

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/BT5890IB
The Operator is: Walkers Snack Foods Limited
The Installation is: Walkers Snack Foods
This Variation Notice number is: EPR/BT5890IB/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 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 28/10/2022.

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

2.3 Requests for further information during determination

Although we were able to consider the Regulation 61 Notice response generally satisfactory at receipt, we did in fact need more information in order to complete our permit review assessment, and issued further information requests on 06/09/2023 – Regarding BATcs 4, 9 along with supplementary information requested in relation to Containment and Medium Combustion Plants (MCPs), 04/10/2023 – Regarding Containment, MCPs and updated emissions points map, and 09/10/2023 – Regarding updated emissions points map. A copy of each further information request was placed on our public register.

3 The legal framework

The Consolidated Variation Notice will be issued under Regulations 18 and 20 of the EPR. The Environmental Permitting regime is a legal vehicle which delivers most of the relevant legal requirements for activities falling within its scope. In particular, the regulated facility is:

- an *installation* as described by the IED;
- subject to aspects of other relevant legislation which also have to be addressed.

We consider that, in issuing the Consolidated Variation Notice, it will ensure that the operation of the Installation complies with all relevant legal requirements and that a high level of protection will be delivered for the environment and human health.

We explain how we have addressed specific statutory requirements more fully in the rest of this document.

Annex 1: decision checklist regarding relevant BAT Conclusions

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

There are 37 BAT Conclusions.

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

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

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

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

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

BAT 15, 16, 21 & 38.

This annex provides a record of decisions made in relation to each relevant BAT Conclusion applicable to the installation. This annex should be read in conjunction with the Consolidated Variation Notice.

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

NA – Not Applicable

CC – Currently Compliant

FC – Compliant in the future (within 4 years of publication of BAT Conclusions)

NC – Not Compliant

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
GENERAL BAT CONCLUSIONS (BAT 1-15)			
1	<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 Operator has a EMS externally accredited to the ISO14001 standard.</p> <p>The Operator also uses a Global Environmental Health & Safety Management System</p>
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>The Operator declared:</p> <ul style="list-style-type: none"> • Water use and waste water discharge is reviewed daily • Emission to air are reviewed annually • The site also has a water map, which identifies incoming water, movement around the site, discharge points and treatment process within the wastewater treatment plant • GEHSMS air quality management and waste water management plans contain descriptions of treatment techniques used to prevent or reduce emissions • Sites water consumption, usage and energy is captured through meter readings on a weekly basis

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
			<ul style="list-style-type: none"> • samples every 24Hours at the effluent treatment plant outlet to ensure we are within the consent limits set by Seven Trent • A full wastewater compositional analysis is carried out annually by the external company Eurofins, and includes TN, TOC, TP, BOD and CL • Information about energy consumption and usage are captured through weekly meter readings • Uses an Energy Profiler which helps identify our biggest energy users • All waste generated is monitored down to individual installations - with data available on the online Sugatrak portal <p>The EMS is externally accredited to the ISO 14001 standard.</p>
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>The operator is continuously monitoring at the Effluent Treatment Plant (ETP) outlet daily values for: Effluent discharge volume, Potential Hydrogen (pH), Chemical Oxygen Demand (COD), Total Suspended Solids (TSS), using spot and 24h composite daily monitoring frequencies.</p> <p>Waste water inventory is taken at the overflow from the dissolved air filtration (DAF)</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
			unit, discharging into the drain which connects into the sewage drain servicing the site.
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 [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>	NA	<p>We are satisfied that BATc 4 is not applicable to this Installation.</p> <p>All effluent from our manufacturing process are directed to the Effluent treatment plant. The treated effluent water is then discharge into the municipal sewage system, which goes to Seven Trent Waste Water Treatment Work for further treatment.</p> <p>A full wastewater compositional analysis is carried out annually by the external company Eurofins, and includes Total Nitrogen (TN), Total Organic Carbon (TOC), Total Phosphorus (TP), Biochemical Oxygen Demand (BOD) and Chlorine (Cl). In the event that a parameter is out of legal requirement or PepsiCo's (parent company) requirement, the site will investigate the reason for anomaly and record it on MyEHS as an environmental incident. The waste water can from these buffers can be tested prior to discharge.</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>	CC	<p>The operator has provided information to support compliance with BATc 5. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 5.</p> <p>The operator has declared:</p> <p>Air emission monitoring is carried out annually by an external MCERTS certified organisation using EN 13284-1 standards. BAT 5 is</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
			applicable to this site as drying tastes place of starch which is produced as a by-product.
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>	CC	<p>The operator has provided information to support compliance with BATc 6. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 6.</p> <p>The site's energy management plan is outlined in the standard EHS 36 ReCon written procedure V1 which outlines:</p> <ul style="list-style-type: none"> • Identification as to how the site will reduce its reliance on natural resources, as well as minimise its impact on the environment • How conservation will be achieved by delivering programs to minimise waste, reduce water consumption and reduce energy usage <p>The operator is using the following techniques:</p> <ul style="list-style-type: none"> • Heat Recovery from CHP hot water to heat pasteurisation process in AD plant. • Preheating feed water for CIPs • Reducing compressed air system leaks • Reducing heat loss by insulation • Water use and recovery • Rainwater Recovery • Use of renewable energy sources • Condensate recovery
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>	CC	<p>The operator has provided information to support compliance with BATc 7. 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) water recycling and/or reuse (b) Optimisation of water flow (c) Optimisation of water nozzles and hoses (d) Segregation of water streams Techniques related to cleaning operations: (e) Dry cleaning (f) Pigging system for pipes (g) High-pressure cleaning (h) Optimisation of chemical dosing and water use in cleaning-in-place (CIP) (i) Low-pressure foam and/or gel cleaning (j) Optimised design and construction of equipment and process areas (k) Cleaning of equipment as soon as possible		satisfied that the operator has demonstrated compliance with BATc 7. The operator is using the following techniques: <ul style="list-style-type: none"> • (a) Water recycling and reuse (at several points of the process flow) • (c) Optimisation of water nozzles and hoses (high pressure and low pressure water, reduced pressure nozzles for specific tasks) • (d) Segregation of water streams (by storm, foul and effluent drains) • (e) Dry cleaning (Dry cleaning of equipment prior to wet cleaning. There are different levels of sanitation ranging from dry wiping to full wet wash, this prevents unnecessary wet cleaning) • (h) Optimisation of chemical dosing and water use in cleaning-in-place (CIP) (CIP system optimisation check carried out, and as a result one step boil outs are being rolled out as standard) • (k) Cleaning of equipment as soon as possible
8	Prevent or reduce the use of harmful substances In order to prevent or reduce the use of harmful substances, e.g. in cleaning and disinfection, BAT is to use one or a combination of the techniques given below. (a) Proper selection of cleaning chemicals and/or disinfectants (b) Reuse of cleaning chemicals in cleaning-in-place (CIP) (c) Dry cleaning (d) Optimised design and construction of equipment and process areas	CC	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. The operator is using the following techniques: <ul style="list-style-type: none"> • (a) Proper selection of cleaning chemicals and/or disinfectants (Chemicals arrive in sealed IBC of 1000kg max).

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
			<ul style="list-style-type: none"> • (c) Dry cleaning (Cleaning schedule in place to remove dust (external contractor). - High level netting removed to prevent dust accumulation). • (d) Optimised design and construction of equipment and process areas (portable monitoring equipment - Ultrasonic leak detection, drains where chemicals are stored lead to onsite trade effluent plant, where the wastewater is treated prior to release into the foul sewer system).
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>	NA	<p>We are satisfied that BATc 9 is not applicable to this Installation.</p> <p>There is no refrigeration taking place in the production process. Any F-gases in use are for drinking water coolers and air conditioning in offices which is out of scope of BAT 9.</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 (f) Use of waste water for land spreading 	CC	<p>The operator has provided information to support compliance with BATc 10. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 10.</p> <p>The operator is using the following techniques:</p> <ul style="list-style-type: none"> • (a) Anaerobic digestion (on-site) • (b) Use of residues (waste sent to animal feed, starch recovery, waste to bio-fertiliser off-site) • (c) Separation of residues (screens, catch pots, drip trays, centrifuge)
11	<p>Waste water buffer storage</p> <p>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</p>

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			<p>satisfied that the operator has demonstrated compliance with BATc 11.</p> <p>The operator declared:</p> <ul style="list-style-type: none"> • Automated and manually operated valves on the surface water and foul water discharge lines. These can be shut instantly using manual controls or remotely via a mobile app • Decant tank for anaerobic digester. Capacity: 700m3 • Flood plane. Capacity: 700m3 - 1000m3 • Additional capacity in sumps, and effluent treatment plant
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 is using the following techniques;</p> <ul style="list-style-type: none"> • (c) Physical separation (screens) • (d) Anaerobic treatment (digestion to remove biodegradable compounds (COD/BOD)) • (k) Sedimentation (Tank 1) • (m) Flotation (Tank 2) <p>In addition to:</p> <ul style="list-style-type: none"> • Coagulation and flocculation followed by Dissolved Air Flotation (DAF) - removes TSS • Centrifuge to remove solids

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										
	(k) Sedimentation (l) Filtration (eg sand filtration, microfiltration, ultrafiltration) (m) Flotation												
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="309 533 1234 730"> <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	<p>We are satisfied that BATc 12 (BAT-AELs) are not applicable to this Installation.</p> <p>These BAT-AELs are applicable to installation with process effluent discharges to surface water. This site does not discharge effluent to water but only to sewer for further treatment by the sewage undertaker, Severn Trent water works therefore, the BAT-AELs are not applicable.</p>
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. 	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>										
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> <ul style="list-style-type: none"> (a) Appropriate location of equipment and buildings (b) Operational measures (c) Low-noise equipment 	CC	<p>The operator has provided information to support compliance with BATc 14. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 14.</p> <p>The operator is using the following techniques:</p>										

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
	(d) Noise control equipment (e) Noise abatement		<ul style="list-style-type: none"> (a) Appropriate location of equipment and buildings (b) Operational measures (regular equipment inspection and maintenance plans, machinery operated by experienced staff, closing of doors and windows).
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 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. 	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>The operator declared:</p> <ul style="list-style-type: none"> Odour Management Plan (OMP) submitted – submitted to and approved by the EA and considered to be part of the EMS (covered under GEHSMS EHS 45B Odour Management Plan AD Plant. Issued Nov 2021 V1) Routine weekly odour checks are carried out weekly by the EHS team. Compliance task in place on MyEHS
Fruit and vegetable processing sector BAT conclusions			
27	<p>Energy efficiency – vegetable processing sector</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>	NA	<p>We are satisfied that BATc 27 is not applicable to this Installation.</p> <p>The operator has confirmed that they do not cool or deep freeze any vegetables on site therefore, BATc 27 is not applicable.</p>
Vegetable Processing Sector Environmental Performance Levels			

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	Environmental Performance Level – energy consumption for the vegetable processing sub-sector		<p>The operator has provided information to support compliance with BATc 27 (energy consumption EPL). We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 27 (energy consumption EPL).</p> <p>The operator has declared an average annual specific energy consumption of 2.05 MWh/tonne in the potato processes process.</p>	
	Specific process	Unit		Specific energy consumption (yearly average)
	Potato processing (excluding starch production)	MWh/tonne of products		1,0-2,1 ⁽¹⁾
	Tomato processing			0,15-2,4 ⁽²⁾ ⁽³⁾
	⁽¹⁾ The specific energy consumption level may not apply to the production of potato flakes and powder.			
⁽²⁾ The lower end of the range is typically associated with the production of peeled tomatoes.				
⁽³⁾ The upper end of the range is typically associated with the production of tomato powder or concentrate.				

EPL	Environmental Performance Level – Specific waste water discharge for the vegetable processing sub-sector		CC	<p>The operator has provided information to support compliance with BATc 27 (waste water discharge EPL). We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 27 (waste water discharge EPL).</p> <p>With the exception of water recycling, water efficiency techniques are deemed to be BAT for this site, as per BATc 7.</p> <p>The operator has declared an average annual specific waste water discharge of 6.92 m³/tonne (7.76 m³/tonne if starch was included) resulting from the production process. This is 0.92 m³/tonne over the maximum range for environmental performance level for potato processing.</p> <p>The operator has given the below justifications for going over this limit:</p> <ul style="list-style-type: none"> • The operator uses fresh water in two components of their starch processing system, which is in their rotary drum, as well as at the start of the process for dust repression system. • The operator uses fresh water in their AD plant mixing tank. This then aids in the generation of biogas which is used in the sites CHP as a means to provide greener electricity to the site, but at the cost of increased waste water discharge. <p>In 2024, the operator will be investing into the sites water metering equipment to more efficiently monitoring water usage. This is in combination with the development of a water management system.</p>	
	Specific process	Unit			Specific waste water discharge (yearly average)
	Potato processing (excluding starch production)	m ³ /tonne of products			4,0-6,0 ⁽¹⁾
	Tomato processing when water recycling is possible				8,0-10,0 ⁽²⁾
<p>⁽¹⁾ The specific waste water discharge level may not apply to the production of potato flakes and powder. ⁽²⁾ The specific waste water discharge level may not apply to the production of tomato powder.</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>With the above justifications taken into consideration, we are satisfied that the operator is compliant with BATc 27 (waste water discharge EPL), providing they do not deviate from the planned water and waste water monitoring and efficiency developments in 2024.</p>

BATC No.	Summary of BAT Conclusion requirement for Waste Treatment	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement												
15	<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="264 360 1211 679"> <thead> <tr> <th data-bbox="264 360 327 400"></th> <th data-bbox="327 360 573 400">Technique</th> <th data-bbox="573 360 958 400">Description</th> <th data-bbox="958 360 1211 400">Applicability</th> </tr> </thead> <tbody> <tr> <td data-bbox="264 400 327 568">a.</td> <td data-bbox="327 400 573 568">Correct plant design</td> <td data-bbox="573 400 958 568">This includes the provision of a gas recovery system with sufficient capacity and the use of high-integrity relief valves.</td> <td data-bbox="958 400 1211 568">Generally applicable to new plants. A gas recovery system may be retrofitted in existing plants.</td> </tr> <tr> <td data-bbox="264 568 327 679">b.</td> <td data-bbox="327 568 573 679">Plant management</td> <td data-bbox="573 568 958 679">This includes balancing the gas system and using advanced process control.</td> <td data-bbox="958 568 1211 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"> • (a) Correct plant design • (b) Plant management <p>The operator declared:</p> <ul style="list-style-type: none"> • Flaring only used for testing of the flare and under non-routine conditions (i.e. not enough biogas generated for CHP to run during startup/shutdown)
	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.												
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="264 863 1182 1367"> <thead> <tr> <th data-bbox="264 863 327 903"></th> <th data-bbox="327 863 573 903">Technique</th> <th data-bbox="573 863 943 903">Description</th> <th data-bbox="943 863 1182 903">Applicability</th> </tr> </thead> <tbody> <tr> <td data-bbox="264 903 327 1062">a.</td> <td data-bbox="327 903 573 1062">Correct design of flaring devices</td> <td data-bbox="573 903 943 1062">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="943 903 1182 1062">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="264 1062 327 1367">b.</td> <td data-bbox="327 1062 573 1367">Monitoring and recording as part of flare management</td> <td data-bbox="573 1062 943 1367">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_x, 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="943 1062 1182 1367">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 _x , 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"> • (a) Correct design of flaring devices (flare is designed and optimised correctly). • (b) Monitoring and recording as part of flare management (continuous monitoring of flaring quantities present)
	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 _x , 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 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								
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="271 363 1238 922"> <thead> <tr> <th data-bbox="271 363 613 408">Technique</th> <th data-bbox="613 363 1238 408">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="271 408 613 612">a. Protection measures</td> <td data-bbox="613 408 1238 612"> These include measures such as: <ul style="list-style-type: none"> — protection of the plant against malevolent acts; — fire and explosion protection system, containing equipment for prevention, detection, and extinction; — accessibility and operability of relevant control equipment in emergency situations. </td> </tr> <tr> <td data-bbox="271 612 613 743">b. Management of incidental/accidental emissions</td> <td data-bbox="613 612 1238 743"> 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="271 743 613 922">c. Incident/accident registration and assessment system</td> <td data-bbox="613 743 1238 922"> This includes techniques such as: <ul style="list-style-type: none"> — a log/diary to record all accidents, incidents, changes to procedures and the findings of inspections; — procedures to identify, respond to and learn from such incidents and accidents. </td> </tr> </tbody> </table>	Technique	Description	a. Protection measures	These include measures such as: <ul style="list-style-type: none"> — protection of the plant against malevolent acts; — fire and explosion protection system, containing equipment for prevention, detection, and extinction; — accessibility and operability of relevant control equipment in emergency situations. 	b. Management of incidental/accidental emissions	Procedures are established and technical provisions are in place to manage (in terms of possible containment) emissions from accidents and incidents such as emissions from spillages, firefighting water, or safety valves.	c. Incident/accident registration and assessment system	This includes techniques such as: <ul style="list-style-type: none"> — a log/diary to record all accidents, incidents, changes to procedures and the findings of inspections; — procedures to identify, respond to and learn from such incidents and accidents. 	CC	<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"> • (a) Protection measures (The site has restricted access, security systems such as recorded CCTV and 24hour security presence. There is a fire and explosion protection system, including provisions for prevention, detection and extinction) • (b) Management of incident/accident emissions (Site has an emergency response plan, which includes environmental incidents) • (c) Incident/accident register and assessment system (Site has an incident and accident management process, all relevant parties (i.e. managers and co-ordinators) are trained in this process. All incidents and accidents are investigated with root cause analysis and actions captured on the operators site specific external 'myEHS portal')
Technique	Description										
a. Protection measures	These include measures such as: <ul style="list-style-type: none"> — protection of the plant against malevolent acts; — fire and explosion protection system, containing equipment for prevention, detection, and extinction; — accessibility and operability of relevant control equipment in emergency situations. 										
b. Management of incidental/accidental emissions	Procedures are established and technical provisions are in place to manage (in terms of possible containment) emissions from accidents and incidents such as emissions from spillages, firefighting water, or safety valves.										
c. Incident/accident registration and assessment system	This includes techniques such as: <ul style="list-style-type: none"> — a log/diary to record all accidents, incidents, changes to procedures and the findings of inspections; — procedures to identify, respond to and learn from such incidents and accidents. 										

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
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"> • ensure a stable digester operation; • minimise operational difficulties, such as foaming, which may lead to odour emissions; • provide sufficient early warning of system failures which may lead to a loss of containment and explosions. <p>This includes monitoring and/or control of key waste and process parameters, e.g.:</p> <ul style="list-style-type: none"> • pH and alkalinity of the digester feed; • digester operating temperature; • hydraulic and organic loading rates of the digester feed; • concentration of volatile fatty acids (VFA) and ammonia within the digester and digestate; • biogas quantity, composition (e.g. H₂S) and pressure; • liquid and foam levels in the digester. 	CC	<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 is using the following techniques:</p> <ul style="list-style-type: none"> • Monitoring system in place with early warning alarms • Antifoam dosing systems • Pressure and Level gauges - with alarms • Pressure relief valves • Water deluge system • Measures of the following is conducted daily: <ul style="list-style-type: none"> ○ pH and alkalinity of the digester feed; ○ digester operating temperature; ○ hydraulic and organic loading rates of the digester feed; ○ concentration of volatile fatty acids (VFA) and ammonia within the digester and digestate; ○ biogas quantity, composition (eg H₂S) and pressure; ○ liquid and foam levels in the digester.

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

Updating permit during permit review consolidation

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

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

Production 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.

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

Waste treatment

The Operator uses anaerobic digestion (AD) to treat the process effluent from the production crisps 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 associated 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. Emission point A8 now includes Carbon monoxide monitoring.

Additional emissions control measures include recirculation of both the oil entrained vapour from the fryer hoods and the combustion of exhaust gases to the burners for reburn prior to release to atmosphere

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.	4.7 MWth
2. Type of the medium combustion plant (diesel engine, gas turbine, dual fuel engine, other engine or other medium combustion plant).	Spark Ignition
3. Type and share of fuels used according to the fuel categories laid down in Annex II.	Bio-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.	February 2015

Boilers

1. Rated thermal input (MW) of the medium combustion plant.	4.38 MWth
2. Type of the medium combustion plant (diesel engine, gas turbine, dual fuel engine, other engine or other medium combustion plant).	Boiler 1 (22 Bar Steam 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 2009

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

For existing MCPs with a rated thermal input of less than or equal to 5 MW (the CHP and Boiler 1), 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.

We have retained the NO₂ emission limits value for Boiler 1 (emission point A8), as per variation V006, and added carbon monoxide (CO) monitoring and reporting requirements, in line with the MCPD. This monitoring requirement will apply from 1 January 2030, unless otherwise advised by the Environment Agency or if the Boiler and/or the CHP is replaced.

We have changed the previous emission limits for the CHP at emission point A29 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. Currently the operator is compliant with NO₂, carbon monoxide and TVOCs, however with the new limits set at the upper end, the operator is not compliant with Sulphur dioxide limits and will need to be compliant by 01/01/2030 as laid out by the MCPD. Emission point A29 has revised limits in accordance with the MCPD.

An Improvement Condition (IC12) 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 site condition report ‘Site Condition Report (SCR) – First PHASE, 2007’ during the original application received in June 2007. 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.

There has been a ground water contamination incident resulting in foam originating from the AD plant since the SCR was submitted. We have included an improvement condition in the permit (IC8) which required the operator to submit a risk assessment considering the possibility of soil and ground water contamination at the installation. 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 confirmed there has been no change in the hazardous substances used, their capability of causing pollution and/or the pollution prevention measures at the installation since the risk assessment was submitted on 28/10/2022. However, due to hazardous substances leaving containment and causing contamination, we require a risk assessment as laid out in IC8, to reevaluated how these substances are used and contained. To this end, we have set an improvement condition in the permit to address the deficiencies in the existing tanks and containment measures on site (IC10).

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 unavailability of land for land spreading of waste, which we consider to be a severe weather event.

We do not consider the operator to have submitted a suitable climate change adaptation plan for the installation. We have included an improvement condition into the permit (IC9) to request a climate change adaptation plan is submitted by the operator for approval from the Environment Agency.

Containment

We asked the Operator via the Regulation 61 Notice to provide details of 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 banded areas
- Tank filling/emptying mitigation measures (drips/splashes)
- Leak detection measures
- Details of when last bund integrity test was carried out
- Maintenance measures in place for tank and bund (inspections)
- How the bund is emptied
- Details of tertiary containment

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

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

Following from the REG 61 request for further information, it was confirmed by the Operator that there has been no bund integrity testing carried out on any containment tanks as is a requirement of CIRIA C736. All other aspects of the installations containment currently meet the standards of CIRIA C736.

We have set an improvement condition in the permit to address the deficiencies in the existing tanks and containment measures on site (IC10). See Improvement conditions in Annex 3 of this decision document.

A request for further information was issued in regard to the underground 'tank L41 (AD Plant Emergency Decant Tank)'. It was confirmed by the Operator that the underground tank is in a pre-operation state and not currently in use. The operator provided documentation on the underground tank's capacity, layout and operation guidance. However, due to the nature of pressure built up from potential foaming incidents and the potential risks involved, a full report including a risk analysis would need to be submitted to the Environment Agency before use of the tank could be permitted by the Environment Agency.

We have set an improvement condition in the permit to address the deficiencies in the existing underground tank and containment measures on site (IC11). 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 Site Closure Plan having regard for Agency Sector Guidance Note IPPC S6.10, Issue 1, September 2003 and shall submit a copy to the Agency for approval.
IC2	The Operator shall undertake an assessment of the surfacing and containment measures on site (including the condition of site drains). The assessment will take into account the requirements of section 2.2.5 of Agency Sector Guidance Note IPPC S6.10, Issue 1, August 2003. A written report summarising the findings, along with proposals for improvements and a proposed timetable for implementation, shall be submitted to the Agency.
IC3	The Operator shall expand and further develop the written Accident Management Plan. The Plan shall have regard to the requirements set out in Section 2.8 of the Agency Sector Guidance Note IPPC S6.10, Issue 1, August 2003. The Plan, along with any proposals for improvements and a proposed timetable for implementation, shall be submitted to the Agency.
IC4	The Operator shall undertake an assessment of potential emissions to sewer of pesticides and shall review the impact assessment with particular regard for any identified pesticide releases. The assessment shall take into account any previously acquired monitoring data. The operator shall submit a written report detailing proposals including timescales for the above, for approval prior to undertaking the assessment.
IC5	The Operator shall submit a report detailing a proposed monitoring programme for all fuels used, for atmospheric emissions of NOx and CO, SO2 and PM from the point sources listed in Table 2.2.1. The report shall provide justification for the proposed monitoring methods, the frequency/duration of the monitoring and present a timeframe for implementation. The report shall take into account the requirements of the Agency Technical Guidance Notes M1 July 2002 version 2 and M2 October 2004 version 3. The written report detailing the programme shall be submitted to the Agency for approval prior to undertaking the monitoring.

IC6	The Operator shall submit a revised H1 assessment for the emission points listed in Table 2.2.1, based on the results of the monitoring undertaken as a result of IC5 (above). A summary report of the monitoring results shall also be submitted along with the H1 assessment.
IC7	The Operator shall investigate the potential release of phosphate via W2 to the aquatic environment (Rothley Brook). The Operator shall report to the Agency, detailing the nature of the sources of phosphate, proposals for the reduction of phosphate discharge and the timescale for implementation.

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

Improvement programme requirements		
Reference	Reason for inclusion	Justification of deadline
IC8	<p>The operator shall submit to the Environment Agency for approval a risk assessment considering the possibility of soil and groundwater contamination at the installation where the activity involves the use, production or release of a hazardous substances (as defined in Article 3 of Regulation (EC) No. 1272/2008 on classification, labelling and packaging of substances and mixtures).</p> <p>A stage 1-3 assessment should be completed (as detailed within the EC Commission Guidance 2014/C 136/-3) as follows;</p> <p>Stage 1 – Identify hazardous substance(s) used / stored on site.</p> <p>Stage 2 – Identify if the hazardous substance(s) are capable of causing pollution. If they are capable of causing pollution, they are then termed Relevant Hazardous Substances (RHS).</p> <p>Stage 3 – Identify if pollution prevention measures & drains are fit for purpose in areas where hazardous substances are used / stored.</p> <p>If the outcomes of Stage 3 identifies that pollution of soil / ground water to be possible. The operator shall produce and submit a monitoring plan to the Environment Agency for approval detailing how the substance(s) will be monitored to demonstrate no pollution. The operator shall commence monitoring of the RHS within a timescale as agreed by the Environment Agency.</p>	<p>6 months from permit issue</p> <p>22/07/2024</p> <p>or other date as agreed in writing with the Environment Agency</p>
IC9	<p>The operator shall produce a climate change adaptation plan, which will form part of the EMS.</p> <p>The plan shall include, but not be limited to:</p> <ul style="list-style-type: none"> • Details of how the installation has or could be affected by severe weather; • The scale of the impact of severe weather on the operations within the installation; • An action plan and timetable for any improvements to be made to minimise the impact of severe weather at the installation. <p>The Operator shall implement any necessary improvements to a timetable agreed in writing with the Environment Agency.</p>	<p>12 months from permit issue</p> <p>22/01/2025</p> <p>or other date as agreed in writing with the Environment Agency</p>

<p>IC10</p>	<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, • 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>6 months from permit issue 22/07/2024 or other date as agreed in writing with the Environment Agency</p>
<p>IC11</p>	<p>The operator shall submit a written 'underground structures plan' and shall obtain the Environment Agency's written approval to it. The plan shall contain the results of a review conducted, by a competent person, in accordance with the risk assessment methodology detailed within CIRIA C736 (2014) guidance, of the condition and extent of secondary and tertiary containment systems where all polluting liquids and solids are being stored.</p> <p>The review shall include, but not be limited to, the following for all underground structures at the installation;</p> <ul style="list-style-type: none"> • The physical condition of all underground structures; • The suitability of providing containment when subjected to the dynamic and static loads caused by the vessels' contents; • A preventative maintenance inspection regime. <p>The plan must contain dates for the implementation of individual improvement measures necessary for the underground structures to adhere to the standards detailed/referenced within CIRIA C736 (2014) guidance, or equivalent.</p> <p>The plan shall be implemented in accordance with the Environment Agency's written approval.</p>	<p>6 months from permit issue 22/07/2024 or other date as agreed in writing with the Environment Agency</p>

Improvement condition to address methane slip emissions from gas engines burning biogas

IC12	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 permit issue 22/01/2025 or other date as agreed in writing with the Environment Agency
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