

# **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/BN9241IS  
The Operator is:                         Greenyard Frozen UK Limited  
The Installation is:                     Greenyard Way  
This Variation Notice number is:   EPR/BN9241IS/V009

### **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

# 1 Our decision

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

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

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

## 2 How we reached our decision

### 2.1 Requesting information to demonstrate compliance with BAT Conclusion techniques

We issued a Notice under Regulation 61(1) of the Environmental Permitting (England and Wales) Regulations 2016 (a Regulation 61 Notice) on 09/06/2022 requiring the Operator to provide information to demonstrate where the operation of their installation currently meets, or how it will subsequently meet, the revised standards described in the relevant BAT Conclusions document.

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

- describes the techniques that will be implemented before 4 December 2023, which will then ensure that operations meet the revised standards, or
- justifies why standards will not be met by 4 December 2023, and confirmation of the date when the operation of those processes will cease within the Installation or an explanation of why the revised BAT standards are not applicable to those processes, or
- justifies why an alternative technique will achieve the same level of environmental protection equivalent to the revised BAT standards described in the BAT Conclusions.

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

The Regulation 61 Notice response from the Operator was received on 10/10/2022.

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

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

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

Based on our records and previous experience in the regulation of the installation we consider that the Operator will be able to comply with the techniques and standards described in the BAT Conclusions other than for those techniques and requirements described in BAT Conclusion 6 and 9. The operator currently hasn't demonstrated compliance with the requirements of BATc 6 and 9. We have therefore included Improvement Conditions IC11 and IC12 in the Consolidated Variation Notice to ensure that the requirements of the BAT Conclusions achieves compliance.

## 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 requests on 29/11/2023 in regard to BATc 1 – 12, AD waste treatment BAT 15, 16, 21 and 38, Hazardous Substances (monitoring) and Climate Change Adaption Plan. A copy of the further information requests was placed on our public register.

In addition to the response to our further information request, we received additional information during the determination from the operator for the full EMS to confirm compliance for BAT 1 and BAT 2, BAT 9 and Climate Change Adaption Plan, received on 14/12/2023. We made a copy of this information available to the public in the same way as the response to our information request.

## **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 internal EMS and processes that comply with all the requirements listed in BATc 1 as demonstrated in document reference 'EMS KL' submitted on 14/12/2023. Additional evidence has been provided for BATc 1; viii, xiv, xx, i (noise management plan).</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 has an internal EMS and processes that comply with all the requirements listed in BATc 2 as demonstrated in document reference 'EMS KL' submitted on 14/12/2023. Additional evidence has been provided for BATc 2; V. BATc 2 is achieved by the operator conducting a Pollution Inventory on an annual basis, producing an annual Interpretative Review in conjunction with the operators EMS.</p>
3	<p><b>Monitoring key process parameters at key locations for emissions to water.</b></p> <p>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>

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
			The operator is continuously monitoring at the Effluent Treatment Plant (ETP) outlet daily for: Pressure, Temperature, Potential Hydrogen (pH), Flow, tank levels and dissolved oxygen.
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>	N/A	<p>We are satisfied that BATc 4 is not applicable to this Installation.</p> <p>The site has no direct discharges to water, all process effluent is discharged to sewer operated by Anglian Water.</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>	N/A	<p>We are satisfied that BATc 5 is not applicable to this Installation.</p> <p>No processes described under BATc 5 are carried out on site and as such this BATc is not applicable.</p>
6	<p><b>Energy Efficiency</b>            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 and we are not satisfied that the operator has demonstrated compliance with BATc 6.</p> <p>The operator has no Energy Efficiency plan in place in their EMS or otherwise documented. IC11 has been included in the permit to ensure an Energy Efficiency plan is developed to achieve compliance.</p> <p>The operator is using the following techniques:</p> <ul style="list-style-type: none"> <li>• PV solar Panels</li> <li>• Biogas Combined Heat Power (CHP)</li> <li>• LED lighting</li> <li>• VSD and high efficiency motor upgrades</li> <li>• Annual air leak surveys</li> </ul>

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			<ul style="list-style-type: none"> <li>Boiler economisers</li> </ul>
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> <p>(a) water recycling and/or reuse  (b) Optimisation of water flow  (c) Optimisation of water nozzles and hoses  (d) Segregation of water streams</p> <p>Techniques related to cleaning operations:</p> <p>(e) Dry cleaning  (f) Pigging system for pipes  (g) High-pressure cleaning  (h) Optimisation of chemical dosing and water use in cleaning-in-place (CIP)  (i) Low-pressure foam and/or gel cleaning  (j) Optimised design and construction of equipment and process areas  (k) Cleaning of equipment as soon as possible</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 is using the following techniques:</p> <ul style="list-style-type: none"> <li>(a) Water Recycling and reuse – Water from the cooling stage of the blanching operation cascades back to the first product rinse/infeed tank. This water is suitable for initial cleaning of product with further rinsing with fresh water before blancher.</li> <li>(b) Optimisation of water flow – Water feed consumption monitored using online dashboard and threshold alarms to email users of high consumption and area of occurrence.</li> <li>(c) Optimisation of water nozzles and hoses - Site uses specific types depending on area and application.</li> <li>(d) Segregation of water streams - Site discharge rainwater from roof spaces and carpark area into surface water. Process water and areas where contamination is a risk are treated by onsite water treatment.</li> <li>(e) Dry Cleaning – Squeegees and shovels are used where possible.</li> <li>(g) High pressure cleaning – Site has standalone hygiene systems in the different operational areas.</li> <li>(h) Optimisation of chemical dosing and water use in CIP - Currently only</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>flow is used as control measure on CIP for Blanchers.</p> <ul style="list-style-type: none"> <li>• (i) Low pressure foam and/ or gel cleaning – Use of low pressure foam cleaning occurs throughout the production areas</li> <li>• (j) Optimised design and construction of equipment and process areas – Supplied equipment needs to be accessible and safe to clean. Within the design consideration need to be made with product accumulation.</li> </ul>
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> <ul style="list-style-type: none"> <li>• (a) Proper selection of cleaning chemicals and disinfectants – The operator only uses trusted established UK supplier of hygiene/Cleaning chemicals. Internal approval required before any new type is authorised for use onsite.</li> <li>• (c) Dry Cleaning – Squeegees and shovels are used where possible.</li> <li>• (d) Optimised design and construction of equipment and process areas – Supplied equipment needs to be accessible and safe to clean. Within the design consideration need to be made with product accumulation.</li> </ul>
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,</p>	FC	<p>The operator has provided information to support compliance with BATc 9. We have assessed the information provided. We are not</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
	BAT is to use refrigerants without ozone depletion potential and with a low global warming potential.		<p>satisfied that the operator has demonstrated compliance with BATc 9.</p> <p>The operator stated that they use F-gases such as R407F, R404A and R410A in the production process which have a high GWP. IC12 has been included to in the permit to ensure future compliance.</p>
10	<p><b>Resource efficiency</b>            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"> <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> </ul>	<b>CC</b>	<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> <ul style="list-style-type: none"> <li>• (a) Anaerobic Digestion - Anaerobic Sludge Blanket Reactor (UASB) Reactor to treat wastewater. Biogas produced and utilised in CHP</li> <li>• (b) Use of Residues – Peelings and Vegetable waste where possible are used for animal feed. Packed stock or product not for consumption disposed of via anaerobic digestion using waste contractor.</li> <li>• (c) Separation of residues – Centrifuge, Rundown screens, rotary screens are all used to separate residues.</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>	<b>CC</b>	<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:</p>

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			<p>In the event of an incident which could potentially cause contamination of the surface water drainage, the operator has a drain blocking procedure in place that uses shut off valves. There is also access to addition drain blocking equipment such as inflatable bladders in case of valve failure.</p> <p>There is approximately 760m<sup>3</sup> of storage capacity available in the balance tank. Tank operates between 30% &amp; 90% capacity. Tank control and level is integrated into a Supervisory Control and Data Acquisition (SCADA) system with alarms for high level linked to Audible local alarm and auto message to engineers and operators phones.</p>
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>	<b>CC</b>	<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 is using the following techniques:</p> <ul style="list-style-type: none"> <li>• (a) Equalisation - Balance tank used</li> <li>• (b) Neutralisation – pH corrected/Neutralised using sodium hydroxide (NaOH).</li> <li>• (c) Physical Separation – Rotary drum sieves and run down screens used prior to Dissolved Air Flotation.</li> <li>• (d) Aerobic and/ or anaerobic treatment – UASB Reactor and Activated sludge process.</li> <li>• (e) Nitrification and/ or denitrification – Denitrification process incorporated into activated sludge process.</li> </ul>

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	(j) Coagulation and flocculation (k) Sedimentation (l) Filtration (eg sand filtration, microfiltration, ultrafiltration) (m) Flotation		<ul style="list-style-type: none"> <li>(j) Coagulation and flocculation – Used on Dissolved air flotation (DAF) process</li> <li>(k) Sedimentation – Final clarifier operating</li> <li>(l) Filtration – Sand filter operational</li> <li>(m) Flotation – DAF</li> </ul>										
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="304 647 1229 847"> <thead> <tr> <th>Parameter</th> <th>BAT-AEL <sup>(1)</sup> <sup>(2)</sup> (daily average)</th> </tr> </thead> <tbody> <tr> <td>Chemical oxygen demand (COD) <sup>(3)</sup> <sup>(4)</sup></td> <td>25-100 mg/l <sup>(5)</sup></td> </tr> <tr> <td>Total suspended solids (TSS)</td> <td>4-50 mg/l <sup>(6)</sup></td> </tr> <tr> <td>Total nitrogen (TN)</td> <td>2-20 mg/l <sup>(7)</sup> <sup>(8)</sup></td> </tr> <tr> <td>Total phosphorus (TP)</td> <td>0,2-2 mg/l <sup>(9)</sup></td> </tr> </tbody> </table>	Parameter	BAT-AEL <sup>(1)</sup> <sup>(2)</sup> (daily average)	Chemical oxygen demand (COD) <sup>(3)</sup> <sup>(4)</sup>	25-100 mg/l <sup>(5)</sup>	Total suspended solids (TSS)	4-50 mg/l <sup>(6)</sup>	Total nitrogen (TN)	2-20 mg/l <sup>(7)</sup> <sup>(8)</sup>	Total phosphorus (TP)	0,2-2 mg/l <sup>(9)</sup>	NA	<p>We are satisfied that BATc 12 is not applicable to this Installation.</p> <p>The site has no direct discharges to water, all process effluent is discharged to sewer operated by Anglian Water.</p>
Parameter	BAT-AEL <sup>(1)</sup> <sup>(2)</sup> (daily average)												
Chemical oxygen demand (COD) <sup>(3)</sup> <sup>(4)</sup>	25-100 mg/l <sup>(5)</sup>												
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Total phosphorus (TP)	0,2-2 mg/l <sup>(9)</sup>												
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, e.g. 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>A noise management plan is only required where noise nuisance at sensitive receptors is expected or has been substantiated. There have been no substantiated noise nuisance from the site therefore an NMP is not a requirement for this site.</p> <p>The operator has voluntarily created a Noise Management Plan (NMP) in October 2022 but has not yet been approved by the EA.</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>	CC	<p>The operator has provided information to support compliance with BATc 14. 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
	(a) Appropriate location of equipment and buildings (b) Operational measures (c) Low-noise equipment (d) Noise control equipment (e) Noise abatement		<p>satisfied that the operator has demonstrated compliance with BATc 14.</p> <p>The operator follows their internal NMP.</p> <p>The operator is using the following techniques:</p> <ul style="list-style-type: none"> <li>• (a) Appropriate location of equipment and buildings – The site uses wind direction and speed monitoring data from the Heacham monitoring station which provides characterisation of the wind climate at the site. The prevailing winds avoid sensitive receptors.</li> <li>• (b) Operational Measures – Assessed equipment, vehicles, waste and site processes. Equipment has daily visual checks and operated by trained staff and mechanical equipment inspection annually.</li> <li>• (e) Noise abatement - Vehicles on site restricted to 5mph to reduce noise.</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>	CC	<p>The operator has provided information to support compliance with BATc 15. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 15.</p> <p>IC9 required the submission of an Odour Management Plan (OMP) which was completed and provided to the EA in 2018. While deemed complaint, the EA has not formally approved the OMP.</p>

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			And OMP was warranted due to the emission from the burning of Biogas at the CHP in which was producing odour from excesses methane slip. The operator has taken appropriate measures to improve and monitor odour.
	<b>Fruit and vegetable processing sector BAT conclusions</b>		
27	<p><b>Energy efficiency – vegetable processing sector</b></p> <p>In order to increase energy efficiency, BAT is to use an appropriate combination of the techniques specified in BAT 6 and to cool fruit and vegetables before deep freezing.</p> <p>The temperature of the fruit and vegetables is lowered to around 4 °C before they enter the freezing tunnel by bringing them into direct or indirect contact with cold water or cooling air. Water can be removed from the food and then collected for reuse in the cooling process.</p>	<b>CC</b>	<p>The operator has provided information to support compliance with BATc 27. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 27.</p> <p>The operator reports the specific the energy consumption of all vegetable throughput, this is reviewed annually. The Site implements internal sustainability project plans and sustainability targets.</p> <p>The operator sources part of its energy from solar energy.</p> <p>Vegetables are cooled down to 4 degrees Celsius through a cooling zone after blanching. After vegetables are cooled in the cooling zone, they are then frozen.</p>
	<b>Vegetable Processing Sector Environmental Performance Levels</b>		

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								
EPL	<p><b>Environmental Performance Level – energy consumption for the vegetable processing sub-sector</b></p> <table border="1" data-bbox="309 338 1236 501"> <thead> <tr> <th>Specific process</th> <th>Unit</th> <th>Specific energy consumption (yearly average)</th> </tr> </thead> <tbody> <tr> <td>Potato processing (excluding starch production)</td> <td rowspan="2">MWh/tonne of products</td> <td>1,0-2,1 <sup>(1)</sup></td> </tr> <tr> <td>Tomato processing</td> <td>0,15-2,4 <sup>(2)</sup> <sup>(3)</sup></td> </tr> </tbody> </table> <p><sup>(1)</sup> The specific energy consumption level may not apply to the production of potato flakes and powder.  <sup>(2)</sup> The lower end of the range is typically associated with the production of peeled tomatoes.  <sup>(3)</sup> The upper end of the range is typically associated with the production of tomato powder or concentrate.</p>	Specific process	Unit	Specific energy consumption (yearly average)	Potato processing (excluding starch production)	MWh/tonne of products	1,0-2,1 <sup>(1)</sup>	Tomato processing	0,15-2,4 <sup>(2)</sup> <sup>(3)</sup>	CC	<p>The operator has provided information to support compliance with BATc 27 EPL (energy consumption). We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 27.</p> <p>The operator has declared a performance level of 0.48 MWh per year</p>
	Specific process	Unit	Specific energy consumption (yearly average)								
Potato processing (excluding starch production)	MWh/tonne of products	1,0-2,1 <sup>(1)</sup>									
Tomato processing		0,15-2,4 <sup>(2)</sup> <sup>(3)</sup>									
EPL	<p><b>Environmental Performance Level – Specific waste water discharge for the vegetable processing sub-sector</b></p> <table border="1" data-bbox="309 711 1236 900"> <thead> <tr> <th>Specific process</th> <th>Unit</th> <th>Specific waste water discharge (yearly average)</th> </tr> </thead> <tbody> <tr> <td>Potato processing (excluding starch production)</td> <td rowspan="2">m<sup>3</sup>/tonne of products</td> <td>4,0-6,0 <sup>(1)</sup></td> </tr> <tr> <td>Tomato processing when water recycling is possible</td> <td>8,0-10,0 <sup>(2)</sup></td> </tr> </tbody> </table> <p><sup>(1)</sup> The specific waste water discharge level may not apply to the production of potato flakes and powder.  <sup>(2)</sup> The specific waste water discharge level may not apply to the production of tomato powder.</p>	Specific process	Unit	Specific waste water discharge (yearly average)	Potato processing (excluding starch production)	m <sup>3</sup> /tonne of products	4,0-6,0 <sup>(1)</sup>	Tomato processing when water recycling is possible	8,0-10,0 <sup>(2)</sup>	CC	<p>The operator has provided information to support compliance with BATc 27 EPL (specific waste water discharge). We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 27.</p> <p>The operator has declared a performance level of 6.6 m<sup>3</sup> per year</p>
	Specific process	Unit	Specific waste water discharge (yearly average)								
Potato processing (excluding starch production)	m <sup>3</sup> /tonne of products	4,0-6,0 <sup>(1)</sup>									
Tomato processing when water recycling is possible		8,0-10,0 <sup>(2)</sup>									
BATC No.	Summary of BAT Conclusion requirement for Waste Treatment	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement								

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												
15	<p>BAT is to use flaring only for safety reasons or for non-routine operating conditions (e.g. start-ups, shutdowns) by using both of the techniques given below.</p> <table border="1" data-bbox="286 359 1238 679"> <thead> <tr> <th data-bbox="286 359 344 400"></th> <th data-bbox="344 359 595 400">Technique</th> <th data-bbox="595 359 981 400">Description</th> <th data-bbox="981 359 1238 400">Applicability</th> </tr> </thead> <tbody> <tr> <td data-bbox="286 400 344 571">a.</td> <td data-bbox="344 400 595 571">Correct plant design</td> <td data-bbox="595 400 981 571">This includes the provision of a gas recovery system with sufficient capacity and the use of high-integrity relief valves.</td> <td data-bbox="981 400 1238 571">Generally applicable to new plants. A gas recovery system may be retrofitted in existing plants.</td> </tr> <tr> <td data-bbox="286 571 344 679">b.</td> <td data-bbox="344 571 595 679">Plant management</td> <td data-bbox="595 571 981 679">This includes balancing the gas system and using advanced process control.</td> <td data-bbox="981 571 1238 679">Generally applicable.</td> </tr> </tbody> </table>		Technique	Description	Applicability	a.	Correct plant design	This includes the provision of a gas recovery system with sufficient capacity and the use of high-integrity relief valves.	Generally applicable to new plants. A gas recovery system may be retrofitted in existing plants.	b.	Plant management	This includes balancing the gas system and using advanced process control.	Generally applicable.	CC	<p>The operator has provided information to support compliance with Waste Treatment – Anaerobic BATc 15. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 15.</p> <p>The operator is using the following techniques:</p> <ul style="list-style-type: none"> <li>• (a) Correct plant design – Plant designed in accordance with ‘Dangerous Substances and Explosive Atmosphere Regulations 2002’ (DSEAR) and Hazard and Operability Analysis (HAZOP) study carried out by independent engineering consultancy.</li> <li>• (b) Plant management – Plant managed using SCADA systems. Remote access available for alarm response. Various equipment within plant is maintained by manufacturer or equipment installer.</li> </ul>
	Technique	Description	Applicability												
a.	Correct plant design	This includes the provision of a gas recovery system with sufficient capacity and the use of high-integrity relief valves.	Generally applicable to new plants. A gas recovery system may be retrofitted in existing plants.												
b.	Plant management	This includes balancing the gas system and using advanced process control.	Generally applicable.												



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												
16	<p>In order to reduce emissions to air from flares when flaring is unavoidable, BAT is to use both of the techniques given below.</p> <table border="1" data-bbox="300 331 1227 842"> <thead> <tr> <th data-bbox="300 331 353 373"></th> <th data-bbox="353 331 602 373">Technique</th> <th data-bbox="602 331 981 373">Description</th> <th data-bbox="981 331 1227 373">Applicability</th> </tr> </thead> <tbody> <tr> <td data-bbox="300 373 353 533">a.</td> <td data-bbox="353 373 602 533">Correct design of flaring devices</td> <td data-bbox="602 373 981 533">Optimisation of height and pressure, assistance by steam, air or gas, type of flare tips, etc., to enable smokeless and reliable operation and to ensure the efficient combustion of excess gases.</td> <td data-bbox="981 373 1227 533">Generally applicable to new flares. In existing plants, applicability may be restricted, e.g. due to maintenance time availability.</td> </tr> <tr> <td data-bbox="300 533 353 842">b.</td> <td data-bbox="353 533 602 842">Monitoring and recording as part of flare management</td> <td data-bbox="602 533 981 842">This includes continuous monitoring of the quantity of gas sent to flaring. It may include estimations of other parameters (e.g. composition of gas flow, heat content, ratio of assistance, velocity, purge gas flow rate, pollutant emissions (e.g. NO<sub>x</sub>, CO, hydrocarbons), noise). The recording of flaring events usually includes the duration and number of events and allows for the quantification of emissions and the potential prevention of future flaring events.</td> <td data-bbox="981 533 1227 842">Generally applicable.</td> </tr> </tbody> </table>		Technique	Description	Applicability	a.	Correct design of flaring devices	Optimisation of height and pressure, assistance by steam, air or gas, type of flare tips, etc., to enable smokeless and reliable operation and to ensure the efficient combustion of excess gases.	Generally applicable to new flares. In existing plants, applicability may be restricted, e.g. due to maintenance time availability.	b.	Monitoring and recording as part of flare management	This includes continuous monitoring of the quantity of gas sent to flaring. It may include estimations of other parameters (e.g. composition of gas flow, heat content, ratio of assistance, velocity, purge gas flow rate, pollutant emissions (e.g. NO <sub>x</sub> , CO, hydrocarbons), noise). The recording of flaring events usually includes the duration and number of events and allows for the quantification of emissions and the potential prevention of future flaring events.	Generally applicable.	CC	<p>The operator has provided information to support compliance with Waste Treatment – Anaerobic BATc 16. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 16.</p> <p>The operator is using the following techniques:</p> <ul style="list-style-type: none"> <li>• (a) Correct design of flaring device - Ground mounted enclosed flare installed</li> <li>• (b) Monitoring and recording as part of flare management - Data file updated daily recording minutes run and quantity of gas combusted.</li> </ul>
	Technique	Description	Applicability												
a.	Correct design of flaring devices	Optimisation of height and pressure, assistance by steam, air or gas, type of flare tips, etc., to enable smokeless and reliable operation and to ensure the efficient combustion of excess gases.	Generally applicable to new flares. In existing plants, applicability may be restricted, e.g. due to maintenance time availability.												
b.	Monitoring and recording as part of flare management	This includes continuous monitoring of the quantity of gas sent to flaring. It may include estimations of other parameters (e.g. composition of gas flow, heat content, ratio of assistance, velocity, purge gas flow rate, pollutant emissions (e.g. NO <sub>x</sub> , CO, hydrocarbons), noise). The recording of flaring events usually includes the duration and number of events and allows for the quantification of emissions and the potential prevention of future flaring events.	Generally applicable.												

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								
21	<p>In order to prevent or limit the environmental consequences of accidents and incidents, BAT is to use all of the techniques given below, as part of the accident management plan (see BAT 1).</p> <table border="1" data-bbox="286 363 1218 901"> <thead> <tr> <th data-bbox="286 363 618 405">Technique</th> <th data-bbox="618 363 1218 405">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="286 405 618 603">a. Protection measures</td> <td data-bbox="618 405 1218 603">           These include measures such as:           <ul style="list-style-type: none"> <li>— protection of the plant against malevolent acts;</li> <li>— fire and explosion protection system, containing equipment for prevention, detection, and extinction;</li> <li>— accessibility and operability of relevant control equipment in emergency situations.</li> </ul> </td> </tr> <tr> <td data-bbox="286 603 618 730">b. Management of incidental/accidental emissions</td> <td data-bbox="618 603 1218 730">           Procedures are established and technical provisions are in place to manage (in terms of possible containment) emissions from accidents and incidents such as emissions from spillages, firefighting water, or safety valves.         </td> </tr> <tr> <td data-bbox="286 730 618 901">c. Incident/accident registration and assessment system</td> <td data-bbox="618 730 1218 901">           This includes techniques such as:           <ul style="list-style-type: none"> <li>— a log/diary to record all accidents, incidents, changes to procedures and the findings of inspections;</li> <li>— procedures to identify, respond to and learn from such incidents and accidents.</li> </ul> </td> </tr> </tbody> </table>	Technique	Description	a. Protection measures	These include measures such as: <ul style="list-style-type: none"> <li>— protection of the plant against malevolent acts;</li> <li>— fire and explosion protection system, containing equipment for prevention, detection, and extinction;</li> <li>— accessibility and operability of relevant control equipment in emergency situations.</li> </ul>	b. Management of incidental/accidental emissions	Procedures are established and technical provisions are in place to manage (in terms of possible containment) emissions from accidents and incidents such as emissions from spillages, firefighting water, or safety valves.	c. Incident/accident registration and assessment system	This includes techniques such as: <ul style="list-style-type: none"> <li>— a log/diary to record all accidents, incidents, changes to procedures and the findings of inspections;</li> <li>— procedures to identify, respond to and learn from such incidents and accidents.</li> </ul>	<b>CC</b>	<p>The operator has provided information to support compliance with Waste Treatment – Anaerobic BATc 21. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 21.</p> <p>The operator is using the following techniques:</p> <ul style="list-style-type: none"> <li>• (a) Protection Measures - Protection of the plant against malevolent acts: Restricted locked access to control room and Gas dome/CHP unit. Site security onsite.</li> <li>• (b) Management of incidental/accidental emissions - Pollution control plan and spill procedure in place.</li> <li>• (c) Incident/accident registration and assessment system - Environmental incidents are recorded on incident investigation form. Incidents and general environmental feedback are discussed in daily operational meetings and monthly HS&amp;E meetings with all dept mangers.</li> </ul>
Technique	Description										
a. Protection measures	These include measures such as: <ul style="list-style-type: none"> <li>— protection of the plant against malevolent acts;</li> <li>— fire and explosion protection system, containing equipment for prevention, detection, and extinction;</li> <li>— accessibility and operability of relevant control equipment in emergency situations.</li> </ul>										
b. Management of incidental/accidental emissions	Procedures are established and technical provisions are in place to manage (in terms of possible containment) emissions from accidents and incidents such as emissions from spillages, firefighting water, or safety valves.										
c. Incident/accident registration and assessment system	This includes techniques such as: <ul style="list-style-type: none"> <li>— a log/diary to record all accidents, incidents, changes to procedures and the findings of inspections;</li> <li>— procedures to identify, respond to and learn from such incidents and accidents.</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
38	<p>In order to reduce emissions to air and to improve the overall environmental performance, BAT is to monitor and/or control the key waste and process parameters.</p> <p>Implementation of a manual and/or automatic monitoring system to:</p> <ul style="list-style-type: none"> <li>• ensure a stable digester operation;</li> <li>• minimise operational difficulties, such as foaming, which may lead to odour emissions;</li> <li>• provide sufficient early warning of system failures which may lead to a loss of containment and explosions.</li> </ul> <p>This includes monitoring and/or control of key waste and process parameters, e.g.:</p> <ul style="list-style-type: none"> <li>• pH and alkalinity of the digester feed;</li> <li>• digester operating temperature;</li> <li>• hydraulic and organic loading rates of the digester feed;</li> <li>• concentration of volatile fatty acids (VFA) and ammonia within the digester and digestate;</li> <li>• biogas quantity, composition (e.g. H<sub>2</sub>S) and pressure;</li> <li>• liquid and foam levels in the digester.</li> </ul>	<b>CC</b>	<p>The operator has provided information to support compliance with Waste Treatment – Anaerobic BATc 38. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 38.</p> <p>The operator has declared:</p> <p>Monitoring of UASB is carried out continually by SCADA control system. The follow parameters are monitored:</p> <ul style="list-style-type: none"> <li>• pH, temperature, reactor pressure, biogas flow rate, water flow rate, pump speed, valve position, pre-conditioning tank level and steam injection, valve position.</li> </ul> <p>Daily lab monitoring of reactor conditions include:</p> <ul style="list-style-type: none"> <li>• Chemical Oxygen Demand (COD), pH, VFA (if COD&gt;1000mg/l).</li> </ul> <p>Biogas quality is measured by online system on CHP unit.</p> <p>Liquid level in reactor maintained by overflow system into conditioning tank..</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**

- Activity name
- 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 maximum production capacity for the site has increased however as there are no particulate emissions or direct emission to water a new H1 assessment is not required. The consent to discharge with Anglian water is up to date and is not impacted by this increase.

### **Waste treatment**

The operator uses anaerobic digestion (AD) to treat the process effluent from the production of frozen vegetables prior to discharge to the foul sewer. As a part of the permit review the Environment Agency has taken the opportunity to review the permit conditions for this activity. Where the permit doesn't already include the additional directly associate activities (DAAs) or processing monitoring requirements (Table S3.4) we have amended the permit to include them. The processing monitoring includes monitoring of biogas, leak detection, flare operation and onsite storage and containment of digester tanks and sludge tanks.

In addition we have assessed the waste treatment activity against the BAT Conclusions for Waste Treatment published 10th August 2018 in the Official Journal of the European Union See Annex 1.

## 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 tables below:

#### Combined heat and power (CHP) engines

1. Rated thermal input (MW) of the medium combustion plant.	1.4 MWth
2. Type of the medium combustion plant (diesel engine, gas turbine, dual fuel engine, other engine or other medium combustion plant).	CHP - Biogas engine
3. Type and share of fuels used according to the fuel categories laid down in Annex II.	Biogas 100%
4. Date of the start of the operation of the medium combustion plant or, where the exact date of the start of the operation is unknown, proof of the fact that the operation started before 20 December 2018.	July 2022

#### Boilers

1. Rated thermal input (MW) of the medium combustion plant.	Boiler 4 - 3.6 MWth
2. Type of the medium combustion plant (diesel engine, gas turbine, dual fuel engine, other engine or other medium combustion plant).	Boiler
3. Type and share of fuels used according to the fuel categories laid down in Annex II.	Natural gas 99% Gas oil 1%
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.	May 2017

### Back-up generators

1. Rated thermal input (MW) of the medium combustion plant.	Boiler 3 - 2.9 MWth
2. Type of the medium combustion plant (diesel engine, gas turbine, dual fuel engine, other engine or other medium combustion plant).	Boiler
3. Type and share of fuels used according to the fuel categories laid down in Annex II.	Natural gas 100%
4. Date of the start of the operation of the medium combustion plant or, where the exact date of the start of the operation is unknown, proof of the fact that the operation started before 20 December 2018.	July 1998

We have reviewed the information provided and we consider that the declared combustion plant 'Boiler 3' and 'Boiler 4' 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.

For the new CHP, we have included the appropriate emission limit values for new CHP engines as part of this permit review. See Table S3.1 in the permit. We have removed the VOC limit as part of this permit review. 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.

We have changed the previous emission limits for the CHP at emission point A3 in line with the MCPD. The limit values were converted from 5 per cent (dry gas) to 15 per cent (dry gas), in line with the FDM and MCPD standard. The limits are based on normal operating conditions and load - temperature 0°C (273K); pressure: 101.3 kPa and oxygen: 15 per cent (dry gas). The measurement uncertainty specified in LFTGN08 v2 2010 shall apply. Emission point A3 has revised limits in accordance with the MCPD.

An Improvement Condition (IC15) has been included to compare methane emissions in the CHP engine exhaust gas from the burning of biogas to that of the manufacturers specifications. The operator shall, as part of the methane leak detection and repair (LDAR) programme, develop proposals to assess the potential for methane slip and take corrective actions where emissions above the manufacturer's specification or appropriate benchmark levels are identified.

## **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 risk assessment which includes a description of the condition of the site and a consideration of the possibility of soil and groundwater contamination at the installation. No site baseline condition was included in the submission.

We have assessed the risk assessment in accordance with our guidance on site condition reports and baseline reporting under the Industrial Emissions Directive – Operational instruction 233\_06 [*Assessing application site condition reports and surrender site condition reports submitted under the Environmental Permitting regime*]. We consider the risk assessment is not satisfactory as it does not adequately describe the current condition of the site.

We have included an Improvement Condition in the permit (IC13) which requires the operator to submit an updated site condition report which includes baseline soil and groundwater data. We have also included an Improvement Condition in the permit (IC14) which requires the operator to submit a RHS baseline assessment and monitoring plan requirement. See Improvement conditions in Annex 3 of this decision document.

## **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.

The operator is required to submit a relevant hazardous substances monitoring plan for review to the Environment Agency via improvement condition (IC14).

## **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 flooding, 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 consider the climate change adaptation plan to be appropriate for the installation.

## **Containment**

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

The operator provided details of all tanks;

- Tank reference/name
- Contents
- Capacity (litres)
- Location
- Construction material(s) of each tank
- The bunding specification including
  - Whether the tank is 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 bunded areas
- Tank filling/emptying mitigation measures (drips/splashes)
- Leak detection measures
- Details of when last bund integrity test was carried out
- Maintenance measures in place for tank and bund (inspections)
- How the bund is emptied
- Details of tertiary containment

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

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

## 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.

<b>Superseded Improvement Conditions – Removed from permit as marked as “complete”</b>	
<b>Reference</b>	<b>Improvement Condition</b>
IC1 – IC6	<p>The operator shall carry out an assessment of the options and opportunities available for heat recovery from refrigeration systems in compliance with Environment Agency Sector Guidance Note EPR6.10.</p> <p>A summary of the assessment shall be sent to the Agency in writing together with a timetable to implement any necessary changes identified.</p> <p>The notification requirements of condition 1.4.1 will be deemed to have been complied with on submission of the assessment.</p>
IC7	<p>The operator shall undertake an assessment of the surfacing and secondary containment measures on site. The assessment will take into account the requirements of CIRIA Containment systems for the prevention of pollution (C736) - Secondary, tertiary and other measures for industrial and commercial premises, or other relevant guidance as agreed with the Environment Agency.</p> <p>A written report summarising the findings shall be submitted to the Environment Agency. A timescale for implementation of any improvements shall be agreed with the Environment Agency, including interim measures.</p>
IC8	<p>The operator shall submit a revised drainage plan to the Environment Agency. The plan shall clearly identify the surface water drainage and process water drainage, including manholes, buffer tanks, interceptors and discharge points. The plan shall clearly identify the areas where the water originates.</p>
IC9	<p>The operator shall submit a revised odour management plan to the Environment Agency for written approval. The plan shall take into account the appropriate measures for odour control specified in section 3.3 of:</p> <p><i>How to comply with your environment permit – The food and drink sector EPR 6.10</i>, and also incorporate all the required detailed information as specified in the Environment Agency's Horizontal Guidance: H4 – <i>Odour Management</i>.</p>

	The plan must contain timescales for implementation of individual Measures.
IC10	The operator shall submit a written report to the Environment Agency for approval describing the performance and optimisation of the biogas CHP engine. The report shall identify the methods to increase operating efficiency in order to reduce the generation of VOCs in the combustion gases. The report shall include a timetable for the implementation of the improvements specified.

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

<b>Improvement programme requirements</b>		
<b>Reference</b>	<b>Reason for inclusion</b>	<b>Justification of deadline</b>
IC11	The Operator shall confirm in writing to the Environment Agency that the Narrative BAT requirements for the BAT Conclusions for Food, Drink and Milk Industries with respect to BAT 6 and 9 were in place on or before 4 December 2023. Refer to BAT Conclusions for a full description of the BAT requirement.	1 month from date of permit issue: 04/03/2024
IC12	<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 develop a replacement plan for the refrigerant system(s) at the installation. This shall be incorporated within the existing environmental management system by the specified date.</p> <p>The plan should include, but not be limited to, the following:</p> <ul style="list-style-type: none"> <li>• Where practicable, retro filling systems containing high GWP refrigerants e.g. R-404A with lower GWP alternatives as soon as possible.</li> <li>• An action log with timescales, for replacement of end-of-life equipment using refrigerants with the lowest practicable GWP.</li> <li>• Replacement of systems containing HCFCs as soon as possible. Only to be included where operator has confirmed use of R22 in “legacy system” in their Reg 61 response.</li> </ul>	1 month from date of permit issue: 04/03/2024

IC13	The operator shall produce a Site Condition Report (SCR) in line with our H5 Guidance. The report shall contain the information necessary to determine the state of soil and groundwater, and ensure this is maintained throughout the life of the permit by using the results to better inform the SPMP. The report shall be submitted to the Environment Agency for review.	12 months from date of permit issue: 01/02/2025 or other date as agreed in writing with the Environment Agency
IC14	The operator shall produce a monitoring plan detailing how the management of relevant hazardous substances which did not screen out as low risk, based on the RHS baseline assessment, will be maintained and monitored to mitigate the risks of pollution. The plan shall be submitted for approval.  The plan shall be implemented in accordance with the Environment Agency's written approval, including timescales to undertake any infrastructure improvements.	12 months from date of permit issue: 01/02/2025 or other date as agreed in writing with the Environment
<b>Improvement condition to address methane slip emissions from gas engines burning biogas</b>		
IC15	The operator shall establish the methane emissions in the exhaust gas from engines burning biogas and compare these to the manufacturer's specification and benchmark levels agreed in writing with the Environment Agency. The operator shall, as part of the methane leak detection and repair (LDAR) programme, develop proposals to assess the potential for methane slip and take corrective actions where emissions above the manufacturer's specification or appropriate benchmark levels are identified.	12 months from date of permit issue: 01/02/2025 or other date as agreed in writing with the Environment Agency