

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/BO2226IU
The Operator is: Greencore Prepared Meals Limited
The Installation is: Greencore Warrington
This Variation Notice number is: EPR/BO2226IU/V007

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.

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 03/08/2022 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 01/12/2022.

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 Conclusion 6 and 9. In relation to these BAT Conclusions, we do not fully agree with the Operator in respect of their current stated capability as recorded in their response to the Regulation 61 Notice. We have therefore included Improvement Conditions IC7 & IC8 in the Consolidated Variation Notice to ensure that the requirements of the BAT Conclusions are delivered within 3 months of the variation being issued.

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 29/05/2024 for further clarity to be provided on the following BATc 1, 2, 3, 6, 8, 9, and 12. In addition to providing further information on the onsite containment provisions and site capacity. A copy of the further information request and response 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
GENERAL BAT CONCLUSIONS (BAT 1-15)			
1	<p>Environmental Management System - Improve overall environmental performance.</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 site has an established EMS (environment management system) in place. which aligns with (but not audited to) the ISO 14001:2015 standards and meets the requirements of BATc 1. A summary of the features are as follows.</p> <ul style="list-style-type: none"> • The EMS is reviewed annually with senior management and updated as required. • The EMS includes an Environmental Policy statement with an explicit commitment to continuous improvement. • The EMS includes KPIs related to sustainability objectives which encompass utility reduction (electricity and gas decrease) and water reduction targets per tonne of product. • The EMS clearly defines roles and responsibilities of all colleagues at all levels of the business. • Established, effective methods of external communication on environmental matters and complaints. • The EMS incorporates asset and food safety standards to ensure that buildings and equipment are maintained to a good standard. This includes (but is not limited to)

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			<p>emergency protection equipment and other equipment that is used in the management of significant environmental aspects, health and safety, and where there are legal requirements regarding its maintenance.</p> <ul style="list-style-type: none"> • Annual reports on KPI data allow for benchmarking between sites within the Greencore group and across the sector.
2	<p>EMS Inventory of inputs & outputs. Increase resource efficiency and reduce emissions.</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>To demonstrate compliance the Operator has submitted the following supporting information.</p> <ul style="list-style-type: none"> • An overview of the onsite processes • Information in support of water usage across the site. • Detailed characterisation of the waste water stream along with 12 months of sampling data. • Information on energy (gas & electricity) consumption across the site. <p>The main production processes are semi-automated, optimised and continually reviewed from a yield and efficiency perspective. In addition there are appropriate operational control procedures in place that are integrated to manage and control emissions in accordance with plant performance objectives supported by a comprehensive metering, monitoring, measurement and KPI programme.</p>

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3	<p>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).</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>All process effluent from onsite processes is discharged directly to the foul sewer. The site reports daily flow data to sewer and the sewage undertaker (United Utilities) undertakes weekly sampling of chemical oxygen demand (COD), total suspended solids (TSS) pH and oil and grease.</p> <p>The site reports on key performance indicators (flow, COD, TSS, pH and oil and grease) on a monthly basis for Group collective management. This includes a review of regulator (United Utilities) analysis of trade effluent samples.</p> <p>The Operator has submitted an application (V008) which is to upgrade the effluent treatment system to include a dissolved air flotation (DAF) plant, this will provide further treatment prior to discharging the effluent to the sewer.</p>
4	<p>Monitoring emissions to water to the required frequencies and standards. BAT is to monitor emissions to water with at least the frequency given and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.</p>	NA	<p>We are satisfied that BATc 4 is not applicable to this Installation.</p> <p>There are no direct discharges of treated process effluent to surface water, all effluent is treated and discharged to the foul sewer.</p>
5	<p>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.</p>	NA	<p>We are satisfied that BATc 5 is not applicable to this Installation.</p>

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			The Operator doesn't undertake any of the activities listed with the table associated with BATc 5.
6	<p>Energy Efficiency</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>	FC	<p>The Operator has provided information to support compliance with BATc 6 we have assessed the information provided we are not satisfied that the Operator has demonstrated compliance with BATc 6.</p> <p>The Operator has provided an Energy Efficiency Plan, however the provided plan doesn't encompass the points of BATc 6a. We have included an improvement condition (IC7) for the Operator to submit an Energy Efficiency Plan for approval</p> <p>The Operator undertakes the following techniques on site to increase energy efficiency as summarised below.</p> <ul style="list-style-type: none"> • All combustion plant operations are optimised through burner control, annual balancing and efficiency testing, • Planned Preventative Maintenance (PPM) is in place and inspections are undertaken in line with the requirements of the suppliers. • The addition of an inverter control on odour plant has already been installed. • The site will replace older IE3 (premium efficiency) motors with more energy efficient IE4 (super premium efficiency) motors where the opportunity arises.

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			<ul style="list-style-type: none"> • Heat is recovered from various parts of the process. • The site has replaced the majority of lights with LED units across all production areas and back rooms. • Boiler blowdown is minimised through total dissolved solids (TDS) automatic controls (calibrated internally). • The site has implemented internal review of steam demand to identify opportunities to minimise peak and smooth out demand. • Preheating of feedwater is undertaken, in addition there are economisers on the boilers. • A PLC (programmable logic controller) control system is employed for optimisation and track trend parameters; including pressure and temperature, variable speed drivers, time, etc. The efficiency of the process is continually reviewed where measures are introduced to optimise the operation of the process, with respect to yield and utility consumption. • Compressed air systems are automated, optimised and maintained inhouse and in conjunction with third party specialists. Compressed air leak surveys are undertaken periodically. • Chilled water and pumps, headers steam, hot and cold pipework is generally lagged. • Variable speed drivers are installed across a number of existing motors and are continually evaluated. • Opportunity for onsite renewables including the use of solar

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			<p>(Photovoltaic cells) is periodically reviewed by site and the wider Greencore Group as part of the utility reduction strategy.</p> <p>We consider that the Operator will be future compliant with BATc 6. Improvement condition (IC7) has been included in the permit to achieve compliance (see Annex 3).</p>
7	<p>Water and wastewater minimisation</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> <p>(a) water recycling and/or reuse</p> <p>(b) Optimisation of water flow</p> <p>(c) Optimisation of water nozzles and hoses</p> <p>(d) Segregation of water streams</p> <p>Techniques related to cleaning operations:</p> <p>(e) Dry cleaning</p> <p>(f) Pigging system for pipes</p> <p>(g) High-pressure cleaning</p> <p>(h) Optimisation of chemical dosing and water use in cleaning-in-place (CIP)</p> <p>(i) Low-pressure foam and/or gel cleaning</p> <p>(j) Optimised design and construction of equipment and process areas</p> <p>(k) Cleaning of equipment as soon as possible</p>	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 has identified the following techniques that are undertaken to reduce water consumption and the volume of waste water discharged.</p> <p>Water is recovered and reused on site through the recovery of CIP wash waters. The final rinse water is recovered and reused as the pre-rinse for the following CIP cycle. In addition boiler condensate is returned to the hot well.</p> <p>Other water minimisation techniques utilised at the site include;</p> <ul style="list-style-type: none"> • Manufacturing processes are controlled using a combination of set points including temperatures, flow rates. The design of the installation incorporates flow meters, VSD and timers for flushes that reduce consumption and minimise discharge

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			<ul style="list-style-type: none"> • Hose guns and trigger controls are partially employed, and the pressure of the delivery systems regulated for the needs of the Operator in the area. • The Operator segregates water streams, process contaminated wastewater is directed to the effluent drains for treatment and uncontaminated rainwater and site run off is directed to surface water drains • The site operates a “Clean As You Go” policy and where possible SOPs (standard operating procedures) prescribe dry cleaning techniques which is subject to process confirmation within each area. • High pressure (6bar) washing is utilised across the site. • Foaming systems are employed to allow more controlled dosing of chemicals and a reduction in rinse water. • The site is an existing facility. New project proposals and process layout reconfigurations take into account the hygiene requirements of the process and ensure efficient cleaning can be facilitated. • The cleaning equipment as soon as possible is carried out to prevent product hardening through hygiene operations for specific equipment and as part of the “Clean As You Go” policy.
8	<p>Prevent or reduce the use of harmful substances</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>	FC	The Operator has provided information to support compliance with BATc 8. We have assessed the information provided and we are

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	<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>		<p>not satisfied that the Operator has demonstrated compliance with BATc 8.</p> <p>The Operator has confirmed that chemicals used at the site are purchased through a specialist third-party. Thus ensuring the application of cleaning chemicals are appropriate to the area and individual cleaning systems.</p> <p>As stated under BATc 7 the Operator utilises dry cleaning and is continually seeking opportunities to recover and reuse rinse water.</p> <p>As part of the determination the Operator declared that a number of the chemicals used contain EDTA, which is considered to be a priority substance under the Water Framework Directive. The Operator undertook a surface water assessment for the emission of EDTA acid within the effluent. The assessment screened out emissions as 'insignificant' on the receiving water body, the River Mersey.</p> <p>As BATc 8 requires the 'proper use of cleaning chemicals' and those which harmful to the aquatic environment we have included an improvement condition for the Operator to review the use of these chemicals on site.</p> <p>We have included improvement condition (IC10) in the permit to achieve compliance. The Operator is required to complete the improvement conditions and demonstrate compliance with the BAT Conclusions within 3 months of the variation being issued.</p>

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9	<p>Refrigerants</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>	FC	<p>The Operator has provided information to support compliance with BATc 9. We have assessed the information provided and we are not satisfied that the Operator has demonstrated compliance with BATc 9.</p> <p>The Operator has provided an inventory of the refrigeration units at the site which includes the type and quantity of refrigeration gas used. A number of the units are listed as using R404a and R410a which have a GWP (global warming potential) above 1,400.</p> <p>We have included an Improvement Condition which requires the Operator to provide a plan that where practicable considers the retro filling of systems containing high GWP refrigerants with refrigerants that have a lower GWP, in addition to an action log with timescales for the replacement of end-of-life equipment using refrigerants with the lowest practical GWP.</p> <p>We have included improvement condition (IC8) in the permit to achieve compliance. The Operator is required to complete the improvement conditions and demonstrate compliance with the BAT Conclusions within 3 months of the variation being issued</p>
10	<p>Resource efficiency</p> <p>In order to increase resource efficiency, BAT is to use one or a combination of the techniques given below:</p> <ul style="list-style-type: none"> (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 	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>

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
	(f) Use of waste water for land spreading		<p>The Operator has identified the following techniques to increase resource efficiency.</p> <ul style="list-style-type: none"> • Waste streams and residues are sent off site for recovery via anaerobic digestion. • 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. Non-conforming product is sent for redistribution for human consumption . • Residues are separated at the point of generation so a decision can actively be made on how the material is to be handled and further treated/recovered.
11	<p>Waste water buffer storage 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>Surface water drains to Spittle Brook via emission points W1 & W2. Surface water from the sites drains to one of four attenuation tanks (AT1 - AT4) prior to discharging via the stated emission points, the valve from the tank to the Spittle Brook is controlled by the Environment Agency.</p> <p>The site has an overflow zone of approximately 150m³ consisting of impermeable hardstanding adjacent to the effluent treatment plant sump to contain trade effluent on site prior to discharge. This</p>

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			<p>provides a degree of buffer capacity in the event of TE transfer pump failure or controlled relief point. This would provide circa 5 hours retention at typical site flows which provides site with some time to prevent discharge of any material that could cause harm to downstream sewage works.</p> <p>In addition, the Operator has confirmed that the site has standard operating procedures in place for the containment of spills, this includes the use of bungs and booms to prevent liquids entering surface water systems. There are a number of spill kits are strategically located around the site, all storage areas for hygiene chemicals are within areas that drain to the trade effluent drains.</p>
12	<p>Emissions to water – treatment</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>	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>The Operator has stated that there is currently no onsite treatment of process effluent, all effluent is discharged to the foul sewer.</p> <p>During the determination of this variation (V007) the Operator submitted a further variation for the installation of an effluent treatment plant. The effluent treatment plant is due to be commissioned end of July 2024.</p> <p>The installation of the effluent treatment plant will include physical separation through solids screening, equalisation and neutralisation through effluent balancing and pH correction</p>

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	(k) Sedimentation (l) Filtration (eg sand filtration, microfiltration, ultrafiltration) (m) Flotation		and aerobic treatment through the use of a DAF plant. Resulting sludge will be removed from site for further processing. The resulting effluent will be discharged to the United Utilities wastewater network. As the Operator has submitted an application to include effluent treatment plant an improvement condition has not been included within this variation.										
12	<p>Emissions to water – treatment BAT-associated emission levels (BAT-AELs) for direct emissions to a receiving water body</p> <table border="1" data-bbox="280 746 1211 951"> <thead> <tr> <th>Parameter</th> <th>BAT-AEL (°) (°) (daily average)</th> </tr> </thead> <tbody> <tr> <td>Chemical oxygen demand (COD) (°) (°)</td> <td>25-100 mg/l (°)</td> </tr> <tr> <td>Total suspended solids (TSS)</td> <td>4-50 mg/l (°)</td> </tr> <tr> <td>Total nitrogen (TN)</td> <td>2-20 mg/l (°) (°)</td> </tr> <tr> <td>Total phosphorus (TP)</td> <td>0,2-2 mg/l (°)</td> </tr> </tbody> </table>	Parameter	BAT-AEL (°) (°) (daily average)	Chemical oxygen demand (COD) (°) (°)	25-100 mg/l (°)	Total suspended solids (TSS)	4-50 mg/l (°)	Total nitrogen (TN)	2-20 mg/l (°) (°)	Total phosphorus (TP)	0,2-2 mg/l (°)	NA	We are satisfied that the BATC-AELs under BATC 12 are not applicable to this Installation. There are no direct discharges of treated process effluent to surface water.
Parameter	BAT-AEL (°) (°) (daily average)												
Chemical oxygen demand (COD) (°) (°)	25-100 mg/l (°)												
Total suspended solids (TSS)	4-50 mg/l (°)												
Total nitrogen (TN)	2-20 mg/l (°) (°)												
Total phosphorus (TP)	0,2-2 mg/l (°)												
13	<p>Noise management plan</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"> - 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. <p>Note: BAT13 is only applicable where a noise nuisance at sensitive receptors is expected and/or has been substantiated.</p>	CC	The Operator has provided information to support compliance with BATc 13. We have assessed the information provided and we are satisfied that the Operator has demonstrated compliance with BATc 13. The Operator has an approved noise management plan that was incorporated into the permit under the previous variation (V006) dated 20/07/2021. The noise management plan incorporates the elements as per BATc 13 and Environment Agency guidance H3.										

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
14	<p>Noise management</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> <p>(a) Appropriate location of equipment and buildings</p> <p>(b) Operational measures</p> <p>(c) Low-noise equipment</p> <p>(d) Noise control equipment</p> <p>(e) Noise abatement</p>	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>A summary of the techniques utilised by the Operator to reduce noise emission at the site is given below,</p> <ul style="list-style-type: none"> • Plant and equipment are subject to a Planned preventative maintenance (PPM) plan • The site operates a closed-door policy with respect to all areas of production (loading operations excepted). • 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, vibration etc). • Consideration of noise is part of equipment specification, which would identify opportunities to include the requirement for low noise equipment such as fans, pumps and compressors, where this is applicable for both temporary or new equipment. <p>The design of any new plant will include features to reduce plant noise leakage, sound suppression to external equipment and inherently quiet fan assemblies to ensure no increase on the current background noise.</p>
15	<p>Odour Management</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</p>	CC	<p>The Operator has provided information to support compliance with BATc 15. We have assessed the information provided and we are</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>part of the environmental management system (see BAT 1), that includes all of the following elements:</p> <ul style="list-style-type: none"> - a protocol containing actions and timelines; - a protocol for conducting odour monitoring. - 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. <p>Note. BAT 15 is only applicable to cases where an odour nuisance at sensitive receptors is expected and/or has been substantiated.</p>		<p>satisfied that the Operator has demonstrated compliance with BATc 15.</p> <p>The Operator has an approved odour management plan that was incorporated into the permit under the previous variation (V006) dated 20/07/2021. The odour management plan incorporates the elements as per BATc 15 and Environment Agency guidance H4.</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

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.

This included some other administrative changes to the permit to ensure cross-sector consistency, including:

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

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 previous variation permitted an increase in the number of meals produced at the site to 1.5 million meals a week. The Operator has confirmed that the number of meals prepared on site each week has remained at 1.5 million and that this equates to 127 tonnes/day. We have included this limit within Table S1.1 of the consolidated variation.

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

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

	Boiler 1	Boiler 2
1. Rated thermal input (MW) of the medium combustion plant.	4.42 MWth	4.42 MWth
2. Type of the medium combustion plant (diesel engine, gas turbine, dual fuel engine, other engine or other medium combustion plant).	Boiler	Boiler
3. Type and share of fuels used according to the fuel categories laid down in Annex II.	Natural gas	Natural gas
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.	January 2018	January 2018

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

For existing MCP with a rated thermal input of less than or equal to 5 MW, the emission limit values set out in tables 1 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 provided a revised risk assessment using the Environment Agency's H1 software tool for the emissions of Chloride .

The assessment shows that, applying the conservative criteria in our guidance on environmental risk assessment, the emissions of Chloride may be screened out as environmentally insignificant.

The Operator also carried out a surface water risk assessment following the Environment Agency's guidance ([Surface water pollution risk assessment for your environmental permit - GOV.UK \(www.gov.uk\)](http://www.gov.uk)). The Operator has identified that a number of the chemicals used at the site for cleaning contain EDTA which is classified as a priority substances as identified by the Water Framework Directive (WFD). The Operator followed the screening tests as detailed within the Environment Agency's H1 methodology.

The first test identifies whether the effluent concentrations are less than 10% of the environmental quality standards (EQS). As the EDTA release concentration (132,885µg/l) was calculated as being greater than 10 % of EDTA EQS (400µg/l), the screening did not pass Test 1.

The second test introduces the dilution available in the receiving water in order to determine whether the process contribution (PC) of EDTA to the receiving water is greater than 4% of the EQS. The dilution factor specified for use in the H1 tool is the 95% Exceedance (Q95) River Flow Rate. Flow data from the 'Mersey at Westy' was considered to be the nearest upstream point, this data was taken from the national flow archives. The Q95 value for the River Mersey at 'Mersey at Westy' is 9.082 m³/s. The calculated annual average emission calculated 27.21% PC of the EQS value. As this is more than 4% the screening did not pass Test 2.

Test 3 uses the previously supplied data, and in the absence of measured data the EA's guidance on surface water risk assessments is to assume the Background Concentration (BC) of EDTA in the 'Mersey at Westy' is 50% of the EQS value (200 µg/l). The PC (109µ/l) is added to the BC to calculate the predicted Environmental concentration (PEC) 309µ/l. Under test 3 the emissions failed as the difference between the BC and PEC is greater than 10% of the EQS (400µ/l),

Tests 4a and 4b consider the PEC in relation to the EQS, the assessment passed tests 4a and 4b as the PEC is less than the EQS.

As the screening of EDTA did not pass all of the tests, we cannot deem that the emission of EDTA to be insignificant. However, the assessment is based on the 'worst case' scenario in that 100% of the EDTA used on the site enters the drainage system and that none of the EDTA is sequestered by other substances and lastly the

assessment was based on the highest concentration of EDTA as listed within the substances MSDS (Material Safety Data Sheet). The Operator is working with their chemical supplier to seek alternative chemicals that don't contain EDTA. We have included improvement condition (IC10) in the consolidated variation for the Operator to seek alternative chemicals that don't contain priority substances such as EDTA.

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 [Application Site Report, Hazelwood Chilled Meals] during the original application received on 09/08/2004. 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 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 (flooding, unavailability of land for land spreading, prolonged dry weather / drought) .

The Operator has stated that the installation is not likely to be or has previously not been affected by climate change.

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 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 and their findings. We are not satisfied that the existing tanks and containment measures on site meet the standards set out in CIRIA C736.

Whilst the majority of onsite tanks and storage vessels are bunded to the CIRIA standard there are a number of tanks and storage vessels which are un-bunded or the bund capacity is less than the CIRIA standard of 110%. These tanks are identified as the iron exchange media, salt, brine and a number of the CiP tanks.

We have set improvement conditions in the permit to address the deficiencies in the existing tanks and containment measures on site (IC9). See Improvement conditions in Annex 3 of this decision document.

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).

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 develop a written accident management plan having regard to the requirements set out in Section 2.8 of Agency Technical Guidance Note IPPC S6.10, issue 1 October 2003 and shall submit the plan to the Agency. The plan shall be submitted in writing to the Agency for agreement.
IC2	The Operator shall develop and implement a formalised Environmental Management System, having regard for section 2.3 of the Agency's Sector Guidance Note S6.10 Issue 1, October 2003.
IC3	The Operator shall carry out a water efficiency audit of the installation. The audit shall have regard to the Agency Guidance Note IPPC S6.10 Section 2.4.4 and shall provide a breakdown of significant water use by department or activity and shall establish the current installation performance (for example litres water/kg of product) and water efficiency objectives for this installation. A summary of the audit shall be sent to the Agency.
IC4	The Operator shall submit a written proposal to the Agency by the date in the adjacent column to install oil interception on release points W1 and W2. The proposal shall include a timetable for implementing the proposal. The Operator shall carry out the proposal; following written agreement from the Agency.
IC5	The Operator shall carry out works to increase the stack height of the OCU outlet stack from 10.5 to 17metres, as identified under scenario 2 in the Odournet Report for Greencore, Warrington dated 15/09/2016. The Operator shall notify the Environment Agency upon commencement and completion of the works. The completed works shall be reviewed and signoff on agreement with the Environment Agency.
IC6	The Operator shall carry out works to implement Option 3 Scenario 3 as described in the Odour Assessment and Abatement Review at Greencore Warrington, dated 01/10/2015. The Operator shall notify the Environment Agency upon commencement and completion of the works. The completed works shall be reviewed and signoff on agreement with the Environment Agency.

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
IC7	<p>The Operator shall submit, for approval by the Environment Agency, a report demonstrating achievement of the 'Narrative' BAT conclusions as identified in the Food, Drink and Milk Bref published on 4 December 2019 where BAT is currently not demonstrated or achieved. The report shall include, but not be limited to, the following:</p> <ul style="list-style-type: none"> • Methodology applied for achieving BAT • Demonstrating that BAT has been achieved. <p>The report shall address the BAT Conclusions for Food, Drink and Milk Industries with respect to BATc 6</p> <p>Refer to BAT Conclusions for a full description of the BAT requirement.</p>	16/11/2024 or as agreed in writing by the Environment Agency
IC8	<p>The Operator shall use refrigerants without ozone depletion potential and with a low global warming potential (GWP) in accordance with BAT 9 from the Food, Drink and Milk Industries BATCs.</p> <p>To demonstrate compliance against BAT 9, the Operator shall produce a plan for the onsite refrigerant system(s) at the installation. The plan is to be assessed by the Environment Agency and shall be incorporated within the existing environmental management system.</p> <p>The plan should include, but not be limited to, the following:</p> <ul style="list-style-type: none"> • Where practicable, retro filling systems containing high GWP refrigerants e.g. R-404A with lower GWP alternatives as soon as possible. • An action log with timescales, for replacement of end-of-life equipment using refrigerants with the lowest practicable GWP. 	16/11/2024 or as agreed in writing by the Environment Agency
IC9	<p>The Operator shall undertake a survey of the primary, secondary and tertiary containment at the site and review measures against relevant standard including:</p> <ul style="list-style-type: none"> • CIRIA Containment systems for the prevention of pollution (C736) – Secondary, tertiary and other measures for industrial and commercial premises, 	16/08/2025 or as agreed in writing by the Environment Agency

	<ul style="list-style-type: none"> • EEMUA 159 - Above ground flat bottomed storage tanks <p>The Operator shall submit a written report to the Environment Agency approval which outlines the results of the survey and the review of standard and provide details of</p> <ul style="list-style-type: none"> • current containment measures • any deficiencies identified in comparison to relevant standards, • improvements proposed • time scale for implementation of improvements. <p>The Operator shall implement the proposed improvements in line with the timescales agreed by the Environment Agency.</p>	
<p>IC10</p>	<p>The Operator shall review the use of materials on site that contain 'priority substances as defined by the Water Frame Directive including, but not limited to those containing EDTA and implement a programme to replace them with alternative less harmful substances.</p> <p>The programme shall include (but not be limited to):</p> <ul style="list-style-type: none"> • alternative chemical(s) • associated impact assessment(s) for the alternative chemical(s) • detail any commissioning required for alternative chemical(s) <p>Along with a timetable for implementing the changes and this shall be agreed in writing by the Environment Agency prior to implementation.</p>	<p>16/08/2025 or as agreed in writing by the Environment Agency</p>