

# **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/TP3932PV  
The Operator is:                        Nestle Purina UK Manufacturing Operations Limited  
The Installation is:                    Chilton Site  
This Variation Notice number is:   EPR/TP3932PV/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 4<sup>th</sup> December 2019 in the Official Journal of the European Union. In this decision document, we set out the reasoning for the consolidated variation notice that we have issued.

It explains how we have reviewed and considered the techniques used by the Operator in the operation and control of the plant and activities of the installation. It is our record of our decision-making process and shows how we have taken into account all relevant factors in reaching our position.

As well as considering the review of the operating techniques used by the Operator for the operation of the plant and activities of the installation, the consolidated variation notice takes into account and brings together in a single document all previous variations that relate to the original permit issue. Where this has not already been done, it also modernises the entire permit to reflect the conditions contained in our current generic permit template.

The introduction of new template conditions makes the Permit consistent with our current general approach and with other permits issued to Installations in this sector. Although the wording of some conditions has changed, while others have been deleted because of the new regulatory approach, it does not reduce the level of environmental protection achieved by the Permit in any way. In this document, we therefore address only our determination of substantive issues relating to the new BAT Conclusions.

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

### **How this document is structured**

1. Our decision
2. How we reached our decision
3. The legal framework

4. Annex 1 – Review of operating techniques within the Installation against BAT Conclusions.
5. Annex 2 – Review and assessment of changes that are not part of the BAT Conclusions derived permit review
6. Annex 3 – Improvement Conditions

# 1 Our decision

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

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

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

## 2 How we reached our decision

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

We issued a Notice under Regulation 61(1) of the Environmental Permitting (England and Wales) Regulations 2016 (a Regulation 61 Notice) on 31/01/2022 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 24/05/2022.

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 BATc 3, 5, 6, 9, 11 and 12. The operator does not currently comply with the requirements of BATc 3, 5, 6, 9, 11 and 12. In relation to these BAT Conclusions, the operator has committed compliance by 4 December 2023. We have therefore included Improvement Conditions 16, 17, 18 and 19, in the Consolidated Variation Notice to ensure that the requirements of the BAT Conclusions are delivered before 4 December 2023.

### 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 10/05/2023 in order to clarify the site capacity, BATc 3 monitoring emissions to water, 5 monitor channelled emissions to air, 6 energy efficiency, 7 water consumption, 8 harmful substances, 9 refrigeration, 11 emissions to water, 14 noise abatement and 17 emissions to air. A copy of the further information request was placed on our public register.

## 3 The legal framework

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

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

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

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

## Annex 1: decision checklist regarding relevant BAT Conclusions

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

There are 37 BAT Conclusions.

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

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

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

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

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

**NA – Not Applicable**

**CC – Currently Compliant**

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

**NC – Not Compliant**

BATC No	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
<b>GENERAL BAT CONCLUSIONS (BAT 1-15)</b>			
1	<p><b>Environmental Management System - Improve overall environmental performance.</b></p> <p>Implement an EMS that incorporates all the features as described within BATc 1.</p>	<b>CC</b>	<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><b>EMS Inventory of inputs &amp; outputs. Increase resource efficiency and reduce emissions.</b></p> <p>Establish, maintain and regularly review (including when a significant change occurs) an inventory of water, energy and raw materials consumption as well as of waste water and waste gas streams, as part of the environmental management system (see BAT 1), that incorporates all of the features as detailed within the BATCs.</p>	<b>CC</b>	<p>The operator has provided information to support compliance with BATc 2. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 2.</p> <p>The operator has an externally accredited EMS to the ISO 14001 standard and Energy Management System accredited to ISO 50001. The site holds inventories of water, energy and raw material consumption.</p>
3	<p><b>Monitoring key process parameters at key locations for emissions to water.</b></p> <p>For relevant emissions to water as identified by the inventory of waste water streams (see BAT 2), BAT is to monitor key process parameters (e.g. continuous monitoring of waste water flow, pH and temperature) at key locations (e.g. at the inlet and/or outlet of the pre-treatment, at the inlet to the final treatment, at the point where the emission leaves the installation).</p>	<b>FC</b>	<p>The operator has provided information to support compliance with BATc 3. We have assessed the information provided and we are not satisfied that the operator has demonstrated compliance with BATc 3.</p> <p>The operator discharges process effluent to sewer and states pH correction, DAF and flow balancing are in place. Trade Effluent consent is in place with Anglian Water.</p> <p>The operator however did not provide details. We therefore sent a further information request asking the operator to provide details of the parameters</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>monitored for at each stage of the process and the rationale behind their selection.</p> <p>The operator responded by stating an Improvement Condition should be included within the permit.</p> <p>We consider the operator will be future compliant with BATc 3. improvement condition IC16 has been included in the permit to achieve compliance</p>
4	<p><b>Monitoring emissions to water to the required frequencies and standards.</b> BAT is to monitor emissions to water with at least the frequency given [refer to BAT 4 table in BATc] and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.</p>	N/A	<p>BATc 4 applies in the case of direct discharge of effluent to a water body. All process effluent from the Chilton Site is discharged to sewer.</p> <p>We are therefore satisfied that BATc 4 is not applicable for this site</p>
5	<p><b>Monitoring channelled emissions to air to the required frequencies and standards.</b> BAT is to monitor channelled emissions to air with at least the frequency given and in accordance with EN standards.</p>	FC	<p>The operator did not provided information in support of compliance with BATc 5. When questioned they stated the requirements for particulate monitoring was removed from the permit during a review in 2014. They further stated that renewed monitoring should not be imposed based on the monitoring results presented at the time.</p> <p>These results show particulate emissions to be low however annual monitoring to appropriate standards in now required by BAT and will be included in the permit going forward.</p> <p>The site has emissions to air from point A3 the main scrubber odour control, A4 SCB5 Bag filters serving the grinder and A5 the extruder line.</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
			We consider the operator will be future compliance with BATc 5. Improvement Condition IC16 has been added to the permit to achieve compliance.
6	<p><b>Energy Efficiency</b></p> <p>In order to increase energy efficiency, BAT is to use an energy efficiency plan (BAT 6a) and an appropriate combination of the common techniques listed in technique 6b within the table in the BATc.</p>	<b>FC</b>	<p>The operator has provided information to support compliance with BATc 6. We have assessed the information provided and we are not satisfied that the operator has demonstrated compliance with BATc 6.</p> <p>The operator stated they had a rolling programme of energy efficiencies planned in line with ISO5001 to support compliance with BATc 6. They however were unable to provide further details of the techniques used on site and do not currently have an energy efficiency plan in place.</p> <p>We consider the operator will be future compliant with BATc 6. improvement condition IC16 has been included in the permit to achieve compliance</p>
7	<p><b>Water and wastewater minimisation</b></p> <p>In order to reduce water consumption and the volume of waste water discharged, BAT is to use BAT 7a and one or a combination of the techniques b to k given below.</p> <p>(a) water recycling and/or reuse</p> <p>(b) Optimisation of water flow</p> <p>(c) Optimisation of water nozzles and hoses</p> <p>(d) Segregation of water streams</p> <p>Techniques related to cleaning operations:</p> <p>(e) Dry cleaning</p> <p>(f) Pigging system for pipes</p> <p>(g) High-pressure cleaning</p> <p>(h) Optimisation of chemical dosing and water use in cleaning-in-place (CIP)</p>	<b>CC</b>	<p>The operator has provided information to support compliance with BATc 7. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 7.</p> <p>The site produces dry and semi wet pet foods. Water use is therefore low. Dry cleaning techniques are used.</p> <p>Where water is used it is reused as appropriate with CIP systems installed on the slurry system with CIP rinse used as a first wash on the next run through.</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
	(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		All water flow over process plant is optimised with leak checking undertaken regularly.  Pigging is used on the slurry system and a cleaning schedule set by product planning and cleaning matrix is in use to ensure efficient cleaning and optimisation.
8	<b>Prevent or reduce the use of harmful substances</b> 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 following techniques are used on site: <ul style="list-style-type: none"> <li>• Proper selection of chemicals and/or disinfectants</li> <li>• Dry cleaning</li> <li>• Optimised design and construction of equipment and process areas</li> </ul>
9	<b>Refrigerants</b> 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.	FC	The operator did not identify if they were compliant with BATc 9. When questioned they provided F Gas log data for the equipment on site. Some of which use refrigerants which have a Global Warming Potential (GWP) greater than 1400 however many appear associated with non-operational equipment (which is covered by different legislation)  Given it is unclear how the site proposes to manage or phase out this equipment we have included IC19 into the permit to ensure the operator will be future compliant with BATc 9
10	<b>Resource efficiency</b> In order to increase resource efficiency, BAT is to use one or a combination of the techniques given below: (a) Anaerobic digestion	CC	The operator has provided information to support compliance with BATc 10. We have assessed the information provided and we are satisfied that the

BATC No	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
	(b) 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		operator has demonstrated compliance with BATc 10.  The operator has stated they rework residues into recipes as appropriate.
11	<b>Waste water buffer storage</b> In order to prevent uncontrolled emissions to water, BAT is to provide an appropriate buffer storage capacity for waste water.	<b>FC</b>	The operator has provided information to support compliance with BATc 11. We have assessed the information provided and we are not satisfied that the operator has demonstrated compliance with BATc 11.  The operator stated they have a 100m3 buffer tank but when questioned did not provide any additional text to explain how this could be utilized stating they are not required to operate any buffer storage by Anglian Water. They also did not provide any discussion around the containment or spill detection infrastructure on site.  We consider the operator will be future compliant with BATc 11. Improvement condition IC16 has been included in the permit to achieve compliance.
12	<b>Emissions to water – treatment</b> In order to reduce emissions to water, BAT is to use an appropriate combination of the techniques given below. Preliminary, primary and general treatment (a) Equalisation (b) Neutralisation (c) Physical separate (e.g. screens, sieves, primary settlement tanks etc) Aerobic and/or anaerobic treatment (secondary treatment) (d) Aerobic and/or anaerobic treatment (e.g. activated sludge, aerobic lagoon etc) (e) Nitrification and/or denitrification	<b>CC</b>	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.  The operator treats discharges to sewer within an on site effluent treatment plant. This includes pH adjustment, Dissolved Air Flocculation (DAF) and flow balancing.

BATC No	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement										
	(f) Partial nitrification - anaerobic ammonium oxidation Phosphorus recovery and/or removal (g) Phosphorus recovery as struvite (h) Precipitation (i) Enhanced biological phosphorus removal Final solids removal (j) Coagulation and flocculation (k) Sedimentation (l) Filtration (e.g. sand filtration, microfiltration, ultrafiltration) (m) Flotation												
12	<p><b>Emissions to water – treatment</b>  <b>BAT-associated emission levels (BAT-AELs) for direct emissions to a receiving water body</b></p> <table border="1" data-bbox="282 804 1211 1002"> <thead> <tr> <th>Parameter</th> <th>BAT-AEL (t) (t) (daily average)</th> </tr> </thead> <tbody> <tr> <td>Chemical oxygen demand (COD) (t) (t)</td> <td>25-100 mg/l (t)</td> </tr> <tr> <td>Total suspended solids (TSS)</td> <td>4-50 mg/l (t)</td> </tr> <tr> <td>Total nitrogen (TN)</td> <td>2-20 mg/l (t) (t)</td> </tr> <tr> <td>Total phosphorus (TP)</td> <td>0,2-2 mg/l (t)</td> </tr> </tbody> </table>	Parameter	BAT-AEL (t) (t) (daily average)	Chemical oxygen demand (COD) (t) (t)	25-100 mg/l (t)	Total suspended solids (TSS)	4-50 mg/l (t)	Total nitrogen (TN)	2-20 mg/l (t) (t)	Total phosphorus (TP)	0,2-2 mg/l (t)	N/A	<p>The site discharges treated effluent to the foul sewer, there are no direct discharges to the water course as such the relevant BAT-AELs for the sector do not apply.</p> <p>We are therefore satisfied that BAT AELs associated with BATc 12 is not applicable for this site.</p>
Parameter	BAT-AEL (t) (t) (daily average)												
Chemical oxygen demand (COD) (t) (t)	25-100 mg/l (t)												
Total suspended solids (TSS)	4-50 mg/l (t)												
Total nitrogen (TN)	2-20 mg/l (t) (t)												
Total phosphorus (TP)	0,2-2 mg/l (t)												
13	<p><b>Noise management plan</b></p> <p>In order to prevent or, where that is not practicable, to reduce noise emissions, BAT is to set up, implement and regularly review a noise management plan, as part of the environmental management system (see BAT 1), that includes all of the following elements:</p> <ul style="list-style-type: none"> <li>- a protocol containing actions and timelines;</li> <li>- a protocol for conducting noise emissions monitoring;</li> <li>- a protocol for response to identified noise events, e.g. complaints;</li> <li>- a noise reduction programme designed to identify the source(s), to measure/estimate noise and vibration exposure, to characterise the</li> </ul>	N/A	<p>The operator has provided information to support compliance with BATc 13. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 13.</p> <p>There is no existing permit requirement and the site has no recent history of noise complaints therefore a noise management plan is not required.</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
	contributions of the sources and to implement prevention and/or reduction measures.		
14	<p><b>Noise management</b></p> <p>In order to prevent or, where that is not practicable, to reduce noise emissions, BAT is to use one or a combination of the techniques given below.</p> <p>(a) Appropriate location of equipment and buildings</p> <p>(b) Operational measures</p> <p>(c) Low-noise equipment</p> <p>(d) Noise control equipment</p> <p>(e) Noise abatement</p>	CC	<p>The operator has provided information to support compliance with BATc 14. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 14.</p> <p>The operator confirms a noise impact assessment in line with BS4142 was undertaken in 2020. This concluded that noise from chiller units in the south western corner of the site were contributing potentially significant impact on receptors during the night-time period.</p> <p>The assessment recommended that supplementary noise attenuation be installed to the chiller fans in the south western corner of the site. The operator confirms works are ongoing to install additional screening/enclosure around the chillers.</p> <p>We have agreed a further assessment will be undertaken once all odour abatement works have been carried out. There are however no known noise issues.</p>
15	<p><b>Odour Management</b></p> <p>In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to set up, implement and regularly review an odour management plan, as part of the environmental management system (see BAT 1), that includes all of the following elements:</p> <ul style="list-style-type: none"> <li>- a protocol containing actions and timelines;</li> <li>- a protocol for conducting odour monitoring.</li> <li>- a protocol for response to identified odour incidents e.g. complaints;</li> </ul>	CC	<p>The operator has provided information to support compliance with BATc 15. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 15.</p> <p>The site has an odour management plan in place. The plan incorporates the elements listed in BATc 15 however odour has previously been a concern with numerous improvements to emissions</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															
	- 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.		abatement having been required. We have retained IC 14 within the permit to ensure ongoing compliance with BATc 15.															
<b>PET FOOD BAT CONCLUSIONS (BAT 16-17)</b>																		
16	<b>Energy efficiency – Green fodder only</b> In order to increase energy efficiency in green fodder processing, BAT is to use an appropriate combination of the techniques specified in BAT 6 and of the techniques given below. (a) Use of predried fodder (b) Recycling of waste gas from the dryer (c) Use of waste heat for pre-drying Applicable in addition to BAT6	<b>N/A</b>	The site does not process green fodder. We are therefore satisfied that BATc 16 is not applicable for this site.															
17	<b>Emissions to air – particulates</b> In order to reduce channelled dust emissions to air, BAT is to use one of the techniques given; a. bag filter, b. cyclone. <table border="1" data-bbox="259 847 1223 1031"> <thead> <tr> <th rowspan="2">Parameter</th> <th rowspan="2">Specific process</th> <th rowspan="2">Unit</th> <th colspan="2">BAT-AEL (average over the sampling period)</th> </tr> <tr> <th>New plants</th> <th>Existing plants</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Dust</td> <td>Grinding</td> <td rowspan="2">mg/Nm<sup>3</sup></td> <td>&lt;2-5</td> <td>&lt;2-10</td> </tr> <tr> <td>Pellet cooling</td> <td>&lt;2-20</td> <td></td> </tr> </tbody> </table>	Parameter	Specific process	Unit	BAT-AEL (average over the sampling period)		New plants	Existing plants	Dust	Grinding	mg/Nm <sup>3</sup>	<2-5	<2-10	Pellet cooling	<2-20		<b>FC</b>	The operator has provided information to support compliance with BATc 17. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 17.  Wet scrubbers and carbon filtration are already in place on all process lines. These are likely to significantly reduce particulate matter emissions. The operator also confirms in their Reg 61 response that bag filters and cyclones are fitted throughout.  BAT-AELs are only applicable to grinding and pellet cooling from compound animal feed. However, we are implementing ELVs for particulate matter emitted from cooling and grinding processes onsite.  We have therefore included ELVs of 10 mg/m <sup>3</sup> and 20mg/m <sup>3</sup> for the emissions of particulate matter to
Parameter	Specific process				Unit	BAT-AEL (average over the sampling period)												
		New plants	Existing plants															
Dust	Grinding	mg/Nm <sup>3</sup>	<2-5	<2-10														
	Pellet cooling		<2-20															

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		
			come into effect 12 months from permit issue. Improvement condition IC16 has been included in the permit to achieve compliance.		
<b>Animal Feed Environmental Performance Levels</b>					
EPL	<b>Environmental Performance Level – Energy Consumption for Animal Feed</b>			FC	<p>The operator has provided information to support compliance with BATc 17. We have assessed the information provided and we are not satisfied that the operator has demonstrated compliance with BATc 17</p> <p>The operator reported an annual production figure for 2021 as 143,634 tonnes against an energy use of 112,994 achieving a specific energy consumption of 0.789MWh/Tonne, which is outside the EPL target range of 0.39 – 0.50 for dry pet food.</p> <p>The operator commented this was due to the commissioning of the new high energy odour control systems. We therefore requested they provide the energy figures for 2022 for comparison. These however showed a higher energy consumption of 120,981MWh. The production figure wasn't provided however given the increasing trend we have included improvement condition IC18 to ensure compliance with the EPL for energy consumption.</p>
	Product	Unit	Specific energy consumption (yearly average)		
	Compound food	MWh/tonne of products	0.01-0.10 <sup>(1)(2)(3)</sup>		
	Dry pet food		0.39-0.50		
	Wet pet food		0.33-0.85		
<p>(1) The lower end of the range can be achieved when pelleting is not applied.</p> <p>(2) The specific energy consumption level may not apply when fish and other aquatic animals are used as raw material.</p> <p>(3) The upper end of the range is 0.12 MWh/tonne of products for installations located in cold climates and/or when heat treatment is used for Salmonella decontamination.</p>					
EPL	<b>Environmental performance level – Waste water discharge for Animal Feed</b>			N/A	The site does not process wet pet food . We are therefore satisfied that EPL for water does not apply to this site
	Product	Unit	Specific waste water discharge (yearly average)		
	Wet pet food	m3/tonne of products	1.3-2.4		

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

### **Updating permit during permit review consolidation**

- Activity name
- Introductory note
- 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.

### **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 did not comment as to whether a H1 assessment of emissions for typical figures of production at the time of permitting and we have been unable to find a record of one.

The Operator has stated a doubling of capacity from the previously recorded maximum capacity stated within the permit or if production is now higher. We have included an improvement condition within the permit (IC21) which requires the operator to revisit their H1 risk assessment for particulate emissions to air at the capacity limit figure that is now stated within table S1.1 of the permit.

### **Emissions to Air**

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

The operator has provided an up to date air emission plan.

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

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

- Number of combustion plant (boilers);
- Size of combustion plant – rated thermal input (MWth)
- Date each combustion plant came into operation

The Operator provided the information in the table below:

### Boilers

	Boiler 1	Boiler 2
1. Rated thermal input (MW) of the medium combustion plant.	4.4	3.2
2. Type of the medium combustion plant (diesel engine, gas turbine, dual fuel engine, other engine or other medium combustion plant).	Steam raising boiler	Steam raising boiler
3. Type and share of fuels used according to the fuel categories laid down in Annex II.	Natural gas	Natural gas
4. Date of the start of the operation of the medium combustion plant or, where the exact date of the start of the operation is unknown, proof of the fact that the operation started before 20 December 2018.	Not currently operational. The permit was varied in 2019 to add this 4.4MWth boiler to replace the existing 2.2 MWth boiler. This however has not been installed as yet with the existing 2.2 MWth boiler (which dates to 1989) still in place.	2002

We have reviewed the information provided and we consider that the Boiler 2 declared combustion qualifies as “existing” medium combustion plant. Boiler 1 is existing but will be replaced by the previously permitted 4.4MW plant prior to 2030 as detailed below. Reference to the existing 2.2 MWth boiler is therefore removed from the permit.

Note. The previous variation and consolidation V005 which permitted the proposed 4.4 MWth boiler stated Boiler 2 was to be replaced with Boiler 1 remaining. The operator has confirmed this was incorrect and the proposal is as above with the aged 2.2MWth boiler being replaced. We have actioned this as an admin variation. The previous variation also incorrectly referenced the MCPD NOx limit for “new” natural gas boilers to be 250mg/m<sup>3</sup>. This has been amended to 100mg/m<sup>3</sup>.

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

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



## **Particulate Emissions**

There are no BAT-AEL associated with dry pet food production. However, we have set ELVs to ensure this parameter is adequately controlled. These are in line with the compound animal feed BAT-AELs (10mg/m<sup>3</sup> for grinding and 20mg/m<sup>3</sup> for cooling).

The operator did not consider monitoring necessary as historic monitoring undertaken in 2013 showed particulate emissions to be low. However we are imposing monitoring in line with BATc 5 and adding ELVs as above.

The operators emissions management system has undergone changes since the last monitoring and point sources have reduced to 3 locations A3 (SCB Main) serves the extruders 1, 2, 4 along with driers 1, 2, 6, 7 coating and coolers 1, 2 4. A4 (SCB5) serves the unprocessed grinders and A5 (Line 7) serves extruders 7.1 to 7.4, airlifts, drier 7 coating and box cooler. The emission points are abated by wet scrubbers and carbon filters. The operator also states cyclones are in place.

We have incorporated an improvement condition (IC16) to ensure the monitoring is carried out as soon as reasonably practical for these emission points

We have added an improvement condition (IC17) for size fractionation of particulate emissions because a BAT-AEL applies for dust emissions to air. The justification for this IC is that there are a number of activities within the FDM sector which may result in release of particulates to air e.g. drying, milling and grinding. Overall there is little available information on how much fine particulates are released. This IC is a one-off exercise requiring operators to monitor and report on the fractions of fine particulate (PM<sub>10</sub> and PM<sub>2.5</sub>) emissions and increase our understanding of potential health effects.

## **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 (Application Site Report) during the original application received in August 2004. The applicant subsequently followed monitoring and intrusive investigation data the following years (July, Dec 2006). 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 in Dec 2006. 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 stated that the installation is not likely to be or has previously not been affected by climate change.

### **Containment**

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

We have set improvement conditions in the permit to address the deficiencies in the existing tanks and containment measures on site (IC20). See Improvement condition(s) 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.

<b>Superseded Improvement Conditions – Removed from permit as marked as “complete”</b>		
<b>Reference</b>	<b>Improvement Condition</b>	
IC1	The Operator shall conduct a review of the air abatement techniques used on site. A report, detailing timescales for any improvements identified, shall be submitted to the Agency.	Complete
IC2	The Operator shall undertake monitoring of particulate emissions to air over a normal operating cycle, as agreed with the Agency. This monitoring shall take place once the new extruder line has been commissioned and is fully operational. An impact assessment shall be carried out based on the results of the monitoring.	Complete
IC3	The Operator shall undertake a review of monitoring methods used on site and submit a report to the Agency detailing the methods used and proposed and having regard to EN, ISO and BS standards. Based on this, a monitoring plan for the site shall be submitted in writing to the Agency.	Complete
IC4	The Operator shall develop and implement a documented system of environmental management techniques, having regard to the Agency Guidance Note IPPC S6.10 Section 2.3.	Complete
IC5	The Operator shall undertake an assessment of the surfacing and containment measures on site. The assessment will take into account the requirements of section 2.2.5 of the Agency Guidance Note IPPC S6.10. A written report summarising the findings and including timescales for implementation shall be submitted to the Agency.	Complete
IC6	The Operator shall provide a written report of the commissioning of the new equipment following its successful introduction to the process. This report shall be submitted within 6 months from the declared date of the start of commissioning. Should commissioning take longer than 6 months, an interim report shall be submitted at most 6 months after the declared date of the start of commissioning and at subsequent 6 month anniversaries. The written report shall include as a minimum: <ul style="list-style-type: none"> <li>• a schedule of modifications made to the process during commissioning;</li> <li>• the results of all monitoring undertaken during commissioning of emissions to atmosphere;</li> <li>• the results of all monitoring undertaken during commissioning of aqueous emissions from the new equipment;</li> </ul>	Complete

	<ul style="list-style-type: none"> <li>• a schedule including quantities and disposal routes of all waste generated during commissioning;</li> <li>• a comparison of actual service uses (water, steam, electricity etc) compared to the anticipated services usage at the design stage.</li> </ul>	
IC7	The Operator shall undertake a review of options available for improvement of its effluent treatment. The Operator shall have regard to the Sector Guidance Note IPPC 6.10, Section 2.2.2 and the methods detailed therein. A written report summarising the review shall be submitted to the Agency and include time scales for the implementation of preferred options.	Complete
IC8	<p>The Operator shall conduct an odour assessment. The assessment shall be undertaken following implementation of the new extruder line 6 and abatement system and have regard to the Agency's Guidance Document H4 on odour. A report shall be submitted to the Agency.</p> <p>The assessment shall include, but not be limited to, a review of the effectiveness of the wet scrubber and an investigation into methods of reducing odorous emissions from the effluent catch pit. The review shall also include monitoring of VOCs over a normal operating cycle.</p> <p>If the results show it is necessary the Operator shall design and implement an odour management plan, including proposed odour limits and timescales for implementation and shall submit the plan in writing to the Agency.</p>	Complete
IC9	The Operator shall assess the quantities of cadmium that may enter the drains from substances used on site and the results shall be submitted in writing to the Agency.	Complete
IC10	The Operator shall investigate the possibility of replacing cleaning chemicals with other methods and submit a report to the Agency that details the timescales for implementing any improvement identified.	Complete
IC11	The Operator shall implement the improvements relating to water use as identified in Section B2.4 of the application.	Complete
IC12	The Operator shall develop a written Site Closure Plan with regard to the requirements set out in Section 2.11 of the Agency Guidance Note IPPC S6.10, August 2003. Upon completion of the plan a summary of the document shall be submitted to the Agency in writing.	Complete
IC13	<p>The Operator shall undertake olfactory monitoring of emissions from the APP6+7 stack following the inclusion of grinders 3 and 4 emissions within the APP7 system. Following monitoring, the Site odour dispersion model shall be updated and a report submitted in writing to the Agency detailing the outcome of the modelling and proposals for a programme of site wide monitoring and reporting of odour emissions.</p> <p>The Operator must implement the programme as approved, and from the date stipulated by the Environment Agency.</p>	Complete
IC15	<p>The Operator shall review and update the Odour Management Plan (OMP) following the completion of the four month dynamic olfactometry monitoring generating performance curves for each carbon filter. This should include but not be limited to:</p> <ul style="list-style-type: none"> <li>• quantitative trigger thresholds;</li> <li>• optimum ranges for operation of the plant; and</li> </ul>	Complete

	<ul style="list-style-type: none"> <li>measures in place if these are exceeded.</li> </ul> <p>Upon the completion of the updates the OMP shall be submitted to the Environment Agency.</p>	
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The following improvement conditions have been added to the permit as a result of the variation, excluding ICs 14 and 15 which has been retained from the previous variation V005.

<b>Improvement programme requirements</b>		
<b>Reference</b>	<b>Reason for inclusion</b>	<b>Justification of deadline</b>
IC14	<p>The Operator shall submit a written report on the commissioning of the additional odour abatement. The report shall compare the environmental performance of the abatement, as installed, against the design parameters set out in the application. This should include but not be limited to:</p> <ul style="list-style-type: none"> <li>odour emission levels (based upon olfactometry and total volatile organic compound (VOC) monitoring); and</li> <li>the bedlife of the carbon media based on the performance curve and demonstration that the changes are of adequate frequency.</li> </ul> <p>In the event the report shows that the abatement is performing to different standards, than those set out in the application, the Operator shall outline the details of the differences and if the changes will have any impact on the conclusions presented within the odour impact assessment reference '<i>Sudbury Odour Impact Assessment, Odour Dispersion Modelling – Proposed Changes, 1772447.603/B.0</i>'.</p> <p>If it is shown to result in a potential increase in environmental impact, the Operator shall carry out a further investigation and where appropriate propose further mitigation to ensure this shall not result in unreasonable off-site odour pollution. In this instance a detailed monitoring program shall be completed to identify the specific substances/substance groups that could cause an impact, including, but not limited to, gas chromatography spectrometry (GCMS) analysis.</p> <p>A report summarising the findings must identify further improvement measures that shall be implemented to a timetable agreed by the Environment Agency.</p>	31/10/2023
IC16	<p>The operator shall submit, for approval by Environment Agency, a report setting out progress to achieving 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> <ol style="list-style-type: none"> <li>1) Methodology for achieving BAT</li> <li>2) Associated targets /timelines for reaching compliance by 4 December 2023.</li> <li>3) Associated targets/timelines, if applicable, for reaching compliance by 4 December 2023.</li> </ol>	04/12/2023

	<p>The report shall address the BAT Conclusions for Food, Drink and Milk Industries with respect to BAT 3, 5, 6, 11, and 17.</p> <p>Refer to BAT Conclusions for a full description of the BAT requirement.</p>	
IC17	<p>The Operator shall submit a written report to the Environment Agency of monitoring carried out to determine the size distribution of particulate matter in the exhaust gas emissions to air from emission point [A1], identifying the fractions within the PM10 and PM2.5 ranges. The monitoring shall be carried out under representative operating conditions and shall be in accordance with EN ISO 23210 unless otherwise agreed with the Environment Agency.</p>	12 months from permit issue
IC18	<p>The operator shall submit, for approval by the Environment Agency, a report setting out progress to achieving the Environmental Performance Levels (EPLs) for specific energy consumption, where the EPL is not currently achieved.</p> <p>The report shall include, but not be limited to, the following:</p> <ol style="list-style-type: none"> <li>1) Methodology for achieving EPL in accordance with general techniques given in section 1.3 of the BAT conclusions</li> <li>2) Associated targets /timelines for reaching compliance by 4 December 2023, or any other date as agreed in writing by the Environment Agency.</li> </ol> <p>The report shall address the BAT Conclusions for Food, Drink and Milk Industries with respect to sections 1.3 and 2.1 of the BAT conclusions. Refer to BAT Conclusions for a full description of the requirements.</p>	04/12/2023
IC19	<p>The operator shall use refrigerants without ozone depletion potential and with a low global warming potential (GWP) in accordance with BAT 9 from the Food, Drink and Milk Industries BATCs.</p> <p>To demonstrate compliance against BAT 9, the operator shall develop a replacement plan for the refrigerant system(s) at the installation. This shall be incorporated within the existing environmental management system by the specified date.</p> <p>The plan should include, but not be limited to, the following:</p> <ul style="list-style-type: none"> <li>• Where practicable, retro filling systems containing high GWP refrigerants e.g. R-404A with lower GWP alternatives as soon as possible.</li> <li>• An action log with timescales, for replacement of end-of-life equipment using refrigerants with the lowest practicable GWP.</li> <li>• Replacement of systems containing HCFCs as soon as possible. Only to be included where operator has confirmed use of R22 in "legacy system" in their Reg 61 response</li> </ul>	04/12/2023
IC20	<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>	12 Months from permit issue

	<ul style="list-style-type: none"> <li>• CIRIA Containment systems for the prevention of pollution (C736) – Secondary, tertiary and other measures for industrial and commercial premises,</li> <li>• EEMUA 159 - Above ground flat bottomed storage tanks</li> </ul> <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"> <li>• current containment measures</li> <li>• any deficiencies identified in comparison to relevant standards,</li> <li>• improvements proposed</li> <li>• time scale for implementation of improvements.</li> </ul> <p>The operator shall implement the proposed improvements in line with the timescales agreed by the Environment Agency.</p>	
IC21	The operator shall review and update the H1 risk assessment for particulate emissions to air at the capacity levels stated within table S1.1 of this permit. The H1 shall be submitted to the Environment Agency for review.	6 months from permit issue