

# **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/ZP3839YR  
The Operator is:                         Greencore Food To Go Limited  
The Installation is:                     Greencore Food To Go Park Royal  
This Variation Notice number is:   EPR/ZP3839YR/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 4<sup>th</sup> 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.

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

## **How this document is structured**

1. Our decision
2. How we reached our decision
3. The legal framework
4. Annex 1 – Review of operating techniques within the Installation against BAT Conclusions.
5. Annex 2 – Review and assessment of changes that are not part of the BAT Conclusions derived permit review
6. Annex 3 – Improvement Conditions
7. Annex 4 – Pre-operational 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 30/09/2022 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 05/04/2023.

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 have no reason to consider that the Operator will not be able to comply with the techniques and standards described in the BAT Conclusions.

## 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 04/11/2024 relating to narrative BATc 1, 2, 6, 9, and non-narrative BAT in relation to a climate change adaptation plan and site name. A copy of the further information request was placed on our public register.

# **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

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
<b>GENERAL BAT CONCLUSIONS (BAT 1-15)</b>			
1	<p><b>Environmental Management System - Improve overall environmental performance.</b></p> <p>Implement an EMS that incorporates all the features as described within BATc 1.</p>	CC	<p>The Operator has provided information to support compliance with BATc 1. We have assessed the information provided and we are satisfied that the Operator has demonstrated compliance with BATc 1.</p> <p>The Operator has an EMS which covers all the topics set out in BATc 1. This EMS is not accredited to ISO14001 however, upon review we agree that the EMS is written to ISO14001 standards.</p>
2	<p><b>EMS Inventory of inputs &amp; outputs. Increase resource efficiency and reduce emissions.</b></p> <p>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.</p>	CC	<p>The Operator has provided information to support compliance with BATc 2. We have assessed the information provided and we are satisfied that the Operator has demonstrated compliance with BATc 2.</p> <p>The Operator declared:</p> <ul style="list-style-type: none"> <li>• Normal, abnormal and emergency emissions are identified and documented and reference against the site's normal emissions by monitoring input/output process flow.</li> <li>• The Operator uses a Hazard Analysis and Critical Control Point (HACCP) review process. HACCP plans show the input of raw materials and utilities (including heat and water) in addition to origin of emissions (including waste) from the production process. The site measures ingredient through mass balance calculation for efficiency and traceability.</li> </ul>

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
			<ul style="list-style-type: none"> <li>• Where practicable the production processes are semi-automated, optimised and continually reviewed from a yield and efficiency perspective.</li> <li>• KPI programmes in place that are aligned with corporate standards and integrated within the governance systems on-site.</li> <li>• Through the mapping of consumption and targeted submetering the site is able to account for consumption and targets a utilisation. Data allows the site to regularly review its water use against budget in addition to performance with respect to utility KPIs. Improvement initiatives are continuously reviewed and delivered through the continuous improvement process and in conjunction with third-party providers.</li> <li>• All sources of process effluent have been identified, quantified and characterised with a monitoring programme that includes the monitoring of the final outfall.</li> <li>• Daily reporting of indicators of plant health/performance to inform operations.</li> <li>• The Operator's 'Business Improvement Team' is employed to diagnose both problems and opportunities in all facets of the on-site processes. They provide the support framework, analytical knowledge and tools to facilitate this in all aspects of the site's operations. Key parameters are the reduction of energy, water and other utility consumption, food waste,</li> </ul>

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
			<p>waste and the net impact that has on the environmental effect from on-site processes. The site has a prescriptive monitoring plan that provides an audit trail for data down to the individual item of plant/equipment as appropriate. The governance framework for the environmental monitoring and improvement programme is embedded within the EMS.</p> <p>The Operator has an EMS which covers all the topics set out in BATc 2. This EMS is not accredited to ISO14001 however, upon review we agree that the EMS is written to ISO14001 standards.</p>
3	<p><b>Monitoring key process parameters at key locations for emissions to water.</b> 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).</p>	CC	<p>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.</p> <p>The Operator monitors pH, total suspended solids, chemical oxygen demand (COD), flow and temperature which is reported to the sewer authority, Thames Water with limits set but the sewer authority. The site reports key performance indicator data on a daily basis for site management and monthly basis for Group collective management. This includes review of regulator (Thames Water) analysis. The site has a prescriptive monitoring and maintenance plan that provides an audit trail for data down to the individual item of plant/equipment as</p>



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
			appropriate. Monitoring takes place at the site's emission point to sewer (S1).
4	<p><b>Monitoring emissions to water to the required frequencies and standards.</b>            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.</p>	<b>NA</b>	<p>We are satisfied that BATc 4 is not applicable to this installation.</p> <p>BATc 4 is applicable only to installations discharging process effluent to surface water and this site discharges only to foul sewer under consent therefore, BATc 4 is not applicable.</p>
5	<p><b>Monitoring channelled emissions to air to the required frequencies and standards.</b>            BAT is to monitor channelled emissions to air with at least the frequency given and in accordance with EN standards.</p>	<b>NA</b>	<p>We are satisfied that BATc 5 is not applicable to this installation.</p> <p>This BATc is applicable to installations where dust emissions from processes such as drying, cooling, grinding, or milling are used.</p> <p>BATc 5 sets out air emissions monitoring requirements applicable to specific FDM sub-sectors. None of these monitoring requirements are applicable to this site as the activities undertaken (ready meal manufacture) are not specified in the sector and specific processes set out in BATc 5.</p>

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
6	<p><b>Energy Efficiency</b></p> <p>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.</p>	CC	<p>The Operator has provided information to support compliance with BATc 6. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 6.</p> <p>The Operator has an energy efficiency plan in place which is incorporated into their EMS. The Operator has actioned all recommendations in their last third-party assessment of the site's potential energy saving and current plans are focused on further metering and data verification together with the delivery of existing improvement projects. This plan meets the requirements of BAT 6a.</p> <p>The Operator is current using the following (b) techniques:</p> <ul style="list-style-type: none"> <li>• Combustion plant operations are optimised through burner control (modulating controls), annual balancing and efficiency testing, PPM and inspections in line with the suppliers O&amp;M.</li> <li>• Feasibility studies of installing a combined heat plant (CHP) was assessed however it was not deemed feasible for this site at with current operations in place.</li> <li>• Variable speed drives (VSD) specified on pumps and frequency controllers on motors is implemented where appropriate.</li> <li>• Heat recovery used to heat domestic requirements from steam boilers. Heat is recovered from various parts of the process that is inherent within the</li> </ul>

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
			<p>design and operation of the individual assets, including non-process units such as AC systems. Heat recovery within dispatch to supplement hot water.</p> <ul style="list-style-type: none"> <li>• Lighting replaced with LED units in all production areas.</li> <li>• Boiler blowdown is automated and minimised through Total dissolved solids (TDS) controls. Blowdown is undertaken weekly and validated via instrumentation to optimise timing of the blowdown. Supported by water treatment specialist.</li> <li>• The Operator has undertaken efficiency measures such as removal of dead legs and pressure reduction in pipework. Lagging/insulation reviews are periodically undertaken.</li> <li>• Feedwater is preheated.</li> <li>• Programmable logic controllers (PLC) and manual control systems are employed variously for optimisation and track trend parameters; including pressure and temperature, VSDs and time.</li> <li>• Compressed air systems are optimised and maintained inhouse and in conjunction with third party specialists where appropriate. Compressed air leak surveys are undertaken in house and remedial works implemented where identified.</li> <li>• Chilled water and pumps, headers steam, hot and cold pipework is generally lagged. Insulation is subject to inspection and repair.</li> </ul>

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7	<p><b>Water and wastewater minimisation</b></p> <p>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.</p> <ul style="list-style-type: none"> <li>(a) water recycling and/or reuse</li> <li>(b) Optimisation of water flow</li> <li>(c) Optimisation of water nozzles and hoses</li> <li>(d) Segregation of water streams</li> </ul> <p>Techniques related to cleaning operations:</p> <ul style="list-style-type: none"> <li>(e) Dry cleaning</li> <li>(f) Pigging system for pipes</li> <li>(g) High-pressure cleaning</li> <li>(h) Optimisation of chemical dosing and water use in cleaning-in-place (CIP)</li> <li>(i) Low-pressure foam and/or gel cleaning</li> <li>(j) Optimised design and construction of equipment and process areas</li> <li>(k) Cleaning of equipment as soon as possible</li> </ul>	CC	<p>The Operator has provided information to support compliance with BATc 7. We have assessed the information provided and we are satisfied that the Operator has demonstrated compliance with BATc 7.</p> <p>The Operator is using the following techniques:</p> <ul style="list-style-type: none"> <li>(a) Water recycling and reuse – Boiler condensate returns to the hot well, further minimising water consumption/discharge. Reuse rinse water (tray wash recycling unit) within the process.</li> <li>(b) Optimisation of water flow - The manufacturing processes are controlled using a combination of set points including temperatures, flow rates, levels (tray wash, plate packs, compressors). The design of the installation incorporates flow meters, and VSD (compressors, chiller units, conveyors) that reduce consumption and minimise discharge. All thermostatically controlled sensor taps (thermostatic mixing valves (TMVs), plate packs) are in place.</li> <li>(c) Optimisation of water nozzles and hoses - Hose guns and trigger controls are employed (low volume flow guns).</li> <li>(d) Segregation of water streams - All process contaminated wastewater is directed to the on-site effluent drains for treatment. Uncontaminated rainwater and site run off is directed to surface water drains.</li> <li>(e) Dry cleaning - The site operates a “Clean as You Go” policy and where possible standard operating procedures (SOPs) prescribe dry cleaning techniques which is subject to process confirmation within each area.</li> </ul>

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
			<p>(i) Low-pressure foam and/or gel cleaning - Foaming systems are employed to allow more controlled dosing of chemicals and a reduction in rinse water.</p> <p>(j) Optimised design and construction of equipment and process areas - New project proposals and process layout reconfigurations take into account the hygiene requirements of the process and ensure efficient cleaning can be facilitated. New equipment installations go through hazard assessments and Hazard Analysis &amp; Critical Control Point (HACCP) process to identify any potential issues.</p> <p>(k) Cleaning of equipment as soon as possible - Cleaning equipment is carried out to prevent product hardening through hygiene operations for specific equipment and as part of the "Clean as You Go" policy.</p>
8	<p><b>Prevent or reduce the use of harmful substances</b></p> <p>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.</p> <p>(a) Proper selection of cleaning chemicals and/or disinfectants</p> <p>(b) Reuse of cleaning chemicals in cleaning-in-place (CIP)</p> <p>(c) Dry cleaning</p> <p>(d) Optimised design and construction of equipment and process areas</p>	CC	<p>The Operator has provided information to support compliance with BATc 8. We have assessed the information provided and we are satisfied that the Operator has demonstrated compliance with BATc 8.</p> <p>The Operator is using the following techniques:</p> <p>(a) Proper selection of cleaning chemicals and/or disinfectants – The site has a contract with a third-party organisation, who provide the Operator with guidance on solutions for cleaning chemicals, and providing industry standard solutions for the cleaning needs of the food processing sector.</p> <p>(c) Dry cleaning – Where possible dry-cleaning techniques are used. Cleaning procedures specify removal of solid debris prior to washing.</p>

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			(d) Optimised design and construction of equipment and process areas - New equipment installations go through hazard identification and HACCP processes to identify any potential issues and opportunities. Existing optimisation opportunities are identified periodically in partnership with the operators and hygiene chemical supplier.
9	<p><b>Refrigerants</b></p> <p>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.</p>	CC	<p>The Operator has provided information to support compliance with BATc 9. We have assessed the information provided and we are satisfied that the Operator has demonstrated compliance with BATc 9.</p> <p>The Operator currently uses the below F-gases for their production process:</p> <ul style="list-style-type: none"> <li>• R449A - global warming potential (GWP) of 1397.</li> <li>• R32 – GWP of 675</li> </ul> <p>The Operator also employs Glycol and CO2 refrigeration systems. The Operator replace F-gas R407F (GWP of 1824) in March 2023 with CO2 based refrigerants. There is also a plan in place to replace the R449A F-gas with CO2 based refrigeration by 2027 at the latest to bring the GWP down to 1.</p>
10	<p><b>Resource efficiency</b></p> <p>In order to increase resource efficiency, BAT is to use one or a combination of the techniques given below:</p> <ol style="list-style-type: none"> <li>(a) Anaerobic digestion</li> <li>(b) Use of residues</li> <li>(c) Separation of residues</li> <li>(d) Recovery and reuse of residues from the pasteuriser</li> <li>(e) Phosphorus recovery as struvite</li> <li>(f) Use of waste water for land spreading</li> </ol>	CC	<p>The Operator has provided information to support compliance with BATc 10. We have assessed the information provided and we are satisfied that the Operator has demonstrated compliance with BATc 10.</p> <p>The Operator is using the following techniques:</p>

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
			<p>(a) Anaerobic digestion - Effluent sludge and food waste are sent off site for energy recovery via AD plant.</p> <p>The Operator declared:</p> <ul style="list-style-type: none"> <li>The site continuously reviews options with respect to re-using residues. For some materials it is not currently feasible to achieve reliable segregation from other waste streams that may contain animal by products. An in-depth review and sufficient trialling is carried out to ensure compliance and to manage the likelihood of contamination. There is limited opportunity separate and separately treat residue generated at the site.</li> </ul>
11	<p><b>Waste water buffer storage</b> In order to prevent uncontrolled emissions to water, BAT is to provide an appropriate buffer storage capacity for waste water.</p>	CC	<p>The Operator has provided information to support compliance with BATc 11. We have assessed the information provided and we are satisfied that the Operator has demonstrated compliance with BATc 11.</p> <p>The Operator declared: Raw effluent from the production operations flows by gravity into an underground sump in the vicinity of the effluent treatment plant. Pumps located within the pit transfer the wastewater through the rotary drum screen to filter out large debris (&gt;2mm). The screened effluent flows into a transfer tank from where it is pumped into an 80m<sup>3</sup> balance tank. This tank holds over 8 hours of effluent production, enabling homogenisation of effluent, and recirculation of effluent in case of treatment malfunction. Wastewater is dosed during flow through the flocculator, effluent dosing to</p>

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
			neutralise pH, while flocculants coagulant are added to aid flocculation. The wastewater is directed towards the DAF tank where the sludge settles and is skimmed away, and the treated water is discharged from the tank. The sludge is then collected in a sludge tank. The sludge tank is dewatered so that the remaining liquid effluent can be recirculated back into a pit for further treatment. Spill kits are located throughout the site.
12	<p><b>Emissions to water – treatment</b></p> <p>In order to reduce emissions to water, BAT is to use an appropriate combination of the techniques given below.</p> <p>Preliminary, primary and general treatment</p> <p>(a) Equalisation</p> <p>(b) Neutralisation</p> <p>(c) Physical separate (eg screens, sieves, primary settlement tanks etc)</p> <p>Aerobic and/or anaerobic treatment (secondary treatment)</p> <p>(d) Aerobic and/or anaerobic treatment (eg activated sludge, aerobic lagoon etc)</p> <p>(e) Nitrification and/or denitrification</p> <p>(f) Partial nitrification - anaerobic ammonium oxidation</p> <p>Phosphorus recovery and/or removal</p> <p>(g) Phosphorus recovery as struvite</p> <p>(h) Precipitation</p> <p>(i) Enhanced biological phosphorus removal</p> <p>Final solids removal</p> <p>(j) Coagulation and flocculation</p> <p>(k) Sedimentation</p> <p>(l) Filtration (eg sand filtration, microfiltration, ultrafiltration)</p> <p>(m) Flotation</p>	CC	<p>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.</p> <p>There is an on-site effluent treatment plant (ETP). The site's process effluent is discharged via foul sewer under consent with Thames Water. The effluent travels to the waste water treatment works in Beckton before final discharge to the river Welland.</p> <p>The Operator is using the following techniques:</p> <p>(a) Equalisation – Used smooth out the effluent characteristics through use of buffer tanks and inlet drainage sump.</p> <p>(b) Neutralisation.</p> <p>(c) physical separation - Using a rotary screen.</p> <p>(h) Precipitation - Solids &amp; FOGs via on-site dissolved air flotation (DAF) cells.</p> <p>(j) Coagulation &amp; flocculation - Achieved via DAF technology.</p> <p>(m) Flotation - DAF plant.</p>



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										
12	<p><b>Emissions to water – treatment</b>  <b>BAT-associated emission levels (BAT-AELs) for direct emissions to a receiving water body</b></p> <table border="1" data-bbox="282 416 1211 616"> <thead> <tr> <th>Parameter</th> <th>BAT-AEL (1) (2) (daily average)</th> </tr> </thead> <tbody> <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> </tbody> </table>	Parameter	BAT-AEL (1) (2) (daily average)	Chemical oxygen demand (COD) (3) (4)	25-100 mg/l (5)	Total suspended solids (TSS)	4-50 mg/l (6)	Total nitrogen (TN)	2-20 mg/l (7) (8)	Total phosphorus (TP)	0,2-2 mg/l (9)	NA	<p>We are satisfied that BATc 12 AEL is not applicable to this installation.</p> <p>BATc 12 AEL is applicable only to installations discharging process effluent to surface water and this site discharges only to foul sewer under consent therefore, BATc 12 AEL is not applicable.</p>
Parameter	BAT-AEL (1) (2) (daily average)												
Chemical oxygen demand (COD) (3) (4)	25-100 mg/l (5)												
Total suspended solids (TSS)	4-50 mg/l (6)												
Total nitrogen (TN)	2-20 mg/l (7) (8)												
Total phosphorus (TP)	0,2-2 mg/l (9)												
13	<p><b>Noise management plan</b></p> <p>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:</p> <ul style="list-style-type: none"> <li>- a protocol containing actions and timelines;</li> <li>- a protocol for conducting noise emissions monitoring;</li> <li>- a protocol for response to identified noise events, eg complaints;</li> <li>- 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.</li> </ul>	NA	<p>We are satisfied that BATc 13 is not applicable to this installation.</p> <p>BATc 13 is only applicable to cases where noise nuisance at sensitive receptors is expected and/or has been substantiated.</p> <p>The Operator declared:  There is no formal noise management plan implemented however, within the site governance systems elements of a noise management plan are in place. The site has a formal complaints procedure that requires updating to state that in the event of an issue this would be recorded and investigated.</p>										
14	<p><b>Noise management</b></p> <p>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.</p> <ol style="list-style-type: none"> <li>(a) Appropriate location of equipment and buildings</li> <li>(b) Operational measures</li> <li>(c) Low-noise equipment</li> <li>(d) Noise control equipment</li> <li>(e) Noise abatement</li> </ol>	CC	<p>The Operator has provided information to support compliance with BATc 14. We have assessed the information provided and we are satisfied that the Operator has demonstrated compliance with BATc 14.</p> <p>The Operator is using the following techniques:</p>										

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
			<p>(b) Operational measures:</p> <ul style="list-style-type: none"> <li>• The site operates a closed-door policy with respect to all areas of production (loading operations excepted).</li> <li>• The site is operated by trained personnel that are aware of the potential for the site to generate off-site impacts including statutory nuisance (noise, odour, dust, vermin, light and vibration).</li> <li>• Noise is a consideration of the activities of contractors and projects and is routinely assessed as part of internal evaluation during planned and reactive construction and maintenance activities.</li> <li>• External noise survey undertaken periodically.</li> </ul>
15	<p><b>Odour Management</b></p> <p>In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to set up, implement and regularly review an odour management plan, as part of the environmental management system (see BAT 1), that includes all of the following elements:</p> <ul style="list-style-type: none"> <li>- a protocol containing actions and timelines;</li> <li>- a protocol for conducting odour monitoring.</li> <li>- a protocol for response to identified odour incidents eg complaints;</li> <li>- 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.</li> </ul>	<b>NA</b>	<p>We are satisfied that BATc 15 is not applicable to this Installation.</p> <p>An odour management plan (OMP) is only required where odour nuisance at sensitive receptors is expected or has been substantiated. There have been no substantiated odour nuisance from the site therefore an OMP is not a requirement for this site.</p> <p>The Operator submitted a summary OMP which provided a general overview of techniques and control measures in place to mitigate odour on-site. There is also a formal complaints procedure to record any record of odour from the site if required.</p>

## **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
- 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.

### **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 at the time of permitting.

The existing H1 assessment of particulate emissions to air 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.

### **Implementing the requirements of the Medium Combustion Plant Directive**

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.

## **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. Consequently, we agree that the original risk assessments remain valid at this time.

## **Soil & groundwater risk assessment (baseline report)**

The IED requires that the Operator of any IED installation using, producing or releasing “relevant hazardous substances” (RHS) shall, having regarded the possibility that they might cause pollution of soil and groundwater, submit a “baseline report” with its permit application. The baseline report is an important reference document in the assessment of contamination that might arise during the operational lifetime of the regulated facility and at cessation of activities. It must enable a quantified comparison to be made between the baseline and the state of the site at surrender.

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

The Operator submitted a site condition report *SCR Appendix A - 02.3 B2-5b Site Condition Report (and related appendices)* during the original application received on 19/06/2019. 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.

## **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 confirmed there has been no change in the hazardous substances used, their capability of causing pollution and/or the pollution prevention measures at the installation since the risk assessment was submitted on 15/03/2019.

Consequently, we are satisfied there has been no change to the assessment of risk for hazardous substances.

### **Climate Change Adaptation**

The Operator has considered if the site is at risk of impacts from adverse weather (flooding, unavailability of land for land spreading, prolonged dry weather / drought) .

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

The Operator has submitted a climate change adaptation plan, which considers, as a minimum the impact of severe weather on the operations within the installation.

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 (IC3) to request a climate change adaptation plan is submitted by the Operator for approval from the Environment Agency.

### **Containment**

We asked the Operator via 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 applicable.

The Operator provided of all tanks;

- Tank reference/name
- Contents details
- Capacity (litres)
- Location
- Construction material(s) of each tank
- The bunding specification including
  - Whether the tank is banded
  - 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 banded 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).

The following improvement conditions have been retained from the original permit with their deadlines reset.

Improvement programme requirements		
Reference	Reason for inclusion	Justification of deadline
IC1	<p>The Operator shall submit a written plan to the Environment Agency for technical assessment and approval. The plan must assess the operational effectiveness of secondary containment in the Effluent Treatment Plant and surrounding area. It must consider the design, method of construction and integrity of the system, and be carried out by suitably competent and qualified personnel. The assessment shall be made against the requirements of our guidance and Ciria C736<sup>(ref 1-3)</sup>. Where improvement requirements are identified, the plan must contain dates for their implementation. Improvements should include (but are not limited to):</p> <ul style="list-style-type: none"> <li>• ensuring that jetting leak screens drain within bunded areas,</li> <li>• investigations to confirm that containment would be effective, in the event of balance tank failure,</li> <li>• integrity testing of bunds and drains,</li> <li>• sealing off drains which are unused or which would compromise the containment plan,</li> <li>• modification of containment design, so that bunded areas or sub-areas collect and do not drain back to the ETP inlet,</li> <li>• any associated repairs or modifications to existing infrastructure including containment provided by the outside storage yard,</li> <li>• plans for testing and maintenance to ensure ongoing fitness for purpose</li> </ul> <p>The notification requirements of condition 2.4.2 will be deemed to have been complied with on submission of the plan. You must implement the plan as approved, and from the date stipulated by the Environment Agency.</p>	<p>6 months from date of issue or as agreed in writing by the Environment Agency 16/06/2025</p>

	<p>References:</p> <ol style="list-style-type: none"> <li>1. <a href="https://www.gov.uk/guidance/pollution-prevention-for-businesses">https://www.gov.uk/guidance/pollution-prevention-for-businesses</a></li> <li>2. <a href="https://www.gov.uk/guidance/control-and-monitor-emissions-for-your-environmental-permit">https://www.gov.uk/guidance/control-and-monitor-emissions-for-your-environmental-permit</a></li> <li>3. CIRIA 736 Containment systems for the prevention of pollution- <i>Secondary, tertiary and other measures for industrial and commercial premises</i>, London 2014, ISBN: 978-0-86017-740-1.</li> </ol>	
IC2	<p>The Operator shall submit a written plan to the Environment Agency for technical assessment and approval. The report provided shall be agreed in writing by the Environment Agency in order for the improvement condition to be completed. The plan must:</p> <ol style="list-style-type: none"> <li>1. assess the need for, and feasibility of measures to further protect ground and surface water from possible releases from areas of operational hardstanding outside Factory 1 and Factory 2, and from drainage within Factory 2.</li> <li>2. demonstrate that that only uncontaminated surface water runoff is discharged to surface water drains (W1 and W2).</li> </ol> <p>The assessment shall be made against the requirements of our guidance<sup>(ref1-2)</sup>. Where additional measures to reduce this risk are identified, the plan must contain dates for their implementation. Improvements could include (but are not limited to):</p> <ul style="list-style-type: none"> <li>• diverting water away from surface water drains (in either all operational scenarios, or under specific conditions) where there is a risk of contamination,</li> <li>• identifying and sealing off unused surface water drains, or those which present a risk of surface water contamination, particularly those inside factory 2,</li> <li>• changes to operational practices (e.g. what activities are carried out in yard areas which drain to surface water),</li> <li>• installing oil interceptors,</li> <li>• manually or automatically detecting contamination and instigating protective action such as operation of the surface water isolation valve,</li> </ul>	<p>6 months from date of issue or as agreed in writing by the Environment Agency 16/06/2025</p>



	<ul style="list-style-type: none"> <li>• any necessary repairs/improvements to existing infrastructure including concrete surfaces and expansion joints,</li> <li>• plans for inspection, testing and maintenance of drainage and surfaces to ensure ongoing fitness for purpose,</li> <li>• monitoring to confirm that no contamination of surface water is detected,</li> </ul> <p>You must implement the plan as approved, and from the date stipulated by the Environment Agency. You must provide updated drainage plan(s) if alterations are made</p> <p>References:</p> <ol style="list-style-type: none"> <li>1. <a href="https://www.gov.uk/guidance/pollution-prevention-for-businesses">https://www.gov.uk/guidance/pollution-prevention-for-businesses</a></li> <li>2. <a href="https://www.gov.uk/guidance/control-and-monitor-emissions-for-your-environmental-permit">https://www.gov.uk/guidance/control-and-monitor-emissions-for-your-environmental-permit</a></li> </ol>	
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The following improvement conditions have added to the permit as a result of this variation.

<b>Improvement programme requirements</b>		
<b>Reference</b>	<b>Reason for inclusion</b>	<b>Justification of deadline</b>
IC3	<p>The operator shall produce a climate change adaptation plan, which will form part of the EMS.</p> <p>The plan shall include, but not be limited to:</p> <ul style="list-style-type: none"> <li>• Details of how the installation has or could be affected by severe weather;</li> <li>• The scale of the impact of severe weather on the operations within the installation;</li> <li>• An action plan and timetable for any improvements to be made to minimise the impact of severe weather at the installation.</li> </ul> <p>The Operator shall implement any necessary improvements to a timetable agreed in writing with the Environment Agency.</p>	<p>12 months from date of issue or as agreed in writing by the Environment Agency</p> <p>16/12/2025</p>

The following Pre-operational measures have been removed from the permit as a result of this variation. The Operator has confirmed that no acid tank was commissioned for the effluent treatment plant and none is planned for commission:

<b>Pre-operational measures for future development - Removed</b>		
<b>Reference</b>	<b>Operation</b>	<b>Pre-operational measures</b>
PO1	Commissioning of acid storage tank in Effluent Treatment Plant	The Operator shall submit a written plan to the Environment Agency for technical assessment and approval. The plan must assess the risk of reaction between incompatible bulk chemicals being stored in a common bund (e.g. acid and alkali) in the event of simultaneous failure. If a risk is identified, the plan must propose measures to reduce or eliminate risk, or mitigate effects. You must receive approval of the plan and implement any measures proposed the plan as approved, before acid is stored within the existing concrete bund.
PO2	Commissioning of acid storage tank in Effluent Treatment Plant	The Operator shall submit a written plan to the Environment Agency for technical assessment and approval. The plan must assess the suitability of the existing concrete bund in respect of resistance to the acid proposed to be stored. In the event that resistance is currently insufficient to prevent ground contamination, corrective measures shall be proposed to ensure that existing bunding is made sufficient, or alternative bunding is provided. You must receive approval of the plan and implement any measures proposed the plan as approved, before acid is stored within the existing concrete bund.