

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/UP3639BF
The Operator is: AB Agri Limited
The Installation is: Enstone Animal Feed Mill
This Variation Notice number is: EPR/UP3639BF/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 4th December 2019 in the Official Journal of the European Union. In this decision document, we set out the reasoning for the consolidated variation notice that we have issued.

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

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

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

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

How this document is structured

1. Our decision
2. How we reached our decision
3. The legal framework
4. Annex 1 – Review of operating techniques within the Installation against BAT Conclusions.
5. Annex 2 – Review and assessment of changes that are not part of the BAT Conclusions derived permit review
6. Annex 3 – Improvement Conditions

1 Our decision

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

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

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

2 How we reached our decision

2.1 Requesting information to demonstrate compliance with BAT Conclusion techniques

We issued a Notice under Regulation 61(1) of the Environmental Permitting (England and Wales) Regulations 2016 (a Regulation 61 Notice) on 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 23/07/2021.

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 BATc 5 and BATc 17. The operator does not currently comply with the requirements of BATc 5 and BATc 17. In relation to these BAT Conclusions, the operator has committed compliance by 4 December 2023. We have therefore included Improvement Conditions 4, 5 and 6 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 10/02/2022 requesting further information and clarity regarding the following BATc 1, 2, 3, 5, 8, 10 and 11. 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
GENERAL BAT CONCLUSIONS (BAT 1-15)			
1	<p>Environmental Management System - Improve overall environmental performance. Implement an EMS that incorporates all the features as described within BATc 1.</p>	CC	<p>The operator has provided information to support compliance with BATc 1. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 1.</p> <p>The operator has a EMS externally accredited to the ISO14001 standard.</p>
2	<p>EMS Inventory of inputs & outputs. Increase resource efficiency and reduce emissions.</p> <p>Establish, maintain and regularly review (including when a significant change occurs) an inventory of water, energy and raw materials consumption as well as of waste water and waste gas streams, as part of the environmental management system (see BAT 1), that incorporates all of the features as detailed within the BATCs.</p>	CC	<p>The operator has provided information to support compliance with BATc 2. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 2.</p> <p>The operator has an externally accredited EMS to the ISO14001 standard. The Site holds Inventories for Water, Energy, Raw Material Consumption, Waste Water & Waste Gas Streams which form part of the National & Site EMS system. These are reviewed at regular intervals.</p>
3	<p>Monitoring key process parameters at key locations for emissions to water. For relevant emissions to water as identified by the inventory of waste water streams (see BAT 2), BAT is to monitor key process parameters (e.g. continuous monitoring of waste water flow, pH and temperature) at key locations (e.g. at the inlet and/or outlet of the pre-treatment, at the inlet to the final treatment, at the point where the emission leaves the installation).</p>	CC	<p>The operator has provided information to support compliance with BATc 3. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 3.</p> <p>The site does not operate an effluent treatment plant. Boiler blowdown and uncontaminated surface water is discharged</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>directly to a soakaway via emission point W1. Improvement Condition (IC 9) has been added for the Operator to undertake a groundwater risk assessment to determine the potential impact of the boiler blowdown. Following the outcome of the risk assessment, a proposed timetable for completion of any improvement works will be submitted to Environment Agency for approval.</p> <p>Additional uncontaminated surface water is discharged to a soakaway via W2.</p> <p>Trade effluent and vehicle wash is discharged to a private off site treatment plant S1, via a three stage interceptor.</p>
4	<p>Monitoring emissions to water to the required frequencies and standards. BAT is to monitor emissions to water with at least the frequency given [refer to BAT 4 table in BATc] and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.</p>	NA	<p>Very little process water is used in the production of animal feed. There are no direct emissions of effluent to surface water.</p> <p>There are no discharges from the site to surface water, all surface run off is discharged to the foul sewer.</p> <p>We are therefore satisfied that BATc 4 is not applicable for this site</p>
5	<p>Monitoring channelled emissions to air to the required frequencies and standards. BAT is to monitor channelled emissions to air with at least the frequency given and in accordance with EN standards.</p>	CC for Coolers (A1 and A2)	<p>Product coolers (A1 & A2): The monitoring of particulate emissions is currently undertaken to MCERTS standards at the product coolers - emission points A1 and A2 as per the previous permit requirements.</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 data-bbox="1285 683 1473 743">FC for Coolers (A3 and A4)</p> <p data-bbox="1285 1086 1473 1115">FC for grinders</p>	<p data-bbox="1525 379 2074 619">The Operator has confirmed that the new BAT AELs are achievable for each of the coolers. 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 for Coolers (A1 and A2).</p> <p data-bbox="1525 687 1861 715"><u>Product coolers (A3 & A4):</u></p> <p data-bbox="1525 719 2074 1023">The monitoring of particulate emissions is currently undertaken to MCERTS standards at the product coolers - emission points A3 and A4 as per the previous permit requirements. The Operator has stated in their Regulation 61 response that the emissions from these coolers currently do not meet the BAT- AELs. Improvement condition (IC 5) has been included in the permit for the Operator to comply with the BAT AELs by 4/12/2023.</p> <p data-bbox="1525 1086 1939 1114"><u>Raw material grinders (A5 & A6):</u></p> <p data-bbox="1525 1118 2056 1327">The operator stated in their Regulation 61 response that the emission point for the grinders (A5 & A6) will be tested prior to the compliance deadline. Improvement condition (IC 6) has been included in the permit for the Operator to comply with the monitoring requirements and IC 5 has been included in</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
			the permit for the Operator to comply with the BAT AELs by 4/12/2023.
6	<p>Energy Efficiency In order to increase energy efficiency, BAT is to use an energy efficiency plan (BAT 6a) and an appropriate combination of the common techniques listed in technique 6b within the table in the BATc.</p>	CC	<p>The operator has provided information to support compliance with BATc 6. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 6.</p> <p>The operator is externally accredited to ISO 50001 and has an energy efficiency plan which forms part of the sites EMS.</p> <p>The Operator currently has a Climate Change Levy Agreement (CCLA) in place for the site. The operator undertakes regular monitoring & internal targeting.</p>
7	<p>Water and wastewater minimisation 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> <ul style="list-style-type: none"> (a) water recycling and/or reuse (b) Optimisation of water flow (c) Optimisation of water nozzles and hoses (d) Segregation of water streams <p>Techniques related to cleaning operations:</p> <ul style="list-style-type: none"> (e) Dry cleaning (f) Pigging system for pipes (g) High-pressure cleaning (h) Optimisation of chemical dosing and water use in cleaning-in-place (CIP) (i) Low-pressure foam and/or gel cleaning (j) Optimised design and construction of equipment and process areas 	CC	<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 milling is an essentially dry process, with little use of water and limited potential for water saving. The site utilises dry cleaning techniques such as vacuuming for cleaning operations.</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>Prevent or reduce the use of harmful substances In order to prevent or reduce the use of harmful substances, e.g. in cleaning and disinfection, BAT is to use one or a combination of the techniques given below.</p> <ul style="list-style-type: none"> (a) Proper selection of cleaning chemicals and/or disinfectants (b) Reuse of cleaning chemicals in cleaning-in-place (CIP) (c) Dry cleaning (d) Optimised design and construction of equipment and process areas 	CC	<p>The operator has provided information to support compliance with BATc 8. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 8.</p> <p>Cleaning of production areas is undertaken by dry cleaning methods only such as vacuuming. The use of disinfectants are limited to those approved by DEFRA for agricultural use. All chemicals that are used on site are stored appropriately.</p>
9	<p>Refrigerants In order to prevent emissions of ozone-depleting substances and of substances with a high global warming potential from cooling and freezing, BAT is to use refrigerants without ozone depletion potential and with a low global warming potential.</p>	NA	<p>No refrigerants are used in the permitted process.</p> <p>We are therefore satisfied that BATc 9 is not applicable for this site.</p>
10	<p>Resource efficiency In order to increase resource efficiency, BAT is to use one or a combination of the techniques given below:</p> <ul style="list-style-type: none"> (a) Anaerobic digestion (b) Use of residues (c) Separation of residues (d) Recovery and reuse of residues from the pasteuriser (e) Phosphorus recovery as struvite (f) Use of waste water for land spreading 	CC	<p>The operator has provided information to support compliance with BATc 10. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 10.</p> <p>The Operator has demonstrated that minimal waste is produced from the process. Where possible and within feed safety QA residues and by-products can be re-worked into the process. In the event that waste feed is unsuitable for re-use, it is sent for Anaerobic digestion (AD).</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>Waste water buffer storage In order to prevent uncontrolled emissions to water, BAT is to provide an appropriate buffer storage capacity for waste water.</p>	CC	<p>The operator has provided information to support compliance with BATc 11. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 11.</p> <p>Boiler blow down and uncontaminated surface water is discharged directly to a soakaway via emission point W1. Improvement Condition (IC 9) has been added for the Operator to undertake a groundwater risk assessment to determine the potential impact of the boiler blow down.</p> <p>Additional uncontaminated surface water is discharged to a soakaway via W2.</p> <p>Trade effluent and vehicle wash is discharged to a private off site treatment plant S1, via a three stage interceptor.</p> <p>To further reduce risk of uncontrolled releases, chemicals are stored in appropriate containers (such as the supplier's primary packaging or bulk storage tanks) in bunded areas or on hardstanding in secure storage areas. There are no open drains inside the process buildings and spill kits are available in the unlikely event that an environmental incident may occur</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
12	<p>Emissions to water – treatment</p> <p>In order to reduce emissions to water, BAT is to use an appropriate combination of the techniques given below.</p> <p>Preliminary, primary and general treatment</p> <p>(a) Equalisation</p> <p>(b) Neutralisation</p> <p>(c) Physical separate (eg screens, sieves, primary settlement tanks etc)</p> <p>Aerobic and/or anaerobic treatment (secondary treatment)</p> <p>(d) Aerobic and/or anaerobic treatment (eg activated sludge, aerobic lagoon etc)</p> <p>(e) Nitrification and/or denitrification</p> <p>(f) Partial nitrification - anaerobic ammonium oxidation</p> <p>Phosphorus recovery and/or removal</p> <p>(g) Phosphorus recovery as struvite</p> <p>(h) Precipitation</p> <p>(i) Enhanced biological phosphorus removal</p> <p>Final solids removal</p> <p>(j) Coagulation and flocculation</p> <p>(k) Sedimentation</p> <p>(l) Filtration (eg sand filtration, microfiltration, ultrafiltration)</p> <p>(m) Flotation</p>	NA	<p>Due to the low volumes of effluent produced, effluent treatment is not required.</p> <p>We are therefore satisfied that BATc12 is not applicable for this site.</p>
13	<p>Noise management plan</p> <p>In order to prevent or, where that is not practicable, to reduce noise emissions, BAT is to set up, implement and regularly review a noise management plan, as part of the environmental management system (see BAT 1), that includes all of the following elements:</p> <ul style="list-style-type: none"> - a protocol containing actions and timelines; - a protocol for conducting noise emissions monitoring; - a protocol for response to identified noise events, eg complaints; - a noise reduction programme designed to identify the source(s), to measure/estimate noise and vibration exposure, to characterise the contributions of the sources and to implement prevention and/or reduction measures. 	NA	<p>A NMP is only required for sites where a noise nuisance at sensitive receptors is expected and/or has been substantiate. There is no history of noise complaints at the site.</p> <p>We are therefore satisfied that BATc 13 is not applicable for this site</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
	Note: BAT13 is only applicable where a noise nuisance at sensitive receptors is expected and/or has been substantiated.		
14	<p>Noise management In order to prevent or, where that is not practicable, to reduce noise emissions, BAT is to use one or a combination of the techniques given below.</p> <p>(a) Appropriate location of equipment and buildings (b) Operational measures (c) Low-noise equipment (d) Noise control equipment (e) Noise abatement</p>	CC	<p>The operator has provided information to support compliance with BATc 14. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 14.</p> <p>The operator has stated that the site will utilise a number of noise reduction techniques including;</p> <ul style="list-style-type: none"> • Using inherently quieter machinery and processes; • Enclosing noisy machinery and processes in buildings or acoustic enclosures; • Cladding with acoustic panelling and impact deadening; • Fitting attenuators on noisy airflows; • Fitting vibration isolation mounts; • Regularly maintaining the plant and machinery. <p>Moving noisy plant further away from site boundaries and sensitive receptors.</p>
15	<p>Odour Management In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to set up, implement and regularly review an odour management plan, as part of the environmental management system (see BAT 1), that includes all of the following elements:</p> <ul style="list-style-type: none"> - a protocol containing actions and timelines; - a protocol for conducting odour monitoring. - a protocol for response to identified odour incidents eg complaints; 	NA	<p>An OMP is only required for sites where a noise nuisance at sensitive receptors is expected and/or has been substantiate. There is no history of odour complaints at the site.</p> <p>We are therefore satisfied that BATc 15 is not applicable for this site</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>- 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. Note: BAT 15 is only applicable to cases where an odour nuisance at sensitive receptors is expected and/or has been substantiated.</p>																	
ANIMAL FEED BAT CONCLUSIONS (BAT 16-17)																		
16	<p>Energy efficiency – Green fodder only In order to increase energy efficiency in green fodder processing, BAT is to use an appropriate combination of the techniques specified in BAT 6 and of the techniques given below. (a) Use of predried fodder (b) Recycling of waste gas from the dryer (c) Use of waste heat for pre-drying Applicable in addition to BAT6</p>	N/A	The site does not process green fodder. We are therefore satisfied that BATc 16 is not applicable for this site.															
17	<p>Emissions to air – particulates 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="275 903 1232 1126"> <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/Nm³</td> <td><2-5</td> <td><2-10</td> </tr> <tr> <td>Pellet cooling</td> <td colspan="2"><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 ³	<2-5	<2-10	Pellet cooling	<2-20		CC for Product coolers A1 & A2	<p>Product coolers (A1 & A2): The existing emission limit value (ELV) for the pellet coolers A1 & A2 was 50mg/Nm³ for particulate emissions. As these are existing plants we believe it is appropriate to set the new ELV at the top of the range. An ELV of 20mg/Nm³ 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 20mg/Nm³. 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>The operator has provided information to support compliance with BATc 17. We have</p>
Parameter	Specific process				Unit	BAT-AEL (average over the sampling period)												
		New plants	Existing plants															
Dust	Grinding	mg/Nm ³	<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		
			An ELV of 10mg/Nm ³ has been included in the varied permit which will apply upon completion of IC4 and IC5, to ensure compliance with the BAT-AEL.		
Animal Feed Environmental Performance Levels					
EPL	Environmental Performance Level – Energy Consumption for Animal Feed			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. The Operator has stated an Environmental Performance Level of 0.075 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 ⁽¹⁾⁽²⁾⁽³⁾		
	Dry pet food		0.39-0.50		
	Wet pet food		0.33-0.85		
<p>(1) The lower end of the range can be achieved when pelleting is not applied.</p> <p>(2) The specific energy consumption level may not apply when fish and other aquatic animals are used as raw material.</p> <p>(3) The upper end of the range is 0.12 MWh/tonne of products for installations located in cold climates and/or when heat treatment is used for Salmonella decontamination.</p>					
EPL	Environmental performance level – Waste water discharge for Animal Feed			NA	Not applicable – 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

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.

This included some other changes to the permit to ensure cross-sector consistency, including:

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

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 (IC8) 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.

Table S3.1 emission points A10 – A19 have been merged as these are all either raw material or fuel tank vents.

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.	3.1 MWth
2. Type of the medium combustion plant (diesel engine, gas turbine, dual fuel engine, other engine or other medium combustion plant).	Boiler
3. Type and share of fuels used according to the fuel categories laid down in Annex II.	LPG
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.	August 2001

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 against BAT 17 for particulate emissions from the product coolers. The Operator has stated they are currently unable to meet the BAT AELs for emission points A3 & A4 from the product coolers and emission points A5 & A6 from the grinders. We have incorporated improvement condition (IC 5) to ensure the BAT AELs are achieved prior to December 2023.

For emission points noted to be future complaint we would incorporate an interim ELV and monitoring requirements from the date of permit issue. This is relevant for emission points A3 and A4 for the product coolers and A5 & A6 for the grinders. For the product coolers A3 & A4 we have kept the current emission limit of 50mg/m³ and incorporated improvement condition IC 5 to ensure the new BAT AELs are achieved. However, the operator has not currently undertaken particulate monitoring on the grinder emission points A5 & A6. Therefore, we are unable to include an interim ELV, we have

incorporated an improvement condition (IC6) to ensure the monitoring is carried out as soon as reasonably practical prior to December 2023 for these emission points.

We have added an improvement condition (IC7) 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 (PM₁₀ and PM_{2.5}) 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.

Boiler blowdown is currently discharged directly to soakaway along with uncontaminated surface water. There is a private effluent treatment on the industrial estate which currently treats domestic sewage arising from the site and vehicle wash. Due to capacity issues the effluent treatment plant is unable to accept further effluent from the site. There is no mains drainage available on the industrial estate and the nearest connection to the public sewer is understood to be 2.5km away. Improvement condition (IC9) has been included in the variation for the Operator to undertake a H1 risk assessment to determine the potential impact of the boiler blow down. Following the outcome of the H1 assessment, a proposed timetable for completion of any improvement works will be submitted to Environment Agency for approval.

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 [ABN, Enstone: PPC Application Site Report, Dated January 2005] during the original application received on 31/03/2005. 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 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. Therefore, we consider the generic condition 3.1.3 for periodic monitoring of soil and groundwater to be appropriate for this site, no additional monitoring is required at this time.

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).

Previous improvement conditions marked as complete in the previous permit.

Superseded Improvement Conditions – Removed from permit as marked as “complete”	
Reference	Improvement Condition
IC1	<p>The operator shall carry out a review of the current method of monitoring used to determine effluent flow at release point S1. This review shall compare the current method against the minimum requirements for the self-monitoring of effluent flow set out within Section 5 of the Agency Guidance Note M18; Monitoring of Discharges to Water and Sewer, Version 1, July 2004.</p> <p>A report detailing the findings of the review, recommendations to reach the minimum standards, and implementation timetable shall be submitted to the Agency for approval.</p>
IC2	<p>The operator shall undertake an assessment of the suitability of the storage arrangements for waste oils, bulk liquid raw materials, diesel and gas oil. The assessment shall highlight any deficiencies the current storage arrangements have with meeting the following guidelines:</p> <ul style="list-style-type: none"> • The containers shall be stored within an identified area which is bunded to prevent the uncontrolled release of the stored substance; • Any bund shall be impermeable and resistant to the range of substances stored within that storage area; • Any bund shall have no outlet(drain or valve) and drain to a blind collection point; • The bund shall be designed to catch leaks from the containers; • The bund shall have a capacity greater than 110% of the largest container or 25% of the total storage capacity; and • The containers shall have fill points within the bund where possible or otherwise additional secondary containment for filling facilities shall be provided. <p>A written report summarising the findings of the assessment and any recommendations of improvements required to enable the bunding to meet the above requirements, together with an implementation timetable shall be submitted to the Agency for approval.</p>
IC3	<p>The operator shall carry out an assessment of the measures in place within the installation to ensure that the discharge points WL1 and WL2 can only receive uncontaminated surface water and cannot be impacted by contaminated firewater, cleaning chemicals and minor spills of polluting liquids from the process.</p> <p>A report detailing the findings of the assessment, recommendations for improvements to the surfacing, kerbing and bunding together with</p>

	an implementation timetable shall be submitted to the Agency for approval.
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Variation V002 issued on 30/05/2007 amended the requirements of IC1 to read as follows.

IC1	<p>The operator shall carry out a review of the impact on groundwater quality resulting from the release of boiler blow down at WL1. The review shall include the following:</p> <ul style="list-style-type: none"> • a site specific characterisation of the composition (range of substances and concentrations) of the boiler blow down that is released from the site; • an assessment of the significance of those releases on the groundwater quality, using the principles set out in the Agency H1 guidance 'Environmental Assessment and Appraisal of BAT'; <p>A report detailing the findings of the review, recommendations to any improvements to the technical measures for disposing of the boiler blowdown, together with an implementation time table shall be submitted to the Agency for approval.</p>
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Improvement conditions added as a result of this variation.

Improvement programme requirements		
Reference	Reason for inclusion	Justification of deadline
IC4	<p>The operator shall submit, for approval by the Environment Agency, a report setting out progress to achieving the Best Available Techniques Conclusion Associated Emission Levels (BAT-AELs) where BAT is currently not achieved, but will be achieved before 4 December 2023. The report shall include, but not be limited to, the following:</p> <ol style="list-style-type: none"> 1) Current performance against the BAT-AELs. 2) Methodology for reaching the BAT-AELs. 3) Associated targets /timelines for reaching compliance by 4 December 2023. 4) Any alterations to the initial plan (in progress reports). The report shall address the BAT Conclusions for Food, Drink and Milk industries with respect to the following: <ul style="list-style-type: none"> • BATc 3 (Monitoring key process parameters at key locations for emissions to water) • BATc 5 (compliance with BAT for monitoring channelled dust emissions to air from grinding in compound feed manufacture) • BATc 17 Table 4 (compliance with BAT-AELs for channelled dust emissions to air from grinding and pellet cooling in compound feed manufacture) <p>Refer to BAT Conclusions for a full description of the BAT requirement.</p>	<p>Within 12 months of permit issue 31/03/2023</p>
IC5	<p>The operator shall submit, for approval by the Environment Agency, a report demonstrating compliance against BAT17 Table 4 for</p>	<p>04/12/2023 or other date as agreed in</p>

	channelled dust emissions to air from grinding for emission points A5 & A6 and cooler emission points A3 and A4.	writing with the Environment Agency
IC6	<p>The Operator shall submit a report, for approval in writing by the Environment Agency, demonstrating the ability to comply with BAT 5 for monitoring of particulates from the grinder emissions points A5 & A6 in accordance with the MCERTS standard.</p> <p>The report shall include, but not be limited to, the installation of the sampling ports and platforms to enable particulate monitoring in accordance with table S3.1.</p>	04/12/2023 or other date as agreed in writing with the Environment Agency
IC7	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, A4, A5 & A6 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.	31/03/2023 or other date as agreed in writing with the Environment Agency
IC8	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.	31/03/2023 or other date as agreed in writing with the Environment Agency
IC9	<p>The Operator shall review the disposal of boiler blowdown from the installation. Following the assessment, the operator shall submit the report to the Environment Agency for approval. The report shall include (but not be limited to) the following;</p> <ul style="list-style-type: none"> • An assessment of the impact for the proposed route using the Environment Agency's H1 methodology taking into consideration the characteristics of the boiler blowdown (temperature, pH, suspended solids, metals and any other potentially polluting substances). • Detail the specific arrangements for disposal of the blowdown associated with annual inspection and servicing. • List the options for disposal, justifying the proposed route (disposals not being treated in an onsite or offsite waste water treatment plant should be fully justified). • A proposed timetable for completion of any improvement works required. <p>The Operator shall implement any necessary improvements to a timetable agreed in writing by the Environment Agency.</p>	31/03/2023 or other date as agreed in writing with the Environment Agency