

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/RP3534FP
The Operator is: Princes Limited
The Installation is: Bridge Road Food Factory
This Variation Notice number is: EPR/RP3534FP/V005

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 04/10/2022.

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 4, 6, 7 and 9. The operator does not currently comply with the requirements of BATc 12 (AELs).

In relation to these BAT Conclusions, the operator has committed compliance by 4 December 2023. We have therefore included Improvement Conditions IC24 and IC25 in the Consolidated Variation Notice to ensure that the requirements of the BAT Conclusions are delivered before 4 December 2023.

Following discussions with the operator, on 27/09/2023, it has been noted that they will not be able to comply with the BAT-AELs referenced under BAT12 (Annex 1). A meeting was held to determine the emission limits that the operator is currently meeting, what is expected of them and when they will be able to achieve meeting the BAT-AELs. As a result of this conversation improvement conditions (IC23 a-c) have been included in the permit to ensure they come into compliance as soon as is practicable.

2.3 Requests for further information during determination

Although we were able to consider the Regulation 61 Notice response generally satisfactory at receipt, we did in fact need more information in order to complete our permit review assessment, and issued a further information request on 11/09/2023. A copy of the further information request was placed on our public register.

3 The legal framework

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

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

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

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

Annex 1: decision checklist regarding relevant BAT Conclusions

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

There are 37 BAT Conclusions.

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

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

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

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>
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>It should be noted that the operator is not currently meeting BATc 2 (I)(a) and (b), however the operator has a EMS externally accredited to the ISO14001 standard and is updated on a regular basis. As such an improvement condition is not considered to be required.</p>
3	<p>Monitoring key process parameters at key locations for emissions to water.</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> <p>The operator has demonstrated that they monitor their waste water streams for key parameters such as, temperature, pH and Flow rate. Monitoring of these parameters is carried out at the effluent outfall W4.</p>

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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>	FC	<p>The operator has provided information to support compliance with BATc 4. We have assessed the information provided. We are not satisfied that the operator has demonstrated compliance with BATc 4.</p> <p>The operator does not monitor the identified key process emissions to the frequency given in BATc 4, this is in relation to the BAT-AELs laid out under BATc 12.</p> <p>Improvement condition 24 has been included in the permit to achieve compliance (see Annex 3).</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 refer to BAT5 table in BATc and in accordance with EN standards.</p>	NA	<p>We are satisfied that BATc 5 is not applicable to this Installation.</p> <p>This BATc is concerned with dust emissions release to air form processes including milling, grinding, frying and cooling. This installation does not have any such processes therefore, this BATc is not applicable to this site.</p>
6	<p>Energy Efficiency In order to increase energy efficiency, BAT is to use an energy efficiency plan (BAT 6a) and an appropriate combination of the common techniques listed in technique 6b within the table in the BATc.</p>	FC	<p>We consider that the operator will be future compliant with BATc 6. Improvement condition 24 has been included in the permit to achieve compliance (see Annex 3).</p> <p>The site utilizes a number of techniques as described under BATc 6. This includes:</p> <ul style="list-style-type: none"> - Energy Efficient Motors - Heat Recovery - Lighting - Minimising Blowdown from the Boilers - Preheating Feed Water - Reducing Compressed Air Leaks - Reducing Heat Loss by Insulation

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			<ul style="list-style-type: none"> - Variable Speed Drives - Use of Solar Energy <p>However there is no energy efficiency plan established on site as required under BATc 6(a) and as such IC 24 has been implemented to ensure a plan is put in place.</p>
7	<p>Water and wastewater minimisation</p> <p>In order to reduce water consumption and the volume of waste water discharged, BAT is to use BAT 7a and one or a combination of the techniques b to k given below. for detail of each technique, refer BAT 7 table in BATc</p> <ul style="list-style-type: none"> (a) water recycling and/or reuse (b) Optimisation of water flow (c) Optimisation of water nozzles and hoses (d) Segregation of water streams <p>Techniques related to cleaning operations:</p> <ul style="list-style-type: none"> (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 	FC	<p>We consider that the operator will be future compliant with BATc 7. Improvement condition 24 has been included in the permit to achieve compliance (see Annex 3).</p> <p>The operator has confirmed that the site uses a range of techniques as detailed in BATc 7, this includes:</p> <ul style="list-style-type: none"> - Optimisation of water nozzles and hoses - Segregation of water streams - Dry cleaning - Pigging System for pipes - High Pressure cleaning - Optimisation of chemical dosing and water use in cleaning-in-place (CIP) <p>However no water recycling and/or reuse is utilised on site, this is essential for compliance with BAT7(a) and as such an improvement condition has been added.</p>
8	<p>Prevent or reduce the use of harmful substances</p> <p>In order to prevent or reduce the use of harmful substances, e.g. in cleaning and disinfection, BAT is to use one or a combination of the techniques given below.</p> <ul style="list-style-type: none"> (a) Proper selection of cleaning chemicals and/or disinfectants (b) Reuse of cleaning chemicals in cleaning-in-place (CIP) (c) Dry cleaning 	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>

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	(d) Optimised design and construction of equipment and process areas for detail of each technique, refer BAT 8 table in BATc		<p>The site uses a combination of all the techniques as described in BATc 8, this includes:</p> <ul style="list-style-type: none"> - Proper selection of cleaning chemicals and/or disinfectants - Reuse of cleaning chemicals in cleaning-in-place (CIP) - Dry cleaning - Optimised design and construction of equipment and process areas.
9	<p>Refrigerants</p> <p>In order to prevent emissions of ozone-depleting substances and of substances with a high global warming potential from cooling and freezing, BAT is to use refrigerants without ozone depletion potential and with a low global warming potential.</p>	FC	<p>We consider that the operator will be future compliant with BATc 9. Improvement condition 25 has been included in the permit to achieve compliance (see Annex 3).</p> <p>The operators has provided an inventory of all refrigerants used on site, they do not include R-22 or R-404a however the majority of fridges on site do have a high GWP. The operator must develop a plan on replacing these with fridges that have a lower GWP.</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 has demonstrated that they use both Anaerobic Digestion on site and separation of residues to increase their resource efficiency.</p>
11	Waste water buffer storage	CC	The operator has provided information to support compliance with BATc 11. We have

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>In order to prevent uncontrolled emissions to water, BAT is to provide an appropriate buffer storage capacity for waste water.</p>		<p>assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 11.</p> <p>The operator does utilise various methods on site to prevent uncontrolled emissions. In addition to this, new bunding and secondary containment for the entire ETP was completed in early 2023. The new bunding has sufficient capacity to prevent any uncontrolled emissions for the ETP should there be leaks and or damage to the Waste water tank.</p> <p>The site is fully stocked with spill kits and all appropriate staff are trained to use these. Penstock valves are in place at appropriate locations to ensure water emission can be stopped as soon as possible should a leak arise.</p>
12	<p>Emissions to water – treatment</p> <p>In order to reduce emissions to water, BAT is to use an appropriate combination of the techniques given below.</p> <p>Preliminary, primary and general treatment</p> <p>(a) Equalisation</p> <p>(b) Neutralisation</p> <p>(c) Physical separate (eg screens, sieves, primary settlement tanks etc)</p> <p>Aerobic and/or anaerobic treatment (secondary treatment)</p> <p>(d) Aerobic and/or anaerobic treatment (eg activated sludge, aerobic lagoon etc)</p> <p>(e) Nitrification and/or denitrification</p> <p>(f) Partial nitrification - anaerobic ammonium oxidation</p> <p>Phosphorus recovery and/or removal</p> <p>(g) Phosphorus recovery as struvite</p> <p>(h) Precipitation</p> <p>(i) Enhanced biological phosphorus removal</p> <p>Final solids removal</p>	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 uses a range of techniques as described in BATc 12, this includes:</p> <ul style="list-style-type: none"> - Equalisation - Neutralisation - Physical Separation by Screening Solids and Primary Settlement - Anaerobic Digestion. - Nitrification and Denitrification. - Secondary Sedimentation. - Filtration by means of Ultrafiltration.

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										
	(j) Coagulation and flocculation (k) Sedimentation (l) Filtration (eg sand filtration, microfiltration, ultrafiltration) (m) Flotation for detail of each technique, refer BAT 12 table 1												
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="282 611 1211 810"> <thead> <tr> <th>Parameter</th> <th>BAT-AEL (1) (2) (daily average)</th> </tr> </thead> <tbody> <tr> <td>Chemical oxygen demand (COD) (3) (4)</td> <td>25-100 mg/l (5)</td> </tr> <tr> <td>Total suspended solids (TSS)</td> <td>4-50 mg/l (6)</td> </tr> <tr> <td>Total nitrogen (TN)</td> <td>2-20 mg/l (7) (8)</td> </tr> <tr> <td>Total phosphorus (TP)</td> <td>0,2-2 mg/l (9)</td> </tr> </tbody> </table> <p>Note (5): 120 mg/l COD for fruit and vegetable installations Note (9): 5 mg/l TP for fruit and vegetable installations</p>	Parameter	BAT-AEL (1) (2) (daily average)	Chemical oxygen demand (COD) (3) (4)	25-100 mg/l (5)	Total suspended solids (TSS)	4-50 mg/l (6)	Total nitrogen (TN)	2-20 mg/l (7) (8)	Total phosphorus (TP)	0,2-2 mg/l (9)	FC	<p>We consider that the operator will be future compliant with BATc 12- AELs. Improvement condition 23 (a, b and c) has been included in the permit to achieve compliance (see Annex 3).</p> <p>All parameters are met to the BAT standards except for Total Phosphorous and Total Nitrogen. The site are reporting an average of 11mg/l for TP and around 6 mg/l for TN.</p> <p>They are currently running various trails, since the commissioning of their new ETP in early 2023, to bring the levels of TP and TN down and in line with BAT.</p> <p>Currently the site is dosing with Ferric Chloride to lower the TP of the site effluent and using aeration as a biological treatment for the TN. The site is investing heavily in ensuring the can be compliant with BAT, after much discussion it was established that the site would require more time than the established December deadline. As the ETP was commissioned after the BAT publication in 2019 we are able to give the operator more time to come into line with BAT12 AELs. As such IC 23 has been included in the permit to ensure work is being carried out on site and that the AELs are met.</p> <p>All parameters and limits have been included in table S3.2 of the permit.</p>
Parameter	BAT-AEL (1) (2) (daily average)												
Chemical oxygen demand (COD) (3) (4)	25-100 mg/l (5)												
Total suspended solids (TSS)	4-50 mg/l (6)												
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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
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>There have been no noise nuisances at any sensitive reports around the site, thus BATc 13 is not applicable.</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> <p>(a) Appropriate location of equipment and buildings</p> <p>(b) Operational measures</p> <p>(c) Low-noise equipment</p> <p>(d) Noise control equipment</p> <p>(e) Noise abatement</p> <p>for detail of each technique, refer BAT 14 table in BATCs</p>	CC	<p>The operator has provided information to support compliance with BATc 14. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 14.</p> <p>The site uses a combination of techniques as described under BATc 14, this includes:</p> <ul style="list-style-type: none"> - Operational Measures – Closing all doors, limited operating hours, and fully trained machine operatives. - Low noise external equipment - Noise abatement fencing
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 site has an Odour Management Plan in place which has been previously assessed and agreed upon by the Environment Agency.</p>

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	VEGETABLE PROCESSING CONCLUSIONS (BAT 27)										
27	<p>Energy efficiency – Fruit and vegetables 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 and thus BATc 27 is not applicable.</p>								
Vegetable Processing Environmental Performance Levels											
EPL	<p>Environmental Performance Level – Energy consumption for the vegetable processing sector</p> <p style="text-align: center;"><i>Table 12</i></p> <p style="text-align: center;">Indicative environmental performance levels for specific energy consumption</p> <table border="1" data-bbox="280 858 1216 1023"> <thead> <tr> <th data-bbox="280 858 607 919">Specific process</th> <th data-bbox="607 858 913 919">Unit</th> <th data-bbox="913 858 1216 919">Specific energy consumption (yearly average)</th> </tr> </thead> <tbody> <tr> <td data-bbox="280 919 607 979">Potato processing (excluding starch production)</td> <td data-bbox="607 919 913 1023" rowspan="2">MWh/tonne of products</td> <td data-bbox="913 919 1216 979">1,0-2,1 ⁽¹⁾</td> </tr> <tr> <td data-bbox="280 979 607 1023">Tomato processing</td> <td data-bbox="913 979 1216 1023">0,15-2,4 ⁽²⁾ ⁽³⁾</td> </tr> </tbody> </table> <p>⁽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.</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⁾	NA	<p>The operator has confirmed that none of the specific processes described in the BAT-EPL are performed on site.</p> <p>Although an EPL does not apply, we have to ensure that the operator is demonstrating achieving an appropriate site specific benchmark and is energy efficient.</p> <p>The operator has stated that they can achieve a EPL of 0.092 MWh/t.</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⁾									

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>Environmental Performance Level – Specific waste water discharge for the Vegetable Processing sector</p> <p style="text-align: center;"><i>Table 13</i></p> <p style="text-align: center;">Indicative environmental performance levels for specific waste water discharge</p> <table border="1" data-bbox="280 427 1225 616"> <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">m³/tonne of products</td> <td>4,0-6,0 ⁽¹⁾</td> </tr> <tr> <td>Tomato processing when water recycling is possible</td> <td>8,0-10,0 ⁽²⁾</td> </tr> </tbody> </table> <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>	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⁾	NA	<p>The operator has confirmed that none of the specific processes described in the BAT-EPL are performed on site.</p> <p>Although an EPL does not apply, we have to ensure that the operator is demonstrating achieving an appropriate site specific benchmark and is energy efficient.</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 stated that they can achieve a EPL of 4.088 m³/t</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⁾									
	MEAT PROCESSING CONCLUSIONS (BAT 29)										
29	<p>In order to reduce channelled emissions of organic compounds to air from meat smoking, BAT is to use one or a combination of the techniques given below.</p> <p>(a) Adsorption (b) Thermal oxidation (c) Wet scrubber (d) Use of purified smoke</p> <p style="text-align: center;"><i>Table 18</i></p> <p style="text-align: center;">BAT-associated emission level (BAT-AEL) for channelled TVOC emissions to air from a smoke chamber</p> <table border="1" data-bbox="280 1153 1225 1262"> <thead> <tr> <th>Parameter</th> <th>Unit</th> <th>BAT-AEL (average over the sampling period)</th> </tr> </thead> <tbody> <tr> <td>TVOC</td> <td>mg/Nm³</td> <td>3-50 ⁽¹⁾ ⁽²⁾</td> </tr> </tbody> </table> <p>⁽¹⁾ The lower end of the range is typically achieved when using adsorption or thermal oxidation. ⁽²⁾ The BAT-AEL does not apply when the TVOC emission load is below 500 g/h.</p>	Parameter	Unit	BAT-AEL (average over the sampling period)	TVOC	mg/Nm ³	3-50 ⁽¹⁾ ⁽²⁾	NA	<p>We are satisfied that BATc 27 is not applicable to this Installation.</p> <p>The operator has confirmed that they do not smoke any meat on site and as such this BATc is not applicable.</p>		
Parameter	Unit	BAT-AEL (average over the sampling period)									
TVOC	mg/Nm ³	3-50 ⁽¹⁾ ⁽²⁾									

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				
Meat Processing Environmental Performance Levels							
EPL	<p>Environmental Performance Level – Energy consumption for the Meat Processing sector</p> <p style="text-align: center;"><i>Table 16</i></p> <p style="text-align: center;">Indicative environmental performance level for specific energy consumption</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%; text-align: center;">Unit</th> <th style="width: 50%; text-align: center;">Specific energy consumption (yearly average)</th> </tr> </thead> <tbody> <tr> <td>MWh/tonne of raw materials</td> <td style="text-align: center;">0,25-2,6 ⁽¹⁾ ⁽²⁾</td> </tr> </tbody> </table> <p>⁽¹⁾ The specific energy consumption level does not apply to the production of ready meals and soups. ⁽²⁾ The upper end of the range may not apply in the case of a high percentage of cooked products.</p>	Unit	Specific energy consumption (yearly average)	MWh/tonne of raw materials	0,25-2,6 ⁽¹⁾ ⁽²⁾	NA	<p>The operator has confirmed that none of the specific processes described in the BAT-EPL are performed on site.</p> <p>Although an EPL does not apply, we have to ensure that the operator is demonstrating achieving an appropriate site specific benchmark and is energy efficient.</p> <p>The operator has stated that they can achieve a EPL of 0.092 MWh/t.</p>
Unit	Specific energy consumption (yearly average)						
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EPL	<p>Environmental Performance Level – Specific waste water discharge for the Meat Processing sector</p> <p style="text-align: center;"><i>Table 17</i></p> <p style="text-align: center;">Indicative environmental performance level for specific waste water discharge</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%; text-align: center;">Unit</th> <th style="width: 50%; text-align: center;">Specific waste water discharge(yearly average)</th> </tr> </thead> <tbody> <tr> <td>m³/tonne of raw materials</td> <td style="text-align: center;">1,5-8,0 ⁽¹⁾</td> </tr> </tbody> </table> <p>⁽¹⁾ The specific waste water discharge level does not apply to processes using direct water cooling and to the production of ready meals and soups.</p>	Unit	Specific waste water discharge(yearly average)	m ³ /tonne of raw materials	1,5-8,0 ⁽¹⁾	NA	<p>The operator has confirmed that none of the specific processes described in the BAT-EPL are performed on site.</p> <p>Although an EPL does not apply, we have to ensure that the operator is demonstrating achieving an appropriate site specific benchmark and is energy efficient.</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 stated that they can achieve a EPL of 4.088 m³/t.</p>
Unit	Specific waste water discharge(yearly average)						
m ³ /tonne of raw materials	1,5-8,0 ⁽¹⁾						

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="275 368 1205 683"> <thead> <tr> <th data-bbox="275 368 331 408"></th> <th data-bbox="331 368 577 408">Technique</th> <th data-bbox="577 368 958 408">Description</th> <th data-bbox="958 368 1205 408">Applicability</th> </tr> </thead> <tbody> <tr> <td data-bbox="275 408 331 576">a.</td> <td data-bbox="331 408 577 576">Correct plant design</td> <td data-bbox="577 408 958 576">This includes the provision of a gas recovery system with sufficient capacity and the use of high-integrity relief valves.</td> <td data-bbox="958 408 1205 576">Generally applicable to new plants. A gas recovery system may be retrofitted in existing plants.</td> </tr> <tr> <td data-bbox="275 576 331 683">b.</td> <td data-bbox="331 576 577 683">Plant management</td> <td data-bbox="577 576 958 683">This includes balancing the gas system and using advanced process control.</td> <td data-bbox="958 576 1205 683">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 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 has confirmed and provided evidence to demonstrate that they use both techniques described in BAT 15 in relation to Anaerobic Digestion and flaring of biogas.</p> <p>The AD plant has recently been replaced with a modern design up-flow anaerobic sludge blanket (UASB) reactor and new safety flare, in order to maximise gas recovery and energy production. The upgrade was included within the 2020 permit variation (V004) and the changes were subject to BAT assessment.</p> <p>A modern BAT compliant flare (Progeco HE350, manufactured in 2019) is present to safely dispose of biogas at times of boiler unavailability or excess biogas production. The flare capacity exceeds the theoretical maximum biogas flow.</p> <p>Pressure relief valves (PRVs) are present on the conditioning tank (prior to the reactor) and on the UASB reactor. The PRVs are a safety feature that will vent biogas, to atmosphere, should the boiler and flare be unavailable to utilise biogas.</p> <p>The balancing of the gas system pressure is controlled by a pressure operated valve at the flare and, ultimately, the PRVs. The design gas pressure within the system is 50mbar (gauge pressure).</p>
	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.												

				The equipment and operating conditions are controlled using modern Siemens PLC software and Siemens human machine interface (HMI).											
16	In order to reduce emissions to air from flares when flaring is unavoidable, BAT is to use both of the techniques given below		CC	<p>The operator has provided information to support compliance with BATc 16. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 16.</p> <p>The operator has confirmed and provided evidence to demonstrate that they use both techniques described in BAT 16 in relation to Anaerobic Digestion and reducing emissions when flaring biogas.</p> <p>The flare design complies with BAT, it contains:</p> <ul style="list-style-type: none"> - Enclosed ground flare (hidden flame) - Combustion chamber with multi-layer ceramic insulation lining - High voltage electrode-type ignition device and UV sensor for continuous flame detection - Fully automatic operation - Fumes retention time > 0,3 sec <p>Flaring events and, their durations, are recorded by the SCADA system.</p> <p>Flow of biogas is continually measured at flow meter FT-0216 (immediately after UASB reactor) and at flow meter FT-0709 (feed to boiler). If the flare is not in use, the two flows should be the same. The volume flared can be determined from the difference in the two meter readings. Should the PRV's vent to atmosphere, this will be known from gas pressure trend data. The SCADA system identifies when the flare is in use.</p>											
		<table border="1"> <thead> <tr> <th></th> <th>Technique</th> <th>Description</th> <th>Applicability</th> </tr> </thead> <tbody> <tr> <td>a.</td> <td>Correct design of flaring devices</td> <td>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>Generally applicable to new flares. In existing plants, applicability may be restricted, e.g. due to maintenance time availability.</td> </tr> <tr> <td>b.</td> <td>Monitoring and recording as part of flare management</td> <td>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>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.	
	Technique	Description	Applicability												
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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="282 217 1191 740"> <thead> <tr> <th data-bbox="282 217 336 255"></th> <th data-bbox="336 217 604 255">Technique</th> <th data-bbox="604 217 1191 255">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="282 255 336 450">a.</td> <td data-bbox="336 255 604 450">Protection measures</td> <td data-bbox="604 255 1191 450"> 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="282 450 336 577">b.</td> <td data-bbox="336 450 604 577">Management of incidental/accidental emissions</td> <td data-bbox="604 450 1191 577"> 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="282 577 336 740">c.</td> <td data-bbox="336 577 604 740">Incident/accident registration and assessment system</td> <td data-bbox="604 577 1191 740"> 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 BATc 21. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 21.</p> <p>Operator has an approved site EMS which is externally accredited to the ISO14001 standard. The site has implemented emergency protection measures in place. The waste treatment centre is protected by a bund wall and inspections are undertaken daily.</p> <p>The site has an incident reporting tool for registration of incidents with root cause analysis, raise/track preventative actions, follow ups and reviews etc. All site based employees has access to raise incidents/their concerns through the system.</p>
	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. 													
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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 BATc 21. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 21.</p> <p>pH and temperature are continuously monitored via the mixing loop of the conditioning tank (which feed the UASB reactor). All have SCADA set-points and alarms associated with them. Alarms are in place to ensure a stable digester operator and to minimise operational difficulties.</p> <p>Biogas flow, composition and pressure are continuously monitored and influent hydraulic flow is continuously monitored. Samples of digestate are routinely taken to determine the organic loading rate and concentrations of VFAs and ammonia</p>												

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

Updating permit during permit review consolidation

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

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

Production/Capacity Threshold

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

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

The Operator has completed a H1 assessment of emissions for typical figures of production at the time of permitting.

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

Emissions to Air

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

The operator has provided an up to date air emission plan. Emission point A7 has been removed from the permit as it referenced the old biogas boiler which has now been replaced by emission point A15.

Implementing the requirements of the Medium Combustion Plant Directive

Existing Medium Combustion Plant (1MW-50MW)

We asked the Operator to provide information on all combustion plant on site in the Regulation 61 Notice as follows:

- Number of combustion plant (CHP engines, back-up generators, boilers);
- Size of combustion plant – rated thermal input (MWth)
- Date each combustion plant came into operation

The Operator provided the information in the table(s) below:

Boilers

1. Rated thermal input (MW) of the medium combustion plant.	8.3 MWth	7.4 MWth	4.4 MWth	8.3 MWth	8.3 MWth	5.4 MWth
2. Type of the medium combustion plant (diesel engine, gas turbine, dual fuel engine, other engine or other medium combustion plant).	Boiler (1)	Boiler (2)	Boiler (3)	Boiler (4)	Boiler (5)	Boiler (6)
3. Type and share of fuels used according to the fuel categories laid down in Annex II.	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas (90%) and Biogas (10%)	Natural Gas
4. Date of the start of the operation of the medium combustion plant or, where the exact date of the start of the operation is unknown, proof of the fact that the operation started before 20 December 2018.	1977	1970	1967	1975	1977	1970

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

Limits and monitoring is already being undertaken on site however these were not in line with MCPD and as such have been adjusted to reflect this.

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.

For existing medium combustion plant with a rated thermal input greater than 5 MW, Boilers 1, 2, 4, 5, and 6, the emission limit values set out in tables 2 and 3 of Part 1 of Annex II MCPD shall apply from 1 January 2025.

For existing MCP with a rated thermal input of less than or equal to 5 MW, Boiler 3, the emission limit values set out in tables 1 and 3 of Part 1 of Annex II MCPD shall apply from 1 January 2030.

In respect to Boiler 5, we have retained the emission limit value and monitoring requirement for hydrogen sulphide at 5 mg m³, reference period, monitoring frequency and standard. In addition to the monitoring for Sulphur dioxide and Total

VOCs. The monitoring of Hydrogen Sulphide on A14 (Biofilter) at 5mg/m³ has also been retained, as shown in the extant variation V004 issued on 29/01/2021.

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

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

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

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

The operator has previously provided assessments for all emissions to water at the installation. The operator declares there has been no change to activities and subsequent effluents generated at the installation since this risk assessment was taken. 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 ‘Original site Condition Report March 2005’ during the original application received in March 2005. This was then updated again during an applied for variation in 2020 – ‘Princes site Condition Report updated 2020’. The site condition report included a report on the baseline conditions as required by Article 22. We reviewed that report and considered that it adequately described the condition of the soil and groundwater at that time.

The Operator submitted a summary report which referenced the site condition report and baseline report. We have reviewed the information and we consider that it

adequately describes the current condition of the soil and groundwater. Consequently, we are satisfied that the baseline conditions have not changed.

Hazardous Substances

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

The operator has confirmed there has been no change in the hazardous substances used, their capability of causing pollution and/or the pollution prevention measures at the installation since the risk assessment was submitted on 23/03/2020.

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

Climate Change Adaptation

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

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

We do not consider the operator to have submitted a suitable climate change adaptation plan for the installation. We have included an improvement condition into the permit (IC26) to request a climate change adaptation plan is submitted by the operator for approval from the Environment Agency.

Containment

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

The Operator provided details of all tanks;

- Tank reference/name
- Contents
- Capacity (litres)
- Location
- Construction material(s) of each tank
- The bunding specification including
 - Whether the tank is bunded
 - If the bund is shared with other tanks
 - The capacity of the bund
 - The bund capacity as % of tank capacity
 - Construction material of the bund
 - Whether the bund has a drain point
 - Whether any pipes penetrate the bund wall
- Details of overfill prevention
- Drainage arrangements outside of bunded areas

- Tank filling/emptying mitigation measures (drips/splashes)
- Leak detection measures
- Details of when last bund integrity test was carried out
- Maintenance measures in place for tank and bund (inspections)
- How the bund is emptied
- Details of tertiary containment

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

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

Annex 3: Improvement Conditions

Based on the information in the Operator's Regulation 61 Notice response and our own records of the capability and performance of the installation at this site, we consider that we need to set improvement conditions so that the outcome of the techniques detailed in the BAT Conclusions are achieved by the installation. These improvement conditions are set out below - justifications for them is provided at the relevant section of the decision document (Annex 1 or Annex 2).

Previous improvement conditions marked as complete in the previous permit.

Superseded Improvement Conditions – Removed from permit as marked as “complete”	
Reference	Improvement Condition
IC1-IC18	Previously removed in V004
IC19	The operator shall submit a report demonstrating that the final design of all primary and secondary containment for the new digester and Effluent Treatment Plant is in line with guidance CIRIA C736. The report shall also include a proposed timetable for installation of the containment. The report and timetable shall be submitted to the Environment Agency for approval.
IC20	The containment approved through IC19 shall be installed in line with the timetable agreed in IC19.
IC21	<p>Following commissioning of the new digester the operator shall review the concentration of pollutants being discharged to water from the process against the AELs set out in the Best Available Techniques (BAT) Conclusions for the Food and Drink sector, dated November 2019.</p> <p>Where following the assessment of performance of the new digester and review of the BAT Conclusions, the operator considers an alternative AEL set out in the BAT Conclusions is appropriate for those parameters listed in note 3 in table S3.2, the operator may provide evidence and justification in support of this conclusion for consideration by the Environment Agency.</p> <p>The operator shall outline the measures that will be put in place to reduce any pollutants which are above the relevant AELs with a corresponding timetable for implementation of the measures. The timetable must ensure compliance with the limits by the BAT Conclusions implementation date of 04/12/2023.</p> <p>The operator shall submit the above information to the Environment Agency in writing for approval. [Note 1]</p>
IC22	The measures approved through IC21 shall be implemented in line with the timetable agreed in IC21. [Note 1]

Note 1: These improvement conditions have been superseded by IC23 (a-c) and as such have been removed from the permit.

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

Improvement programme requirements		
Reference	Reason for inclusion	Justification of deadline
IC23 (a)	The Operator shall submit a detailed operability action plan which details the phases of post-commissioning testing and operational methodologies for the effluent treatment	3 months from permit issue

	system, with timescales for completion, in order to ultimately meet the Emission Limit Values as detailed in Table S3.1	
IC23 (b)	Having regard for the requirements of action plan as per IC23(a), the operator shall demonstrate compliance with the emissions limit value for Total Nitrogen, as detailed in Table S3.1	12 months from permit issue
IC23 (c)	Having regard for the requirements of action plan as per IC23(a), the operator shall demonstrate compliance with the emissions limit value for Total Phosphorus, as detailed in Table S3.1	18 months from permit issue
IC24	<p>The operator shall submit, for approval by Environment Agency, a report demonstrating achievement of the 'Narrative' BAT where BAT is currently not achieved, but will be achieved before 4 December 2023. The report shall include, but not be limited to, the following:</p> <p>Methodology applied for achieving BAT Demonstrating that BAT has been achieved.</p> <p>The report shall address the BAT Conclusions for Food, Drink and Milk Industries with respect to BAT 4, 6(a) and 7(a). Refer to BAT Conclusions for a full description of the BAT requirement.</p>	2 months from permit issue
IC25	<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"> • An action log with timescales, for replacement of end-of-life equipment using refrigerants with the lowest practicable GWP. 	2 months from permit issue
IC26	<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>	12 months from permit issue

