

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/BX2078IM
The Operator is: Pauls Malt Limited
The Installation is: Burry St. Edmunds Maltings
This Variation Notice number is: EPR/BX2078IM/V004

What this document is about

Article 21(3) of the Industrial Emissions Directive (IED) requires the Environment Agency to review conditions in permits that it has issued and to ensure that the permit delivers compliance with relevant standards, within four years of the publication by the European Commission of updated decisions on best available techniques (BAT) Conclusions.

We have reviewed the permit for this installation against the BAT Conclusions for the Food, Drink and Milk Industries published on 4th December 2019 in the Official Journal of the European Union. In this decision document, we set out the reasoning for the consolidated variation notice that we have issued.

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

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

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

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

How this document is structured

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

1 Our decision

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

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

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

2 How we reached our decision

2.1 Requesting information to demonstrate compliance with BAT Conclusion techniques

We issued a Notice under Regulation 61(1) of the Environmental Permitting (England and Wales) Regulations 2016 (a Regulation 61 Notice) on 09/06/2022 requiring the Operator to provide information to demonstrate where the operation of their installation currently meets, or how it will subsequently meet, the revised standards described in the relevant BAT Conclusions document.

The Notice required that where the revised standards are not currently met, the operator should provide information that:

- describes the techniques that will be implemented before 4 December 2023, which will then ensure that operations meet the revised standards, or
- justifies why standards will not be met by 4 December 2023, and confirmation of the date when the operation of those processes will cease within the Installation or an explanation of why the revised BAT standards are not applicable to those processes, or
- justifies why an alternative technique will achieve the same level of environmental protection equivalent to the revised BAT standards described in the BAT Conclusions.

Where the Operator proposed that they were not intending to meet a BAT standard that also included a BAT Associated Emission Level (BAT-AEL) described in the BAT Conclusions Document, the Regulation 61 Notice required that the Operator make a formal request for derogation from compliance with that BAT-AEL (as provisioned by Article 15(4) of IED). In this circumstance, the Notice identified that any such request for derogation must be supported and justified by sufficient technical and commercial information that would enable us to determine acceptability of the derogation request.

The Regulation 61 Notice response from the Operator was received on 07/10/2022.

We considered it was in the correct form and contained sufficient information for us to begin our determination of the permit review but not that it necessarily contained all the information we would need to complete that determination.

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

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

Based on our records and previous experience in the regulation of the installation we consider that the Operator will be able to comply with the techniques and standards described in the BAT Conclusions other than for those techniques and requirements described in BAT Conclusion 2 and 5. The operator does not currently comply with the requirements of BATc 2. In relation to these BAT Conclusions, the operator has committed compliance by 4 December 2023. We have therefore included Improvement Condition IC12 and IC13 in the Consolidated Variation Notice to ensure that the requirements of the BAT Conclusions are delivered before 4 December 2023.

2.3 Requests for further information during determination

Although we were able to consider the Regulation 61 Notice response generally satisfactory at receipt, we did in fact need more information in order to complete our permit review assessment, and issued a further information request on 20/06/2023 concerning BATcs 1, 6, 8, 9, 11, 12, 20, ELP for energy, EPL for wastewater, MCPs, SCR, RHS Stage 1 – 3 Risk Assessment, air emission points, cooling towers, and updated site plan. A copy of the further information request was placed on our public register. In addition to the response to our further information request, we received additional information during the determination from the Operator via email on 22/08/2023, updated site plan, and 28/08/2023, non-technical description and 3D site plan. We made a copy of this information available to the public in the same way as the response to our information request.

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.</p> <p>Implement an EMS that incorporates all the features as described within BATc 1.</p>	CC	<p>The operator has provided information to support compliance with BATc 1. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 1.</p> <p>The operator has an 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>	FC	<p>The operator has provided information to support compliance with BATc 2. We have assessed the information provided and we are not satisfied that the operator has demonstrated compliance with BATc 2.</p> <p>The Operator declared that it is using:</p> <ul style="list-style-type: none"> • A simplified process flowsheet and a description of the process integrated techniques to monitor resource used/waste generated • Information about the water mass mass-balance • Information and characteristics of wastewater streams • Information about energy consumption, raw materials used, and opportunities to reduce waste • Monitoring and identification of strategies to reduce consumption and waste creation. <p>However, the Operator declared that it is not currently compliant with BATc 2 (IV)(a)(b) and (c). in relation to this BATc subpoints, the Operator declared that compliance will be achieved by 04/12/2023.</p> <p>We consider that the operator will be future compliant with BATc 2. Improvement condition</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
			IC12 has been included in the permit to achieve compliance (see Annex 3).
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 Operator has no process effluent discharges to surface water. Effluent treated in the on-site ETP is discharged to the foul sewer under consent from Anglian Water.</p> <p>Weekly monitoring of COD, SS, pH, and flow rate is carried out on the effluent.</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>We are satisfied that BATc 4 is not applicable to this installation.</p> <p>The Operator is not required to monitor process effluent discharged to sewer and this BATc is applicable only for discharges to surface water.</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>	FC	<p>The operator has provided information to support compliance with BATc 5. We have assessed the information provided and we are not satisfied that the operator has demonstrated compliance with BATc 5.</p> <p>The Operator declared that it is monitoring emission to air from those emission points identified in the Reg.61 Response Tool but did not provide any evidence of doing so and declared this BATc is 'not applicable'.</p> <p>While there are no requirements under this BATc for the malt sector, we believe that the 'specific process' description is relevant to this sector.</p> <p>We have taken this opportunity to include in the consolidated permit monitoring</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>requirements for those air emission points associated with handling and processing of malt and adjuncts, specifically for A6, A7, A8, A9, A10, and A11. The monitoring will be carried out annually at EN 13284-1 standard.</p> <p>We consider that the operator will be future compliant with BATc 5. Improvement condition IC12 has been included in the permit to achieve compliance (see Annex 3).</p>
6	<p>Energy Efficiency</p> <p>In order to increase energy efficiency, BAT is to use an energy efficiency plan (BAT 6a) and an appropriate combination of the common techniques listed in technique 6b within the table in the BATc.</p>	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 declared that is has an ISO 50001 accreditation and provided a copy of the certification.</p> <p>The Energy efficiency techniques used are:</p> <ul style="list-style-type: none"> • Burner regulation and control • Cogeneration • Energy efficient motors • Heat recovery and heat exchangers • LED lighting • Process control systems • Variable speed drives
7	<p>Water and wastewater minimisation</p> <p>In order to reduce water consumption and the volume of waste water discharged, BAT is to use BAT 7a and one or a combination of the techniques b to k given below.</p> <p>(a) water recycling and/or reuse</p> <p>(b) Optimisation of water flow</p> <p>(c) Optimisation of water nozzles and hoses</p> <p>(d) Segregation of water streams</p> <p>Techniques related to cleaning operations:</p>	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>The Operator declared using the following techniques:</p> <ul style="list-style-type: none"> • Water recycling and/or reuse • Optimisation of water flow • Segregation of water streams

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
	(e) 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		<ul style="list-style-type: none"> • Dry cleaning
8	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. (a) Proper selection of cleaning chemicals and/or disinfectants (b) Reuse of cleaning chemicals in cleaning-in-place (CIP) (c) Dry cleaning (d) Optimised design and construction of equipment and process areas	CC	The operator has provided information to support compliance with BATc 8. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 8. The Operator declared that it is using dry cleaning along with a proper selection of cleaning chemicals based on the assessment of risks associated with the usage of said chemicals.
9	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.	CC	The operator has provided information to support compliance with BATc 9. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 9. The Operator declared that ammonia, used for product cooling, is the only refrigerant gas used in the production process. All other refrigerant details provided by the Operator are related to domestic and/or air conditioning system, thus out of scope for this BATc.
10	Resource efficiency In order to increase resource efficiency, BAT is to use one or a combination of the techniques given below: (a) Anaerobic digestion (b) Use of residues (c) Separation of residues (d) Recovery and reuse of residues from the pasteuriser	CC	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.

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
	(e) Phosphorus recovery as struvite (f) Use of waste water for land spreading		The Operator declared that it is using the separation of residue as a resource efficiency measure. Residue from the production process is palletised and used as animal feed.
11	Waste water buffer storage In order to prevent uncontrolled emissions to water, BAT is to provide an appropriate buffer storage capacity for waste water.	CC	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. The Operator declared that is has sufficient buffer capacity in the form of two tanks with a 1,325 m ³ combined capacity, along with the site's drainage system and a penstock valve on the balance tank leading to the municipal sewer for further treatment.
12	Emissions to water – treatment 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	NA	We are satisfied that BATc 12 is not applicable to this installation. The Operator has no process effluent discharges to surface water. Effluent treated on-site in the ETP is discharged to the foul sewer under consent from Anglian Water. However, the Operator treats the process effluent prior to discharge to the foul sewer by: <ul style="list-style-type: none"> • Influent from processes is pumped first in a 500 m³ underground tank for settling and then pumped above ground in a 825 m³ tank through a rotary screen. • The sludge is removed from site and used for composting • Treated effluent is discharged to the sewer.

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										
	(l) Filtration (eg sand filtration, microfiltration, ultrafiltration) (m) Flotation												
12	<p>Emissions to water – treatment BAT-associated emission levels (BAT-AELs) for direct emissions to a receiving water body</p> <table border="1" data-bbox="277 483 1086 804"> <thead> <tr> <th>Parameter</th> <th>BAT-AEL ⁽¹⁵⁾ ⁽¹⁶⁾ (daily average)</th> </tr> </thead> <tbody> <tr> <td>Chemical oxygen demand (COD) ⁽¹⁷⁾ ⁽¹⁸⁾</td> <td>25-100 mg/l ⁽¹⁹⁾</td> </tr> <tr> <td>Total suspended solids (TSS)</td> <td>4-50 mg/l ⁽²⁰⁾</td> </tr> <tr> <td>Total nitrogen (TN)</td> <td>2-20 mg/l ⁽²¹⁾ ⁽²²⁾</td> </tr> <tr> <td>Total phosphorus (TP)</td> <td>0,2-2 mg/l ⁽²³⁾</td> </tr> </tbody> </table> <p>(16) The BAT-AELs may not apply to the production of citric acid or yeast (17) No BAT-AEL applies for biochemical oxygen demand (BOD). As an indication, the yearly average BOD5 level in the effluent from a biological waste water treatment plant will generally be ≤ 20 mg/l. (18) The BAT-AEL for COD may be replaced by a BAT-AEL for TOC. The correlation between COD and TOC is determined on a case-by-case basis. The BAT-AEL for TOC is the preferred option because TOC monitoring does not rely on the use of very toxic compounds. (20) The lower end of the range is typically achieved when using filtration (e.g. sand filtration, microfiltration, membrane bioreactor), while the upper end of the range is typically achieved when using sedimentation only. (21) The upper end of the range is 30 mg/l as a daily average only if the abatement efficiency is ≥ 80 % as a yearly average or as an average over the production period. (22) The BAT-AEL may not apply when the temperature of the waste water is low (e.g. below 12 °C) for prolonged periods.</p>	Parameter	BAT-AEL ⁽¹⁵⁾ ⁽¹⁶⁾ (daily average)	Chemical oxygen demand (COD) ⁽¹⁷⁾ ⁽¹⁸⁾	25-100 mg/l ⁽¹⁹⁾	Total suspended solids (TSS)	4-50 mg/l ⁽²⁰⁾	Total nitrogen (TN)	2-20 mg/l ⁽²¹⁾ ⁽²²⁾	Total phosphorus (TP)	0,2-2 mg/l ⁽²³⁾	NA	<p>We are satisfied that BAT-AELs is not applicable to this installation.</p> <p>This BATc is applicable only where there are discharges of process effluent to surface water and this site only has discharges to foul sewer.</p>
Parameter	BAT-AEL ⁽¹⁵⁾ ⁽¹⁶⁾ (daily average)												
Chemical oxygen demand (COD) ⁽¹⁷⁾ ⁽¹⁸⁾	25-100 mg/l ⁽¹⁹⁾												
Total suspended solids (TSS)	4-50 mg/l ⁽²⁰⁾												
Total nitrogen (TN)	2-20 mg/l ⁽²¹⁾ ⁽²²⁾												
Total phosphorus (TP)	0,2-2 mg/l ⁽²³⁾												
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; 	NA	<p>We are satisfied that BATc 13 is not applicable to this Installation.</p> <p>A noise management plan is only required where noise nuisance at sensitive receptors is expected or has been substantiated. There have been no substantiated noise nuisances from the site therefore an NMP is not a requirement 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
	- 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.		
14	<p>Noise management</p> <p>In order to prevent or, where that is not practicable, to reduce noise emissions, BAT is to use one or a combination of the techniques given below.</p> <p>(a) Appropriate location of equipment and buildings</p> <p>(b) Operational measures</p> <p>(c) Low-noise equipment</p> <p>(d) Noise control equipment</p> <p>(e) Noise abatement</p>	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 declared using the following noise management techniques:</p> <ul style="list-style-type: none"> • Operational measures • Low-noise equipment • Noise abatement where practicable
15	<p>Odour Management</p> <p>In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to set up, implement and regularly review an odour management plan, as part of the environmental management system (see BAT 1), that includes all of the following elements:</p> <ul style="list-style-type: none"> - a protocol containing actions and timelines; - a protocol for conducting odour monitoring. - a protocol for response to identified odour incidents eg complaints; - an odour prevention and reduction programme designed to identify the source(s); to measure/estimate odour exposure: to characterise the contributions of the sources; and to implement prevention and/or reduction measures. 	NA	<p>We are satisfied that BATc 15 is not applicable to this Installation.</p> <p>An odour management plan is only required where odour nuisance at sensitive receptors is expected or has been substantiated. There have been no substantiated odour nuisance from the site recently, therefore this BATc is not applicable.</p>
20	In order to reduce channelled dust emissions to air, BAT is to use a bag filter or both a cyclone and a bag filter.	CC	<p>The operator has provided information to support compliance with BATc 20. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 20.</p> <p>The Operator declared it is using a bag filter for emission points:</p> <ul style="list-style-type: none"> • A6 – malt handling • A7 – barley transfer

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"> • A8 – malt transfer • A9 and A10 – finished malt cleaning • A11 – barley/malt transfer 				
AEL	<p>Note: There are no BAT-AELs for malt production. However, we want to set an ELV to ensure this parameter is adequately controlled. These should be based on what the operator can achieve (if monitoring data is available) and should be in line with the malt processing BAT-AELs (20mg/m³ for grinding and/or 20mg/m³ for cooling). However, as it is not a BAT-AEL, no derogation is required if the operator cannot achieve this. We will ensure they have the correct abatement and set an appropriate ELV with an IC.</p>	CC	<p>The operator has provided information to support compliance with BAT-AEL. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BAT-AELs.</p> <p>The current permit has a limit of 20 mg/m³ for the emissions points listed below. We take this opportunity to include new ELVs for dust air emissions at the upper range of the limit.</p> <ul style="list-style-type: none"> • A6, A7, A8, A9, A10, and A11 – 20 mg/m³ for each emission point. <p>Because the Operator had not provided any monitoring data, the applicability of these ELVs is now post-dated to 01/10/2024.</p> <p>We consider that the operator will be future compliant with BAT_AELs. Improvement condition IC13 has been included in the permit to achieve compliance (see Annex 3).</p>				
Brewing Sector Environmental Performance Levels							
EPL	<p>Environmental Performance Level – Energy consumption for the brewing sector</p> <table border="1" data-bbox="275 1136 1182 1227"> <thead> <tr> <th data-bbox="275 1136 633 1182">Unit</th> <th data-bbox="633 1136 1182 1182">Specific energy consumption (yearly average)</th> </tr> </thead> <tbody> <tr> <td data-bbox="275 1182 633 1227">MWh/hl of products</td> <td data-bbox="633 1182 1182 1227">0.02 – 0.05</td> </tr> </tbody> </table>	Unit	Specific energy consumption (yearly average)	MWh/hl of products	0.02 – 0.05	NA	<p>We are satisfied this BAT-EPL is not applicable to this installation.</p> <p>While the EPL is reserved for the brewing and not malt sector, the Operator did provide us with the value of approximately 0.95 MWh energy consumption per tonne of product, data recorded for 2022.</p>
Unit	Specific energy consumption (yearly average)						
MWh/hl of products	0.02 – 0.05						

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	Environmental Performance Level – Specific waste water discharge for the brewing sector	NA	<p>We are satisfied this BAT-EPL is not applicable to this installation.</p> <p>While the EPL is reserved for the brewing and not malt sector, the Operator did provide us with the value of approximately 3.0 m³ of waste water discharged per tonne of malt produced in 2022.</p>	
	Unit			Specific waste water discharge (yearly average)
	m ³ /hl of products			0.15 – 0.50

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

Updating permit during permit review consolidation

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

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

Capacity Threshold

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

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

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

The existing volume of raw material permitted at the site has not increased since the previous variation and therefore the assessment for emissions to water/sewer remain valid for capacity threshold now placed within table S1.1 of the permit.

Emissions to Air

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

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

Implementing the requirements of the Medium Combustion Plant Directive

Existing Medium Combustion Plant (1MW-50MW)

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

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

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

Combined heat and power (CHP) engines

1. Rated thermal input (MW) of the medium combustion plant.	10.8 MWth
2. Type of the medium combustion plant (diesel engine, gas turbine, dual fuel engine, other engine or other medium combustion plant).	CHP 1 – 3.6 MWth CHP 2 – 3.6 MWth CHP 3 – 3.6 MWth
3. Type and share of fuels used according to the fuel categories laid down in Annex II.	Natural gas 100%
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.	CHP 1 – December 2014 CHP 2 – January 2015 CHP 2 – January 2015

The site also operates 4 Kilns of 3.45 MWth capacity each, and 2 GVKs with 2 burners each, having an input of 6.1 MWth per burner. However, this MCPs are excluded from having monitoring requirements and ELVs for flue gas emissions, as per the MCPD document, Article 2 (d).

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

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 that do not specifically include the malt producing installations. However, we want to set ELVs to ensure this parameter is adequately controlled. These are based on what the operator can achieve (if monitoring data is available) and are in line with the malt processing BAT-AELs (20mg/m³ for

grinding and/or 20mg/m³ for cooling). However, as this is not a BAT-AEL, no derogation is required if the operator cannot achieve this.

If the operator has identified current compliance against BAT-AELs for malt processing we will implement the relevant emission limit value (ELV) from the date of permit issue. This is relevant for emission points (A6, A7, A8, A9, A10, and A11) against BAT 20 for dust emissions from the bag filter and/or cyclone.

We have added an improvement condition (IC14) for size fractionation of particulate emissions because a BAT-AEL applies for dust emissions to air. The justification for this IC is that there are a number of activities within the FDM sector which may result in release of particulates to air e.g. drying, milling and grinding. Overall there is little available information on how much fine particulates are released. This IC is a one-off exercise requiring operators to monitor and report on the fractions of fine particulate (PM₁₀ and PM_{2.5}) emissions and increase our understanding of potential health effects. Where BAT-AELs may apply to multiple emission points e.g. grain milling, we may accept limited representative monitoring rather than expecting them to monitor every single emission point.

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

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

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

The operator has previously provided assessments for all emissions to water at the installation. The operator declares there has been no change to activities and subsequent effluents generated at the installation since this risk assessment was taken. Consequently, we agree that the original risk assessments remain valid at this time.

Soil & groundwater risk assessment (baseline report)

The IED requires that the operator of any IED installation using, producing or releasing “relevant hazardous substances” (RHS) shall, having regarded the possibility that they might cause pollution of soil and groundwater, submit a “baseline report” with its permit application. The baseline report is an important reference document in the assessment of contamination that might arise during the operational lifetime of the regulated facility and at cessation of activities. It must enable a quantified comparison to be made between the baseline and the state of the site at surrender.

At the definitive cessation of activities, the Operator has to satisfy us that the necessary measures have been taken so that the site ceases to pose a risk to soil or groundwater, taking into account both the baseline conditions and the site’s current or approved future use. To do this, the Operator has to submit a surrender application to us, which we will not grant unless and until we are satisfied that these requirements have been met.

The Operator submitted a site condition report [Document reference: B1.3.1 dated 24/03/2005] during the original application received on 05/05/2005, and resubmitted it as part of the Reg.61 Response, SCR now contained in the RFI Reply under Appendix 4. 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.

Hazardous Substances

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

The operator has confirmed there has been no change in the hazardous substances used, their capability of causing pollution and/or the pollution prevention measures at the installation since the risk assessment was submitted as part of the baseline report submitted as part of the permit application received on 05/05/2005, and resubmitted an updated version dated 05/11/2022 as part of the Reg.61 Response, included in the RFI Reply under Appendix 5. Consequently, we are satisfied there has been no change to the assessment of risk for hazardous substances.

Climate Change Adaptation

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

The operator has stated that the installation is not likely to be or has previously not been affected by climate change.

Containment

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

The Operator provided details of all tanks;

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

- Details of when last bund integrity test was carried out
- Maintenance measures in place for tank and bund (inspections)
- How the bund is emptied
- Details of tertiary containment

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

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

Annex 3: Improvement Conditions

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

Previous improvement conditions marked as complete in the previous permit.

Superseded Improvement Conditions – Removed from permit as marked as “complete”	
Reference	Improvement Condition
IC1	The Operator shall undertake an assessment of the subsurface structures, surfacing and secondary containment measures on site. The assessment will take into account the requirements of section 2.2.5 of the Agency Guidance Note IPPC S6.10, October 2003. A written report summarising the findings shall be submitted to the Agency. A timescale for implementation of any improvements shall be approved with the Agency and subsequently implemented.
IC2	The Operator shall submit a written report to the Environment Agency that summarises a review of the provision of MCERTS accreditation for the monitoring equipment, personnel and organisations employed for the emissions monitoring program in condition 2.10.1. The report shall also propose a timetable for achieving this standard for any elements that are not MCERTS certified.
IC3	The operator shall carry out an assessment of the options to detect failures of the abatement equipment for release points A6, A7, A8, A9, A10, A11. The assessment shall include, but not be limited to the use of continuous monitoring. A summary report shall be submitted to the Agency in writing, of this assessment and shall include timescales for any proposed improvements. Upon approval with the Agency the improvements shall be implemented.
IC4	The operator shall assess the burning of sulphur in the kilns of the installation, including an assessment of the releases to air from this activity, and demonstrate that this technique constitutes Best Available Technique for this activity. A written report shall be sent to the Agency detailing the findings of this review, and including a timetable for any improvements. Upon approval by the Agency the improvements shall be implemented.
IC5	The operator shall review the systems and procedures in place on the installation for the control and management of accidents and incidents, as described in the site “Disaster Plan” against the requirements of Section 2.3(Accident Management Plan) of the IPPC sector guidance note IPPC 6.10, October 2003. Following the review a report shall be sent to the Agency detailing the findings, and remedial actions to be taken, with a timetable for their implementation. Upon approval by the Agency the improvements shall be implemented.
IC6	The operator shall prepare and implement an Odour Management Plan. Guidance for the preparation of an odour management plan is given in the separate guidance IPPC H4 (Part 2). A written report summarising this plan is to be submitted to the Agency

IC7	The Operator shall develop a written Site Closure Plan with regard to the requirements set out in Section 2.11 of the Agency Guidance Note IPPC S6.10, October 2003. Upon completion of the plan, a written copy shall be submitted to the Agency for approval.
IC8	The operator is to undertake BS4142 noise surveys at the sensitive receptors, A written report outlining the conclusions and resultant proposals for any improvements identified shall be submitted to the Agency. Upon approval with the Agency any improvements shall be implemented. The operator is to agree with the Agency prior to the first submission, the format of the report.
IC9	The Operator shall conduct an assessment of all emissions from air emission points A1-A5 in accordance with B2.2, Point Source Emissions to Air and B4 Impact Assessment,(including completed H1 assessment or equivalent) of the Agency Guidance Note IPPC S6.10, October 2003 in accordance with the application requirements. The assessment will also take into account the requirements of the technical guidance note M2 v3.0 October 2004. A written report outlining the conclusions and resultant proposals for any improvements identified shall be submitted to the Agency. Upon approval with the Agency any improvements shall be implemented
IC10	The operator shall prepare and implement a Noise Management Plan. Guidance for the preparation of a noise management plan is given in the separate guidance IPPC H3 (Part 2). A written report summarising this plan is to be submitted to the Agency.
IC11	The Operator shall provide a report detailing the preventative maintenance , calibration methods and frequency, designed to ensure that the Goyen BBD5s continuous particulate monitors, are operating at a standard capable of detecting elevated particulate emissions for discharge points A6-A9, A10, A11, during normal operation and in the event of baghouse failure. The Operator shall submit the report in writing for approval to the Environment Agency by 30th April 2010.

The concern over the completion of IC11 has been satisfied by the Operator though the submission of details regarding the implementation of this IC's requests, and correspondence with the Agency. Furthermore, IC11 has now become redundant with the replacement of Goyen BBD5s with a newer model, BBD6, of details shown in the technical description of the monitors shown in Appendix 6 of the RFI Reply submitted as part of the Reg.61 Response Tool.

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

Improvement programme requirements		
Reference	Reason for inclusion	Justification of deadline
IC12	The operator shall submit, for approval by Environment Agency, a report setting out progress to achieving the 'Narrative' BAT where BAT is currently not achieved, but will be achieved before 4 December 2023. The report shall include, but not be limited to, the following: 1) Methodology for achieving BAT	04/12/2023

	<p>2) Associated targets /timelines for reaching compliance by 4 December 2023.</p> <p>The report shall address the BAT Conclusions for Food, Drink and Milk Industries with respect to BAT 2 and 5.</p> <p>Refer to BAT Conclusions for a full description of the BAT requirement.</p>	
IC13	<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.</p> <p>The report shall include, but not be limited to, the following:</p> <p>Performance against the BAT-AELs.</p> <p>Methodology applied for reaching the BAT-AELs.</p> <p>The report shall address the BAT Conclusions for Food, Drink and Milk industries with respect to the following:</p> <ul style="list-style-type: none"> • BAT 20 Table 7 (compliance with BAT-AELs for channelled dust emissions to air from handling and processing of malt and adjuncts). <p>Refer to BAT Conclusions for a full description of the BAT requirement.</p>	12 months from permit issue or other date agreed in writing with the Environment Agency
IC14	<p>The Operator shall submit a written report to the Environment Agency of monitoring carried out to determine the size distribution of particulate matter in the exhaust gas emissions to air from emission points A6, A7, A8, A9, A10, and A11, identifying the fractions within the PM₁₀ and PM_{2.5} ranges.</p> <p>The monitoring shall be carried out under representative operating conditions and shall be in accordance with EN ISO 23210 unless otherwise agreed with the Environment Agency.</p>	12 months from permit issue or other date agreed in writing with the Environment Agency