

# **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/HP3437GR  
The Operator is:                         AB Agri Limited  
The Installation is:                     Flixborough Feed Mill  
This Variation Notice number is:   EPR/HP3437GR/V002

### **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 26/07/2021.

We considered that the response did not contain sufficient information for us to commence determination of the permit review. We therefore issued a further information request to the Operator. Suitable further information was provided by the Operator on 28/01/2022.

We considered it was in the correct form and contained sufficient information for us to begin our determination of the permit review.

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

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

Based on our records and previous experience in the regulation of the installation we have no reason to consider that the Operator will not be able to comply with the techniques and standards described in the BAT Conclusions.

## 2.3 Requests for further information during determination

Although we were able to consider the Regulation 61 Notice response generally satisfactory at receipt, we did in fact need more information in order to complete our permit review assessment, and issued a further information request for monitoring data for the Grinder on 03/02/2022. 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 an environmental management system (EMS) which is externally accredited to ISO 14001 and ISO 50001.</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 is externally accredited to ISO14001 and ISO50001.</p> <p>The Site holds Performance Indicator Monitoring Procedures for Water, Energy, Air Pollution; Waste Control and Disposal Procedures which form part of the National and Site EMS system. The EMS is under regular review.</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>CC</b>	<p>The operator has provided information to support compliance with BATc 3. We assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 3.</p> <p>The site does not operate an effluent treatment plant on site. Direct discharge is comprised of uncontaminated surface water to the River Trent.</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
			Vehicle wash and boiler blowdown is discharged to an offsite sewage treatment works, discharge consent is held with Severn Trent Water Limited.
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 [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>	<b>NA</b>	<p>No process effluent is discharged directly to surface water. For the discharge to sewer; chloride is not a parameter of concern for this installation.</p> <p>No monitoring is required for compliance with the BATc, however, annual sampling is undertaken to demonstrate compliance against the limits within the Trade Effluent Discharge Consent with sewerage undertaker (Severn Trent Water Limited).</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 operator has provided information to support compliance with BATc 5. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 5.</p> <p>The site undertakes annual MCERTS testing of air emissions for total particulates from the coolers and grinder using an approved contractor following EN 13284-1 standard.</p> <p>The requirement for annual monitoring of particulates has been included in the permit in order to ensure compliance with BATc 5.</p>
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</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>

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
	common techniques listed in technique 6b within the table in the BATc.		The operator is externally accredited to ISO50001.
7	<p><b>Water and wastewater minimisation</b></p> <p>In order to reduce water consumption and the volume of waste water discharged, BAT is to use BAT 7a and one or a combination of the techniques b to k given below.</p> <p>(a) water recycling and/or reuse  (b) Optimisation of water flow  (c) Optimisation of water nozzles and hoses  (d) Segregation of water streams</p> <p>Techniques related to cleaning operations:</p> <p>(e) Dry cleaning  (f) Pigging system for pipes  (g) High-pressure cleaning  (h) Optimisation of chemical dosing and water use in cleaning-in-place (CIP)  (i) Low-pressure foam and/or gel cleaning  (j) Optimised design and construction of equipment and process areas  (k) Cleaning of equipment as soon as possible</p>	<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>The site uses dry cleaning techniques (vacuuming) for cleaning operations; and daily cleaning operations.</p>
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  (b) Reuse of cleaning chemicals in cleaning-in-place (CIP)</p>	<b>CC</b>	<p>The operator has provided information to support compliance with BATc 8. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 8.</p> <p>Vehicle mats are used as a method to disinfect wheels at the site, when required for biosecurity reasons. The disinfectants used in this</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>(c) Dry cleaning</p> <p>(d) Optimised design and construction of equipment and process areas</p>		<p>process are DEFRA approved. The Operator uses limited volumes of disinfectant; ensures the disinfectant is either absorbed or evaporated; and that no leaks or spills outside of the vehicle mat boundary occurs.</p> <p>Disinfectant Virkon S is stored as a concentrated powder and diluted on site. The dilution ratio is 1:100 which provides Virkon S at 1%, the powder is dissolved in an IBC with secondary containment/ bunded (110% capacity) and spill kit are made available in the vicinity.</p> <p>The Operator has a quality assurance document and risk assessments which include these control measures.</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>	There is no refrigerants used on site.
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> <p>(f) Use of waste water for land spreading</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>Residues and by products from process manufacture are reworked into the process subject to quality assurance procedures for feed safety.</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
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>NA</b>	The discharge volumes from this installation are low, the minimal process effluent produced is discharged to sewer additional buffer storage capacity is not applicable.
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 (a) Equalisation (b) Neutralisation (c) Physical separate (eg screens, sieves, primary settlement tanks etc) Aerobic and/or anaerobic treatment (secondary treatment) (d) Aerobic and/or anaerobic treatment (eg activated sludge, aerobic lagoon etc) (e) Nitrification and/or denitrification (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 (eg sand filtration, microfiltration, ultrafiltration)</p>	<b>NA</b>	No emissions to water of process effluents.

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
	(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>	<b>NA</b>	<p>BAT 13 is only applicable to cases where a 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> <li>(e) Noise abatement</li> </ul>	<b>CC</b>	<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>Operator uses a combination of relevant procedures:</p> <ul style="list-style-type: none"> <li>- Using inherently quieter machinery and processes;</li> <li>- Enclosing noisy machinery and processes in buildings or acoustic enclosures;</li> <li>- Cladding with acoustic panelling and impact deadening;</li> <li>- Fitting attenuators on noisy airflows;</li> <li>- Diffusing and slowing high speed and high pressure discharges, e.g. silencers on boiler pressure relief valves;</li> <li>- Fitting vibration isolation mounts;</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
			<ul style="list-style-type: none"> <li>- Regularly maintaining the plant and machinery;</li> <li>- Moving noisy plant further away from site boundaries and sensitive receptors;</li> <li>- Restricting noisy activities to daytime hours; and</li> <li>- Use of mounds or barriers to contain or deflect the noise.</li> </ul>
15	<p><b>Odour Management</b></p> <p>In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to set up, implement and regularly review an odour management plan, as part of the environmental management system (see BAT 1), that includes all of the following elements:</p> <ul style="list-style-type: none"> <li>- a protocol containing actions and timelines;</li> <li>- a protocol for conducting odour monitoring.</li> <li>- a protocol for response to identified odour incidents eg complaints;</li> <li>- an odour prevention and reduction programme designed to identify the source(s); to measure/estimate odour exposure: to characterise the contributions of the sources; and to implement prevention and/or reduction measures.</li> </ul>	<b>NA</b>	<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>	<b>NA</b>	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															
	(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																	
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="275 711 1066 1018"> <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><b>Pellet coolers</b></p> <p>The operator has provided information to support compliance with BATc17. We have assessed the information provided we are satisfied that the operator has demonstrated compliance with BATc17.</p> <p><u>Coolers</u></p> <p>There are no existing emission limit value (ELV) for the pellet coolers for particulate emissions. This is existing plant so 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>Monitoring data suggests the operator can comply with the revised ELV of 20 mg/Nm<sup>3</sup> now, therefore we are including this limit within the permit from date of issue and are choosing to not future date this BAT-AEL.</p> <p><u>Grinders</u></p> <p>There is no existing ELV for the grinder exhaust for particulate emissions. As this is an existing plant we believe it is appropriate to set the new ELV at the top of the range. A new ELV of 10mg/Nm<sup>3</sup> will be included in the varied permit to ensure compliance with the 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															

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		
			Monitoring data suggests the operator can comply with a tighter ELV of 10 mg/Nm <sup>3</sup> now, therefore we are including this limit within the permit from date of issue and we are choosing to not future date this BAT AEL.		
<b>Animal Feed Environmental Performance Levels</b>					
EPL	<b>Environmental Performance Level – Energy Consumption for Animal Feed</b>		<b>CC</b>	<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 MWh/t is appropriate for this installation.</p> <p>The operators specific energy consumption average between 2020 and 2021 was 0.076 MWh/t, which is within the target, reflecting 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 heat treatment is used for Salmonella decontamination.</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						
EPL	<b>Environmental performance level – Waste water discharge for Animal Feed</b>	<b>NA</b>	Not applicable – dry process only.						
	<table border="1"> <thead> <tr> <th data-bbox="277 454 539 555">Product</th> <th data-bbox="539 454 801 555">Unit</th> <th data-bbox="801 454 1061 555">Specific waste water discharge (yearly average)</th> </tr> </thead> <tbody> <tr> <td data-bbox="277 555 539 603">Wet pet food</td> <td data-bbox="539 555 801 603">m3/tonne of products</td> <td data-bbox="801 555 1061 603">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
	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 H1 assessment is not valid for the maximum capacity stated within the permit or if production is now higher. We have included an improvement condition within the permit (IC11) 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.

The vents numbered A4a and A4b have been grouped as outlets from air intakes in Table S3.1 as these are not monitored for any parameters and have no limits set in the permit.

### **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 (CHP engines, back-up generators, boilers);



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

The Operator provided the information in the table below:

**Boilers**

1. Rated thermal input (MW) of the medium combustion plant.	2 x 3.2MWth
2. Type of the medium combustion plant (diesel engine, gas turbine, dual fuel engine, other engine or other medium combustion plant).	Boilers
3. Type and share of fuels used according to the fuel categories laid down in Annex II.	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.	October 2003

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

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

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

**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 and A5 against BAT 17 for particulate emissions from the coolers/ a grinder.

We have added an improvement condition (IC10) 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 eg 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 eg 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.

The Operator submitted a site condition report ‘9M4951/02/34a/L001/SC/PBor’ dated 04/10/2002 during the original application received on 29/03/2005. 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 dated 22/06/2021, 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 provided a short risk assessment on the hazardous substances stored and used at the installation. The risk assessment was a stage 1-3 assessment as detailed within EC Commission Guidance 2014/C 136/03.

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

The outcomes of the three stage assessment identified that pollution of soil and/or ground water to be unlikely.

### **Climate Change Adaptation**

The operator has considered if the site is at risk of impacts from adverse weather considering flooding, prolonged dry weather, high winds, extreme temperatures and lightning strikes.

The operator has submitted a climate change risk assessment, which demonstrates the severity and likelihood of the impact of potential changing climate variables results in majority are moderate to low risk for the site. The site has mitigation in the in place which decreases the residual risk.

We consider the climate change adaptation risk assessment to be appropriate for the installation.

### **Underground Structures**

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

There is a fully decommissioned fuel tank in the northwest corner of the site, this was fully decommissioned in 2009 when the site was transferred to AB Agri Limited.

## 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).

If the consolidated permit contains existing improvement conditions that are not yet complete or the opportunity has been taken to delete completed improvement conditions then the numbering in the table below will not be consecutive as these are only the improvement conditions arising from this permit variation.

<b>Superseded Improvement Conditions</b>	
<b>Reference</b>	<b>Improvement condition</b>
IC1	The Operator shall provide the Agency with written proposals for a programme of monitoring for particulate releases from the emission points A1 to A5 inclusive. Monitoring shall be carried out to an appropriate recognised standard. The proposals shall include a justification for the frequency and method of monitoring and a justification for the exclusion of monitoring of any of the emission points.
IC2	Using emissions data collected as a result of IC1 the Operator shall assess the installation's point source particulate emissions to air. The assessment shall include a comparison of the monitored particulate emissions concentrations against the benchmark concentration contained in Section 3.9 of the Agency Sector Guidance Note IPPC S6.10 and a review of the techniques used to minimise the emissions of particulates to air. The operator shall submit a written report of this assessment to the Agency with proposals and a timescale for any identified improvements.
IC3	The Operator shall develop and implement a formalised Environmental Management System, having regard to Section 3.9 of the Agency Sector Guidance Note IPPC S6.10.
IC4	The Operator shall develop the written accident management plan having regard to the requirements set out in Section 2.8 of the Agency technical guidance note IPPC S6.10, and shall submit the plan in writing to the Agency. The Plan shall include, but not be limited to, an assessment of the risk of fires and explosions occurring on site and the release of firewater, and leakage/failure of the underground diesel tank. The report shall identify suitable measures and procedures aimed at minimising the potential for environmental impacts arising from identified scenarios. A written report shall be provided to the Agency detailing any deficiencies in the present accident management measures in place, the improvements proposed and the time scale for implementation.
IC5	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. Upon completion of the plan a summary of the document shall be submitted to the Agency in writing.
IC6	The Operator shall develop and implement a formal, documented programme of preventative inspection and maintenance for the installation's particulate abatement equipment. The Operator shall provide the Agency with a written proposal for the programme of preventative inspection and maintenance and a timetable for its implementation by the date specified.
IC7	The Operator shall investigate options for installing a continuous, alarmed detection system to indicate the relevant performance of, and detect failures in, particulate abatement equipment where the exhaust flow exceeds 100m <sup>3</sup> /min. A written report shall be submitted to the Agency summarising the options identified, along with a timetable for implementing the preferred option.
IC8	The Operator shall carry out an energy use audit for the installation and shall develop, implement and maintain an energy efficiency plan as detailed in Section 2.7 of the Agency's Sector Guidance Note IPPC S6.10. The Operator shall provide the Agency with a written summary of the energy use audit and a written copy of the energy efficiency plan. The Operator shall implement any necessary improvements to a timetable agreed with the Agency.
IC9	The Operator shall review the measures and procedures that are in place to prevent or reduce fugitive emissions to land or water from the potentially polluting substances that are stored or held on site, having regard to Section 2.2.5 of the Agency's Guidance Note IPPC S6.10 and PPG2: Pollution Prevention Guidelines for Above Ground Oil Storage Tanks. This shall include, but not be limited to; a review of the leak detection measures and inspection and maintenance programme provided for the installation's underground diesel tank, with specific reference to the DEFRA Groundwater Protection Code: Petrol stations and other fuel dispensing facilities involving underground storage tanks, November 2002. The Operator shall provide the Agency with a written copy of the review and shall implement identified improvements to a timetable agreed with the Agency.

<b>Improvement programme requirements for V002</b>		
<b>Reference</b>	<b>Reason for inclusion</b>	<b>Justification of deadline</b>
IC10	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 points A1, A2, A3 and A5 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.	01/02/2023 or other date as agreed in writing with the Environment Agency
IC11	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.	01/02/2023 or other date as agreed in writing with the Environment Agency