

# **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/KP3738YP  
The Operator is:                         2 Agriculture Limited  
The Installation is:                     Bawsey Animal Feed Mill  
This Variation Notice number is:   EPR/KP3738YP/V003

### **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 04/05/2021 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 30/07/2021.

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 1, 2 and 8. The operator does not currently comply with the requirements of BATc 1, 2 and 8. In relation to these BAT Conclusions, the operator has committed compliance by 4 December 2023. We have therefore included Improvement Condition IC9 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 further information request on 28/03/2022 and 19/03/2022. Requesting information regarding noise management, boiler details, hazardous substances, and baseline reporting. A copy of each further information request was placed on our public register.

# **3 The legal framework**

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

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

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

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

## Annex 1: decision checklist regarding relevant BAT Conclusions

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

There are 37 BAT Conclusions.

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

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

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

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>FC</b>	<p>We consider that the operator will be future compliant with BATc 1. Improvement condition IC9 has been included in the permit to achieve compliance (see Annex 3).</p> <p>The operator has provided information to support compliance with most sections of BATc 1, however xvi) is not currently complaint.</p> <p>The operator is currently investigating the sectoral benchmarking and these will be implemented into the EMS prior to December 2023</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>FC</b>	<p>We consider that the operator will be future compliant with BATc 2. Improvement condition IC9 has been included in the permit to achieve compliance (see Annex 3).</p> <p>The operator has provided information to support compliance with most sections of BATc 2, however ii) is not currently complaint.</p> <p>The operator will produce comprehensive flow diagrams of water usage and potential waste areas and these will be included in the EMS prior to December 2023</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</p>	<b>NA</b>	<p>We are satisfied that BATc 3 is not applicable to this Installation. The only trade effluent produced at the site is a small volume of boiler blowdown, which is typically around 0.1m<sup>3</sup> per day; and a</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
	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).		discharge of vehicle wash effluent which is discharged via an oil interceptor. Both effluent streams discharge to Bawsey Lake via reed bed filtration system. The site has a monitoring procedure incorporated into the EMS. Water samples of discharged water are sent for laboratory analysis by an MCERTS and UKAS accredited biannually.
4	<p><b>Monitoring emissions to water to the required frequencies and standards.</b></p> <p>BAT is to monitor emissions to water with at least the frequency given and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.</p>	<b>NA</b>	<p>We are satisfied that BATc 4 is not applicable to this Installation. The only trade effluent produced at the site is a small volume of boiler blowdown, which is typically around 0.1m<sup>3</sup> per day; and a discharge of vehicle wash effluent which is discharged via an oil interceptor.</p> <p>Both effluent streams discharge to Bawsey Lake via reed bed filtration system.</p> <p>The site has a monitoring procedure incorporated into the EMS. Water samples of discharged water are sent for laboratory analysis by an MCERTS and UKAS accredited biannually.</p>
5	<p><b>Monitoring channelled emissions to air to the required frequencies and standards.</b></p> <p>BAT is to monitor channelled emissions to air with at least the frequency given and in accordance with EN standards.</p>	<b>CC</b>	<p>The site undertakes annual MCERTS testing of air emissions for total particulates from coolers and grinders following EN 13284-1 standard. The requirement for annual monitoring of particulates is retained in the permit in order to ensure compliance with the BATc.</p> <p>The operator has provided information to support compliance with BATc 5. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 5.</p>

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
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>CC</b>	<p>The operator has provided information to support compliance with BATc 6. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 6.</p> <p>The operator has an energy efficiency plan as part of their EMS, which incorporates common techniques to reduce energy consumption.</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  (b) Optimisation of water flow  (c) Optimisation of water nozzles and hoses  (d) Segregation of water streams</p> <p>Techniques related to cleaning operations:</p> <p>(e) Dry cleaning  (f) Pigging system for pipes  (g) High-pressure cleaning  (h) Optimisation of chemical dosing and water use in cleaning-in-place (CIP)  (i) Low-pressure foam and/or gel cleaning  (j) Optimised design and construction of equipment and process areas</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>Animal Feed Manufacture is essentially a dry process, with low water usage and limited potential for water saving and application of BAT techniques.</p> <p>Water optimisation is achieved through PPM (Pre-Planned Maintenance) regimes to ensure minimal wastage. Water jets are used where ever possible. Water streams are segregated. High pressure cleaning is carried out where practical. Optimisation of chemical dosing and water use in cleaning-in-place (CIP) is being done where practical.</p> <p>Improvement condition IC9 has been included in the permit to ensure relevant documents relating to water consumption and usage are integrated into the sites EMS (see Annex 3).</p>

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
	(k) Cleaning of equipment as soon as possible		
8	<p><b>Prevent or reduce the use of harmful substances</b></p> <p>In order to prevent or reduce the use of harmful substances, e.g. in cleaning and disinfection, BAT is to use one or a combination of the techniques given below.</p> <p>(a) Proper selection of cleaning chemicals and/or disinfectants</p> <p>(b) Reuse of cleaning chemicals in cleaning-in-place (CIP)</p> <p>(c) Dry cleaning</p> <p>(d) Optimised design and construction of equipment and process areas</p>	<b>FC</b>	<p>The operator has provided information to support compliance with BATc 8. We have assessed the information provided. We are not satisfied that the operator has demonstrated compliance with BATc 8.</p> <p>The operators EMS includes reference to hazardous materials selection. However, the operator has not provided sufficient evidence to demonstrate compliance with any of the techniques described in BATc8.</p> <p>We have included consider that the operator will be future compliant with BATc 8. Improvement condition IC9 has been included in the permit to achieve compliance (see Annex 3).</p>
9	<p><b>Refrigerants</b></p> <p>In order to prevent emissions of ozone-depleting substances and of substances with a high global warming potential from cooling and freezing, BAT is to use refrigerants without ozone depletion potential and with a low global warming potential.</p>	<b>NA</b>	<p>We are satisfied that BATc 9 is not applicable to this Installation as there is no refrigerants used on site.</p>
10	<p><b>Resource efficiency</b></p> <p>In order to increase resource efficiency, BAT is to use one or a combination of the techniques given below:</p> <p>(a) Anaerobic digestion</p> <p>(b) Use of residues</p> <p>(c) Separation of residues</p> <p>(d) Recovery and reuse of residues from the pasteuriser</p> <p>(e) Phosphorus recovery as struvite</p>	<b>CC</b>	<p>The operator has provided information to support compliance with BATc 10. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 10.</p> <p>The operator sends any waste feed material for anaerobic digestion.</p>

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
	(f) Use of waste water for land spreading		
11	<p><b>Waste water buffer storage</b> In order to prevent uncontrolled emissions to water, BAT is to provide an appropriate buffer storage capacity for waste water.</p>	<b>CC</b>	<p>The operator has provided information to support compliance with BATc 11. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 11.</p> <p>The site incorporates a 50,000 litre oil separator interceptor, which acts as a waste water buffer; this is emptied twice per year.</p>
12	<p><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</p> <ul style="list-style-type: none"> <li>(a) Equalisation</li> <li>(b) Neutralisation</li> <li>(c) Physical separate (eg screens, sieves, primary settlement tanks etc)</li> <li>Aerobic and/or anaerobic treatment (secondary treatment)</li> <li>(d) Aerobic and/or anaerobic treatment (eg activated sludge, aerobic lagoon etc)</li> <li>(e) Nitrification and/or denitrification</li> <li>(f) Partial nitrification - anaerobic ammonium oxidation</li> <li>Phosphorus recovery and/or removal</li> <li>(g) Phosphorus recovery as struvite</li> <li>(h) Precipitation</li> <li>(i) Enhanced biological phosphorus removal</li> </ul>	<b>NA</b>	<p>No emissions to water of process effluents.</p> <p>The sites vehicle wash facility has a 2,500-litre oil interceptor, the overflow is diverted to a 50,000 litre three stage oil interceptor, which also caters for the surface water drains. The final discharge is via a level-controlled pumping system to a private lake adjacent to the site. Contaminants trapped within both interceptors are removed on a scheduled basis for off-site disposal by an approved contactor. The site uses a reed bed filtration system which is designed to remove particulate and neutralise any residual chemicals which may be present after the wastewater has been through the oil interceptor.</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
	Final solids removal (j) Coagulation and flocculation (k) Sedimentation (l) Filtration (eg sand filtration, microfiltration, ultrafiltration) (m) Flotation		
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, eg complaints;</li> <li>- a noise reduction programme designed to identify the source(s), to measure/estimate noise and vibration exposure, to characterise the contributions of the sources and to implement prevention and/or reduction measures.</li> </ul>	CC	<p>BAT 13 is only applicable to cases where an noise nuisance at sensitive receptors is expected and/or has been substantiated, or if forms part of an existing permit requirement.</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>
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> <ul style="list-style-type: none"> <li>(a) Appropriate location of equipment and buildings</li> <li>(b) Operational measures</li> <li>(c) Low-noise equipment</li> <li>(d) Noise control equipment</li> </ul>	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>Appropriate noise minimisation measures are in place:</p> <ul style="list-style-type: none"> <li>- Maintains surfacing on roadways</li> <li>- Agreed HGV transport routes to and from site</li> <li>- Planned preventative Maintenance regime for all machinery and infrastructure</li> </ul>

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
	(e) Noise abatement		- Every other day environmental impact site walks around
15	<p><b>Odour Management</b></p> <p>In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to set up, implement and regularly review an odour management plan, as part of the environmental management system (see BAT 1), that includes all of the following elements:</p> <ul style="list-style-type: none"> <li>- a protocol containing actions and timelines;</li> <li>- a protocol for conducting odour monitoring.</li> <li>- a protocol for response to identified odour incidents eg complaints;</li> <li>- an odour prevention and reduction programme designed to identify the source(s); to measure/estimate odour exposure: to characterise the contributions of the sources; and to implement prevention and/or reduction measures.</li> </ul>	NA	<p>BAT 15 is only applicable to cases where an odour nuisance at sensitive receptors is expected and/or has been substantiated, or if forms part of an existing permit requirement.</p> <p>There is no existing permit requirement and the site has no recent history of odour complaints therefore an odour management plan is not required.</p>
<b>ANIMAL FEED BAT CONCLUSIONS (BAT 16-17)</b>			
16	<p><b>Energy efficiency – Green fodder only</b></p> <p>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.</p> <ul style="list-style-type: none"> <li>(a) Use of predried fodder</li> <li>(b) Recycling of waste gas from the dryer</li> <li>(c) Use of waste heat for pre-drying</li> </ul>	N/A	Not applicable for this site

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement															
	Applicable in addition to BAT6																	
17	<p><b>Emissions to air – particulates</b></p> <p>In order to reduce channelled dust emissions to air, BAT is to use one of the techniques given; a. bag filter, b. cyclone.</p> <table border="1" data-bbox="275 547 1066 850"> <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 colspan="2">&lt;2-20</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		CC	<p>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.</p> <p>The existing emission limit value (ELV) for the pellet coolers was 50mg/Nm<sup>3</sup> for particulate emissions. Because this is existing plant we believe it is appropriate to set the new ELV at the top of the range. A new ELV of 20mg/Nm<sup>3</sup> will be included in the varied permit to ensure compliance with the BAT-AEL.</p> <p>There is no existing emission limit value (ELV) for the grinders for particulate emissions. The grinders are existing so we believe it is appropriate to set an ELV at the top of the range. An ELV of 10mg/m<sup>3</sup> will be included in the varied permit to ensure compliance.</p> <p>Monitoring data suggests the operator can comply with the revised ELVs for the grinders and pellet coolers now, therefore we are including these limits within the permit from date of issue and are choosing to not future date this BAT AEL</p>
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>Animal Feed Environmental Performance Levels</b>																		

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement													
EPL	<p><b>Environmental Performance Level – Energy Consumption for Animal Feed</b></p> <table border="1" data-bbox="275 451 1059 842"> <thead> <tr> <th data-bbox="275 451 539 555">Product</th> <th data-bbox="539 451 797 555">Unit</th> <th data-bbox="797 451 1059 555">Specific energy consumption (yearly average)</th> </tr> </thead> <tbody> <tr> <td data-bbox="275 555 539 600">Compound food</td> <td data-bbox="539 555 797 687" rowspan="3">MWh/tonne of products</td> <td data-bbox="797 555 1059 600">0.01-0.10 <sup>(1)(2)(3)</sup></td> </tr> <tr> <td data-bbox="275 600 539 644">Dry pet food</td> <td data-bbox="797 600 1059 644">0.39-0.50</td> </tr> <tr> <td data-bbox="275 644 539 687">Wet pet food</td> <td data-bbox="797 644 1059 687">0.33-0.85</td> </tr> <tr> <td colspan="3" data-bbox="275 687 1059 842"> <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 teat treatment is used for Salmonella decontamination.</p> </td> </tr> </tbody> </table>	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 teat treatment is used for Salmonella decontamination.</p>			CC	<p>The operator has provided information to support compliance with the energy EPL. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with the energy consumption for Animal Feed.</p> <p>The compound food figure of 0.01-0.10 is appropriate for this installation.</p> <p>The sites energy consumption for 2020 was 0.0945 MWh/t, which is well within the target, reflecting the good energy management in place at this installation.</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 teat treatment is used for Salmonella decontamination.</p>																
EPL	<p><b>Environmental performance level – Waste water discharge for Animal Feed</b></p> <table border="1" data-bbox="275 963 1059 1109"> <thead> <tr> <th data-bbox="275 963 539 1067">Product</th> <th data-bbox="539 963 797 1067">Unit</th> <th data-bbox="797 963 1059 1067">Specific waste water discharge (yearly average)</th> </tr> </thead> <tbody> <tr> <td data-bbox="275 1067 539 1109">Wet pet food</td> <td data-bbox="539 1067 797 1109">m3/tonne of products</td> <td data-bbox="797 1067 1059 1109">1.3-2.4</td> </tr> </tbody> </table>	Product	Unit	Specific waste water discharge (yearly average)	Wet pet food	m3/tonne of products	1.3-2.4	NA	N/A – Dry process only.							
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 (updated)
- Site plan
- Table S1.1 overhaul
  - Activity Reference (AR) renumbering
  - Updated listed activities
  - Addition of production capacity
  - Directly associated activities (DAAs) standardisation

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

### **Capacity Threshold**

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

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

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

The existing H1 assessment of particulate emissions to air 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.

The existing combustion plants on site have a rated thermal input less than 1 MW they are exempt from MCPD limits, however, we have retained the emission limit values and monitoring requirements from the previous

### **Particulate Emissions**

BAT-AELs are derived for those substances identified as key environmental issues during the BREF review process.

If the operator has identified current compliance against BAT-AELs we will implement the relevant emission limit value (ELV) from the date of permit issue. This is relevant for emission points A1, A2, A3, A4 and A5 against BAT 17 for particulate emissions from the coolers and grinders.

We have added an improvement condition (IC8) 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. Where BAT-AELS may apply to multiple emission points e.g. grain milling, we may accept limited representative monitoring rather than expecting them to monitor every single emission point.

### **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.

There is no record of an original Site Condition Report (SCR), as there are RHS which have been identified on site a SCR is required. To ensure the operator is taking an holistic approach to the protection of groundwater and soil, and the SCR should be used to better inform the site protection and monitoring programme going forward.

We have included an Improvement condition in the permit (IC10) which requires the Operator to submit an updated site condition report which includes baseline soil and groundwater data. See Improvement conditions in Annex 3 of this decision document.

### **Hazardous Substances**

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

The stage 1 assessment identifies the hazardous substances used / stored on site. The stage 2 assessment identifies if hazardous substances are capable of causing pollution. If they are capable of causing pollution they are then termed Relevant Hazardous Substances (RHS). The Stage 3 assessment identifies if pollution prevention measures are fit for purpose in areas where hazardous substances are used / stored. This includes drains as well.

The operator provided a risk assessment as part of R61 response in the form of their SPMP however, this assessment did not provide a sufficient level of detail to so was not an appropriate risk assessment, as detailed within EC Commission Guidance 2014/C 136/03.

We have therefore included IC11 to satisfy this requirement.

The operator did provided a monitoring plan within the SPMP which has been incorporated within table S1.2 Operating Techniques of the Permit. However, this should also be reviewed in relation to the outcome of IC11.

### **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.

### **Underground Structures**

The operator has confirmed there are no underground structures at the installation.

### **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).

The following improvement conditions have been marked as complete and removed from the permit.

<b>Superseded Improvement Conditions</b>	
<b>Reference</b>	<b>Improvement condition</b>
IC1	<p>Notwithstanding improvement condition IC2 below, the Operator shall submit a written report to the Agency of the improvements carried out to the drainage system since the time of submitting the Application, (i.e. the installation of the reed bed and bio-disc septic tank).</p> <p>This report shall contain, but need not be restricted to:</p> <ul style="list-style-type: none"> <li>• as built drawings of the construction of the reed bed and septic tank;</li> <li>• drawings showing the location of the reed bed and septic tank and their relationship to the rest of the drainage system;</li> <li>• a review of the impact of the improvements on the quality of the effluent discharge to the lake; and</li> <li>• a timetable to implement any further improvements identified</li> </ul>
IC2	<p>The Operator shall undertake an assessment of the drainage, sub-surface structures, surfacing and containment measures on site. The assessment shall take into account the requirements of section 2.2.5 of the Agency Guidance Note IPPC S6.10, October 2003. A written report summarising the findings shall be submitted to the Agency together with a timetable to implement any improvements identified</p>
IC3	<p>The Operator shall develop a program of regular integrity testing, inspection and maintenance of all liquid storage systems, sub-surface structures, secondary and tertiary containment in relation to the potential to cause fugitive emissions to surface water and ground water. The program shall take into account the requirements of section 2.2.5 of the Agency Guidance Note IPPC S6.10, October 2003. A written report summarising the program shall be submitted to the Agency for agreement.</p>
IC4	<p>The Operator shall carry out an assessment of the options available for reducing oxides of nitrogen from the release points A6 and A7. The assessment shall include, but need not be limited to both improvements to dispersion from the stacks as well as abatement of the releases at source. A summary of the assessment shall be sent to the Agency in writing together with a timetable to implement any improvements identified</p>
IC5	<p>The Operator shall carry out an assessment of the options to detect failures of the abatement equipment for release points A4 and A5. The assessment shall include, but need not be limited to the use of continuous indicative monitoring such as level sensors to detect blockage of the cyclone which is interlocked to the process to immediately shut down the cooler discharge and process feed line in the case of activation of the alarm. A summary report of this assessment shall be submitted to the Agency in writing, and shall include timescales for any proposed improvements.</p>

IC6	The Operator shall review their Environmental Management System against the requirements of section 2.3 of Agency Guidance Note S6.10, October 2003, The Operator shall submit a proposed timetable of improvements, for any deficiencies identified, to the Agency.
IC7	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, October 2003. Upon completion of the plan a summary of the document shall be submitted to the Agency in writing.

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

<b>Improvement programme requirements V003</b>		
<b>Reference</b>	<b>Reason for inclusion</b>	<b>Justification of deadline</b>
IC8	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, A2, A3, and A4 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.	28/07/2023 or other date as agreed in writing with the Environment Agency
IC9	The operator shall submit, for approval by the Environment Agency, a report demonstrating compliance against BAT 1, BAT 2, and BAT 8. Refer to BAT Conclusions for a full description of the BAT requirement.	04/12/2023
IC10	The Operator shall produce a Site Condition Report (SCR) in line with our H5 Guidance. The report shall contain the information necessary to determine the state of soil and groundwater and ensure this is maintained throughout the life of the permit by using the results to better inform the SPMP. The SCR shall be submitted to the Environment Agency for review.	28/07/2023 or other date as agreed in writing with the Environment Agency

IC11	<p>The operator shall submit to the Environment Agency for approval a risk assessment considering the possibility of soil and groundwater contamination at the installation where the activity involves the use, production or release of a hazardous substances (as defined in Article 3 of Regulation (EC) No. 1272/2008 on classification, labelling and packaging of substances and mixtures).</p> <p>A stage 1-3 assessment should be completed (as detailed within the EC Commission Guidance 2014/C 136/-3) as follows;</p> <p>Stage 1 – Identify hazardous substance(s) used / stored on site.</p> <p>Stage 2 – Identify if the hazardous substance(s) are capable of causing pollution. If they are capable of causing pollution, they are then termed Relevant Hazardous Substances (RHS).</p> <p>Stage 3 – Identify if pollution prevention measures &amp; drains are fit for purpose in areas where hazardous substances are used / stored.</p> <p>If the outcomes of Stage 3 identifies that pollution of soil / ground water to be possible. The operator shall produce and submit a monitoring plan to the Environment Agency for approval detailing how the substance(s) will be monitored to demonstrate no pollution. The operator shall commence monitoring of the RHS within a timescale as agreed by the Environment Agency.</p>	28/04/2022
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