams (see BAT 2), BAT is to monitor key process parameters (e.g. continuous monitoring of waste water flow, pH and temperature) 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).	**CC**	The operator has provided information to support compliance with BATc 3. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 3. The Operator declared that it is monitoring the process effluent daily for pH, flow rate, and pollutant loads, prior to discharging the treated effluent to River Ouse.
4	**Monitoring emissions to water to the required frequencies and standards.** BAT is to monitor emissions to water with at least the frequency given [refer to BAT 4 table in BATc] 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.	**CC**	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. This installation operates the ETP that is processing wastewater generated by Selby Sauces & Pickles that operates under its own environmental permit, EPR/BO2323IB. The Operator has not previously monitored Chemical Oxygen Demand (COD), Total Nitrogen (TN), and Total Phosphorous (TP). However, we have included the following monitoring standards and frequency in the permit: • COD – As agreed with the Environment Agency (daily)

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			• TN - EN 12260, EN ISO 11905-1 (daily) • TP - EN ISO 6878, EN ISO 15681-1 and -2, ENISO 11885 (daily) In addition, considering the specific of the activity producing the effluent and the use of salt (sodium chloride) for brining (pickles production), we are including the requirement for monthly monitoring of chloride (Cl^-) emissions at EN ISO 10304-1 or EN ISO 15682 standards. The monitoring and associated standards described here will be future dated in the permit from the 04/12/2023, therefore, the operator will be complaint from the date of permit issue.
5	**Monitoring channelled emissions to air to the required frequencies and standards.** BAT is to monitor channelled emissions to air with at least the frequency given and in accordance with EN standards.	**NA**	We are satisfied that BATc 5 is not applicable to this installation. This permit is for an effluent treatment plant (ETP) where the process water generated by the Selby Sauces & Pickles site, is treated therefore, BATc 5 is not applicable to this installation that has no process associated air emissions.
6	**Energy Efficiency** In order to increase energy efficiency, BAT is to use an energy efficiency plan (BAT 6a) and an appropriate combination of the common techniques listed in technique 6b within the table in the BATc.	**FC**	The operator has provided information to support compliance with BATc 6. We have assessed the information provided and we are not satisfied that the operator has demonstrated compliance with BATc 6. The Operator declared that it does not currently have an Energy Efficiency Plan as requested by BATc 6(a) but will achieve compliance by 04/12/2023.

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	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
			The following energy efficiency techniques are used at this installation: • Cogeneration • Heat recovery and heat exchangers • Variable speed drives • LED lighting We consider that the operator will be future compliant with BATc 6(a). Improvement condition IC8 has been included in the permit to achieve compliance (see Annex 3).
7	**Water and wastewater minimisation** In order to reduce water consumption and the volume of waste water discharged, BAT is to use BAT 7a and one or a combination of the techniques b to k given below. (a) water recycling and/or reuse (b) Optimisation of water flow (c) Optimisation of water nozzles and hoses (d) Segregation of water streams Techniques related to cleaning operations: (e) Dry cleaning (f) Pigging system for pipes (g) High-pressure cleaning (h) Optimisation of chemical dosing and water use in cleaning-in-place (CIP) (i) Low-pressure foam and/or gel cleaning (j) Optimised design and construction of equipment and process areas (k) Cleaning of equipment as soon as possible	**NA**	We are satisfied that BATc 7 is not applicable to this Installation. This installation containing only the ETP is responsible for treating process effluent generated by Selby Sauces and Pickles facility. As such, none of this BATc sub-points are applicable to effluent treatment plants.
8	**Prevent or reduce the use of harmful substances** In order to prevent or reduce the use of harmful substances, e.g. in cleaning and disinfection, BAT is to use one or a combination of the techniques given below. (a) Proper selection of cleaning chemicals and/or disinfectants (b) Reuse of cleaning chemicals in cleaning-in-place (CIP) (c) Dry cleaning	**NA**	We are satisfied that BATc 8 is not applicable to this installation. The scope of BATc 8 is to reduce the use of chemicals in installations where production processes take place. However, this site

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	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
	(d) Optimised design and construction of equipment and process areas		contains only the effluent treatment plant (ETP) treating process effluent generated at the Selby Sauces & Pickles facility therefore, BATc 8 is not applicable.
9	**Refrigerants** In order to prevent emissions of ozone-depleting substances and of substances with a high global warming potential from cooling and freezing, BAT is to use refrigerants without ozone depletion potential and with a low global warming potential.	**NA**	We are satisfied that BATc 9 is not applicable to this installation. This BATc is concerned with refrigerants used in the production process. This installation operates only an effluent treatment plant where refrigeration processes are not required or used therefore, this BATc 9 is not applicable.
10	**Resource efficiency** In order to increase resource efficiency, BAT is to use one or a combination of the techniques given below: (a) Anaerobic digestion (b) Use of residues (c) Separation of residues (d) Recovery and reuse of residues from the pasteuriser (e) Phosphorus recovery as struvite (f) Use of waste water for land spreading	**CC**	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. The Operator declared that: • On-site anaerobic digestion (AD) is used to generate biogas which utilised in a CHP plant operated by Greencore Grocery Limited. • Sludge and vegetable solids are sent off-site for AD.
11	**Waste water buffer storage** In order to prevent uncontrolled emissions to water, BAT is to provide an appropriate buffer storage capacity for waste water.	**CC**	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. The Operator declared that the buffer volume capacity is approximately 1,000m^3 comprising of the balance tanks and divert tanks. In addition, the ETP tanks are equipped with

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			automated level alarms connected to the call-out system for immediate actions to be taken. There are spill kits around the site and trained staff to utilise these kits. Spillages are directed to the ETP for treatment.
12	**Emissions to water – treatment** In order to reduce emissions to water, BAT is to use an appropriate combination of the techniques given below. Preliminary, primary and general treatment (a) Equalisation (b) Neutralisation (c) Physical separate (eg screens, sieves, primary settlement tanks etc) Aerobic and/or anaerobic treatment (secondary treatment) (d) Aerobic and/or anaerobic treatment (eg activated sludge, aerobic lagoon etc) (e) Nitification and/or denitrification (f) Partial nitration - anaerobic ammonium oxidation Phosphorus recovery and/or removal (g) Phosphorus recovery as struvite (h) Precipitation (i) Enhanced biological phosphorus removal Final solids removal (j) Coagulation and flocculation (k) Sedimentation (l) Filtration (eg sand filtration, microfiltration, ultrafiltration) (m) Flotation	**CC**	The operator has provided information to support compliance with BATc 12. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 12. The Operator declared that the following water treatment stages are used: • Equalisation and neutralisation in sump • Primary separation • Balancing • Chemical dosing • Direct Air Flotation (DAF) • Anaerobic digestion • Bio-tower where COD is reduced through aerobic treatment. • Settlement for TSS reduction, prior to discharge of the treated effluent to River Ouse via water emission point W1.
12	**Emissions to water – treatment** **BAT-associated emission levels (BAT-AELs) for direct emissions to a receiving water body**	**CC**	The operator has provided information to support compliance with BAT-AELs. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BAT-AELs. The Operator provided monitoring result for the following parameters: • BOD – 0.016 mg/l

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	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><tr><th>Parameter</th><th>BAT-AEL (1) (2) (daily average)</th></tr><tr><td>Chemical oxygen demand (COD) (3) (4)</td><td>25-100 mg/l (5)</td></tr><tr><td>Total suspended solids (TSS)</td><td>4-50 mg/l (6)</td></tr><tr><td>Total nitrogen (TN)</td><td>2-20 mg/l (7) (8)</td></tr><tr><td>Total phosphorus (TP)</td><td>0,2-2 mg/l (9)</td></tr></table>		• COD – 0.22 mg/l • TSS – 0.073 mg/l The Operator declared that they are compliant with COD and TSS limits which we agree with. They do not currently have any monitoring data for the following TN and TP, however, the following ELVs have been included in the consolidated permit, in line with this BAT-AELs: • BOD – 30 mg/l (retained from CP3238XU 2006) • COD – 120 mg/l • TSS – 50 mg/l • TN – 20 mg/l • TP – 5 mg/l We consider that the operator will be complaint from the issue of this permit.
13	**Noise management plan** In order to prevent or, where that is not practicable, to reduce noise emissions, BAT is to set up, implement and regularly review a noise management plan, as part of the environmental management system (see BAT 1), that includes all of the following elements: - a protocol containing actions and timelines; - a protocol for conducting noise emissions monitoring; - a protocol for response to identified noise events, eg complaints; - a noise 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.	**NA**	We are satisfied that BATc 13 is not applicable to this Installation. A noise management plan is only required where noise nuisance at sensitive receptors is expected or has been substantiated. There have been no substantiated noise nuisances from the site therefore an NMP is not a requirement for this site. However, the Operator voluntarily developed a NMP that is now included in the EMS.
14	**Noise management** In order to prevent or, where that is not practicable, to reduce noise emissions, BAT is to use one or a combination of the techniques given below. (a) Appropriate location of equipment and buildings	**CC**	The operator has provided information to support compliance with BATc 14. We have assessed the information provided and we are

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	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
	(b) Operational measures (c) Low-noise equipment (d) Noise control equipment (e) Noise abatement		satisfied that the operator has demonstrated compliance with BATc 14. The Operator declared using the following noise management technique: • Appropriate location of equipment • Operational measures such as closed-doors policy and PPM • Low noise equipment where possible
15	**Odour Management** 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: - a protocol containing actions and timelines; - a protocol for conducting odour monitoring. - a protocol for response to identified odour incidents eg complaints; - an odour prevention and reduction programme designed to identify the source(s); to measure/estimate odour exposure: to characterise the contributions of the sources; and to implement prevention and/or reduction measures.	**CC**	The operator has provided information to support compliance with BATc 15. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 15. The Operator declared that it has an operational OMP, and this is included in the permit, having been requested and reviewed by the Agency.
BATC 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

15	<table><tr><th colspan="2">Technique</th><th>Description</th><th>Applicability</th></tr><tr><td>a.</td><td>Correct plant design</td><td>This includes the provision of a gas recovery system with sufficient capacity and the use of high-integrity relief valves.</td><td>Generally applicable to new plants. A gas recovery system may be retrofitted in existing plants.</td></tr><tr><td>b.</td><td>Plant management</td><td>This includes balancing the gas system and using advanced process control.</td><td>Generally applicable.</td></tr></table> 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. a. Correct plant design. This includes the provision of a gas recovery system with sufficient capacity and the use of high-integrity relief valves. b. Plant management This includes balancing the gas system and using advanced process control.	**FC**	The operator has provided information to support compliance with BATc 15. We have assessed the information provided and we are not satisfied that the operator has demonstrated compliance with BATc 15. The Operator declared that biogas is being flared not only for routine operations and/or maintenance but also when the biogas cannot be used on site, for example if the CHP is out of operation. The Operator is considering the installation of a gas recovery system with the scope of utilising the biogas in the existing MCPs. The Operator declared that compliance will be achieved by 04/12/2023. We consider that the operator will be future compliant with BATc 15. Improvement condition IC9 has been included in the permit to achieve compliance (see Annex 3).
16	In order to reduce emissions to air from flares when flaring is unavoidable, BAT is to use both of the techniques given below: a. Correct design of flaring devices Optimisation of height and pressure, assistance by steam, air or gas, type of flare tips etc. to enable smokeless and reliable operation and to ensure the efficient combustion of excess gases. b. Monitoring and recording as part of flare management This includes continuous monitoring of the quantity of gas sent to flaring. It may include estimations of other parameters. The recording of flaring events usually includes the duration and number of events and allows for the quantification of emissions and the potential prevention of future flaring events.	**CC**	The operator has provided information to support compliance with BATc 16. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 16. The Operator declared that the flaring device is of correct design capable of reliable operation without smoke generation or incomplete oxidation of the gas burned. In addition, the flaring operation is automated and continuously monitor via SCADA; information about flaring events and duration are recorded.

21	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. a. Protection measures: These include measures such as: - protection of the plant against malevolent acts; - fire and explosion protection system, containing equipment for prevention, detection, and extinction; - accessibility and operability of relevant control equipment in emergency situations b. Management of incidental/accidental emissions Procedures are established and technical provisions are in place to manage (in terms of possible containment) emissions from accidents and incidents such as emissions from spillages, firefighting water, or safety valves c. Incident/accident registration and assessment system This includes techniques such as: - a log/diary to record all accidents, incidents, changes to procedures and the findings of inspections; - procedures to identify, respond to and learn from such incidents and accidents.	**CC**	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. The Operator declared that: • Unauthorised access to site is prevented through maned access gates. • CCTV monitoring in operation 24/7. • Access to emergency operation control is facilitated. • Spill kits are available across the site. • Any accidental spills, or major loss of bunding integrity resulting in loss of containment, are directed to the ETP. • Procedure to report and record accidents are in use. • Updated procedures are shared online with pertinent staff.
38	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. Description: Implementation of a manual and/or automatic monitoring system to: - ensure a stable digester operation; - minimise operational difficulties, such as foaming, which may lead to odour emissions; -provide sufficient early warning of system failure which may lead to a loss of containment and explosions. This includes monitoring and/or control of key waste and process parameters, eg. - 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 (eg H2S) and pressure; - liquid and foam levels in the digester.	**CC**	The operator has provided information to support compliance with BATc 38. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 38. The Operator declared that: • The AD is permanently manned and surveyed via SCADA. • Alarms are in use and activated in emergencies. • Parameters including temperature, flow, pH, and loadings are monitored. • Biogas is analysed to determine its volume, quality, composition, and pressure.

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

Updating permit during permit review consolidation

- Introductory note updated
- Site plan
- Table S1.1 overhaul
    - Activity Reference (AR) renumbering
    - Updated listed activities
    - Addition of production capacity
    - Directly associated activities (DAAs) standardisation

We have updated permit conditions to those in the current generic permit template as a part of permit consolidation. The conditions will provide the same level of protection as those in the previous permit.

The listed activity has been changed as part of the permit review process, to reflect the current specifics of the site, from disposal of waste to recovery of waste.

Production/Capacity Threshold

The Environment Agency is looking to draw a “line in the sand” for permitted production capacity; a common understanding between the Operator and regulator for the emissions associated with a (maximum) level of production, whereby the maximum emissions have been demonstrated as causing no significant environmental impact.

We have included a permitted production level (capacity) within table S1.1 of the permit for the section 6.8 listed activity and we need to be confident that the level of emissions associated with this production level have been demonstrated to be acceptable.

The Operator has completed a H1 assessment of emissions for typical figures of production in 2022 and provided us as part of the Reg.61 Response with a summary of the assessment which concluded that there are no significant impacts on the environment and human receptors with all modelled parameters having passed Tests 2 and 3 of the H1 Assessment.

The existing H1 assessment of emissions to air and water remains valid for the revised capacity threshold now placed within table S1.1 of the permit.

Emissions to Air

We asked the operator to list all emission points to air from the installation in the Regulation 61 notice. And to provide a site plan indicating the locations of all air emission points.

The operator has provided an up-to-date air emission plan.

Table S3.1 has been updated in line with the R61 response tool.

Implementing the requirements of the Medium Combustion Plant Directive

Existing small combustion plant (<1MW)

For the existing combustion plant with a rated thermal input less than 1 MW we will not be including any emission limit values or monitoring requirements within the permit, unless any site specific conditions require us to do this.

Existing Medium Combustion Plant (1MW-50MW)

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

The Operator provided the information in the table below:

Boilers

1. Rated thermal input (MW) of the medium combustion plant.	1.5 MWth
2. Type of the medium combustion plant (diesel engine, gas turbine, dual fuel engine, other engine or other medium combustion plant).	Boiler 1 – 1.5 MWth
3. Type and share of fuels used according to the fuel categories laid down in Annex II.	Natural gas 100%
4. Date of the start of the operation of the medium combustion plant or, where the exact date of the start of the operation is unknown, proof of the fact that the operation started before 20 December 2018.	Pre 2018 (the Operator cannot state an exact date, only that it has been installed approximately 20 years ago)

We have reviewed the information provided and we consider that the declared combustion plant qualify as “existing” medium combustion plant.

For existing medium combustion plant with a rated thermal input under 5 MW, Boiler 1, the emission limit values set out in tables 2 and 3 of Part 1 of Annex II MCPD shall apply from 1 January 2030.

We have included the appropriate emission limit values for existing medium combustion plant as part of this permit review. See Table S3.1 in the permit. We have also included a new condition 3.1.4 within the permit which specifies the monitoring requirements for the combustion plant in accordance with the MCPD.

Emissions to Water and implementing the requirements of the Water Framework Directive

We asked the Operator to provide information on all emissions to water at the installation in the Regulation 61 Notice as follows;

- Identify any effluents which discharge directly to surface or groundwater;
- Provide an assessment of volume and quality, including results of any monitoring data available;
- and for any discharges to water / soakaway whether a recent assessment of the feasibility of connection to sewer has been carried out.

The operator has previously provided assessments for all emissions to water at the installation. The operator declares there has been no change to activities and subsequent effluents generated at the installation since this risk assessment was taken in 2022. Consequently, we agree that the risk assessments remain valid at this time.

In addition, the Operator has applied for a minor permit variation, EPR/XP3506LZ/V003 submitted on 31/07/2023, aimed at permitting the already functioning Direct Air Flotation (DAF) plant in relation to which an updated H1 assessment has been submitted in support of the ongoing permit variation. The assessment shows that, applying the conservative criteria in our guidance on environmental risk assessment, all emissions may be screened out as environmentally insignificant.

The ETP, originally permitted in 2005, has been operated by different Operators over the years before Aqua Operations Limited became the new Operator following the partial permit transfer in 2021 from Suez Industrial Water Ltd. The function of the ETP's (containing assets commissioned 27 years ago) capacity and purpose has not changed years since it was first put in operation. The DAF plant has replaced the Swirlflo tank of whose purpose was to remove solids.

In line with the above reasoning and explanations, we do not consider that a new H1 assessment is required at this time as the DAF process based on chemical dosing facilitating the removal of suspended solids has a superior efficiency compared with the approximately 20 years old Swirlflo.

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.

A site condition report (SCR) for this multi-operator site referenced in the Decision Document of the United Utilities Industrial Limited permit application EPR/CP3135SV produced during the original application received on 29/03/2005. The file note from 23/06/2006 for EPR/BO2323IB, Greencore Groceries, based on this SCR, asked the Operator to prepare a Site Protection and Monitoring Program. The site condition report included a report on the baseline conditions as required by Article 22. We reviewed that report and considered that it adequately described the condition of the soil and groundwater at that time.

The Operator submitted a summary report which referenced the site condition report and baseline report. We have reviewed the information, and we consider that it adequately describes the current condition of the soil and groundwater. Consequently, we are satisfied that the baseline conditions have not changed.

The Operator declared that it is using a SPMP that is regularly updated.

Hazardous Substances

Hazardous substances are those defined in Article 3 of Regulation (EC) No. 1272/2008 on classification, labelling and packaging of substances and mixtures

The operator has provided a short risk assessment on the hazardous substances stored and used at the installation. The risk assessment was a stage 1-3 assessment as detailed within EC Commission Guidance 2014/C 136/03.

The stage 1 assessment identified the hazardous substances used / stored on site. The stage 2 assessment identified if hazardous substances are capable of causing pollution. If they are capable of causing pollution, they are then termed Relevant Hazardous Substances (RHS). The Stage 3 assessment identified if pollution prevention measures are fit for purpose in areas where hazardous substances are used / stored. This includes drains as well.

The outcomes of the three-stage assessment identified that pollution of soil and/or ground water to be unlikely.

Climate Change Adaptation

The operator has considered if the site is at risk of impacts from adverse weather including flooding, and prolonged dry weather / drought.

The operator has identified the installation as likely to be or has been affected by flooding and prolonged dry weather/ drought, which we consider to be a severe weather event.

We do not consider the operator to have submitted a suitable climate change adaptation plan for the installation. We have included an improvement condition into the permit (IC10) to request a climate change adaptation plan is submitted by the operator for approval from the Environment Agency.

Containment

We asked the Operator vis the Regulation 61 Notice to provide details of the each above ground tanks which contain potentially polluting liquids at the site, including tanks associated with the effluent treatment process where appliable.

The Operator provided details of all tanks;

- Tank reference/name
- Contents
- Capacity (litres)
- Location
- Construction material(s) of each tank
- The bunding specification including
    - Whether the tank is bunded
    - If the bund is shared with other tanks
    - The capacity of the bund
    - The bund capacity as % of tank capacity
    - Construction material of the bund
    - Whether the bund has a drain point
    - Whether any pipes penetrate the bund wall
- Details of overfill prevention
- Drainage arrangements outside of bunded areas
- Tank filling/emptying mitigation measures (drips/splashes)
- Leak detection measures
- Details of when last bund integrity test was carried out
- Maintenance measures in place for tank and bund (inspections)
- How the bund is emptied
- Details of tertiary containment

and whether the onsite tanks currently meet the relevant standard in the Ciria “Containment systems for the prevention of pollution (C736)” report.

We reviewed the information provided by the operator. We are satisfied that the existing tanks and containment measures on site meet the standards set out in CIRIA C736.

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).

We also consider that we need to set improvement conditions relating to changes in the permit not arising from the review of compliance with BAT conclusions. The justifications for these are provided in Annex 5 of this decision document.

Previous improvement conditions marked as complete in the previous permit.

Superseded Improvement Conditions – Removed from permit as marked as "complete"	
Reference	**Improvement Condition**
IC1	The Operator shall review the options for achieving a reduction in the concentration of BOD and suspended solids discharged from the effluent treatment plant to the benchmark values set out in section 3.3 of Sector Guidance Note S6.10 (August 2003). A written report of the review shall be submitted to the Agency.
IC2	The Operator shall implement an odour management plan at the installation, having regard to section 2.2.6 of Sector Guidance Note S6.10 (August 2003) and to Horizontal Guidance note H4. A written copy of the plan shall be submitted to the Agency.
IC3	The Operator shall establish the BOD:COD ratio of the final effluent discharged from the effluent treatment plant to the River Ouse. The ratio shall be established using monitoring data obtained over a minimum period of six months. The Operator shall submit a written report to the Agency stating the BOD:COD ratio and including the monitoring data from which it has been derived.
IC4	The Operator shall provide a written report to the Agency that evaluates the impact of the effluent treatment plant on the Humber Estuary using available detailed dispersion modelling. If the modelling shows the impact to be having an adverse effect on site integrity, either alone or in combination with other plans or projects, the Operator shall propose in writing a programme of improvements to reduce emissions from the effluent treatment plant to the point at which they are not having an adverse effect on the integrity of the European site. The programme of improvements shall include a timescale for completion, and a means of verifying that the programme has achieved the necessary reduction in impact.
IC5	The Operator shall implement a noise management plan at the installation. The noise management plan shall have regard to section 2.9 of Sector Guidance Note S6.10 (August 2003) and Horizontal Guidance note H3. A written copy of the plan shall be submitted to the Agency.
IC6	The Operator shall undertake monitoring of emissions of: • H2S from emission point A1 • H2S and total sulphur content of the biogas generated from the anaerobic digester

	Monitoring shall be carried out on a weekly basis over a period of 6 months. The Operator shall submit a written report to the Agency detailing the monitoring undertaken and the results obtained.
IC7	The Operator shall review the provision of MCERTS accreditation for the monitoring equipment, personnel and organisations employed for the emissions monitoring programme in condition 2.10.1 and propose a timetable for achieving this standard for any elements that are not MCERTS certified.

The following improvement conditions have added to the permit as a result of the variation.

Improvement programme requirements		
Reference	**Reason for inclusion**	**Justification of deadline**
IC8	The Operator shall confirm in writing to the Environment Agency that the Narrative BAT requirements for the BAT Conclusions for Food, Drink and Milk Industries with respect to BAT 6 were in place on or before 4 December 2023. Refer to BAT Conclusions for a full description of the BAT requirement.	One month from permit issue
IC9	The Operator shall carry out an assessment of the options available for the management of biogas resulted from the on-site anaerobic digestor. A written report summarising the findings shall be submitted to the Environment Agency, along with a timetable for implementing improvements that shall be agreed in writing with the Environment Agency prior to implementation.	One month from permit issue
IC10	The operator shall produce a climate change adaptation plan, which will form part of the EMS. The plan shall include, but not be limited to: • Details of how the installation has or could be affected by severe weather; • The scale of the impact of severe weather on the operations within the installation; • An action plan and timetable for any improvements to be made to minimise the impact of severe weather at the installation. The Operator shall implement any necessary improvements to a timetable agreed in writing with the Environment Agency.	12 months from permit issue or other date agreed in writing with the Environment Agency
IC11	The operator shall establish the methane emissions in the exhaust gas from engines burning biogas and compare these to the manufacturer's specification and benchmark levels agreed in writing with the Environment Agency. The operator shall, as part of the methane leak detection and repair (LDAR) programme, develop proposals to assess the potential for methane slip and take corrective actions	12 months from permit issue or other date as agreed in writing with the

	where emissions above the manufacturer's specification or appropriate benchmark levels are identified.	Environment Agency