# 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

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| The Permit number is: | EPR/FP3132PH |
| The Operator is: | Muntons PLC |
| The Installation is: | Cedar Maltings |
| This Variation Notice number is: | EPR/FP3132PH/V007 |

## What this document is about

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

We have reviewed the permit for this installation against the BAT Conclusions for the Food, Drink and Milk Industries published on 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 4 and AELs to water. The operator does not currently comply with the requirements of BAT-AELs. In relation to these BAT Conclusions, the operator has committed compliance by 4 December 2023. We have therefore included Improvement IC16 and IC18 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 02/06/2023. 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 on 22/06/2023 regarding BATcs 6(a), 12, BAT-AELs to water, BAT-AELs to air, and combustion plants operated on site. 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):

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| 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 |

In addition to the BAT Conclusions for the Food, Drink and Milk Industries; the following BAT Conclusions also apply (as “secondary” BREF BAT Conclusions) due to the site activities:

- Waste Treatment BAT Conclusions, published 10th August 2018 (relevant to FDM sites undertaking Anaerobic Digestion).

BAT 15, 16, 21 & 38.

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 |
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| **GENERAL BAT CONCLUSIONS (BAT 1-15)** | | | |
| 1 | **Environmental Management System - Improve overall environmental performance.**<br><br>Implement an EMS that incorporates all the features as described within BATc 1. | **CC** | 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.<br><br>The operator has a EMS externally accredited to the ISO14001 standard. |
| 2 | **EMS Inventory of inputs & outputs. Increase resource efficiency and reduce emissions.**<br><br>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. | **CC** | 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.<br>The Operator declared having:<br>• A simplified process flowsheet<br>• Water mass balance<br>• Monitoring of wastewater parameters and concentrations<br>• Monitoring of waste gas characteristics and concentrations<br>• Monitoring of energy usage, raw materials and waste generation<br>• Monitoring strategy aimed at identifying efficiency measure to reduce waste |
| 3 | **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). | **CC** | 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.<br>The Operator declared monitoring a range of parameters as follows:<br>• Flow and pH – influent/effluent daily<br>• DO and MLSS – in-line probe daily |

| 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 |
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| | | | • COD and TSS – influent/effluent daily |
| 4 | **Monitoring emissions to water to the required frequencies and standards.**<br>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. | **CC** | The operator has provided information to support compliance with BATc 4. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 4.<br>The Operator declared monitoring:<br>• BOD – Monthly - BS EN 1899-1<br>• SS – Monthly - BS EN 872<br>• TP – Weekly - BS EN ISO 15681<br>• TN – no other data provided<br>Other parameters, site specific, not looked at in this BATc are also monitored: Mg, Cd, pH, $NH_3$, Fe, and temperature.<br>**In order to meet the requirements of BATc 4, we have included the following parameters and their associated monitoring requirements within the consolidated permit, as shown:**<br>• **COD – daily**<br>• **TSS – daily**<br>• **TN – daily**<br>• **TP – daily**<br>All other parameters contained in the current permit will remain unchanged and included in the consolidate permit.<br>Improvement condition IC15 has been included in the permit to show compliance was chieved on or before 04/12/2023 (see Annex 3). |

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| 5 | **Monitoring channelled emissions to air to the required frequencies and standards.**<br>BAT is to monitor channelled emissions to air with at least the frequency given and in accordance with EN standards. | **NA** | 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. |

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| | | | The Operator provided description of air emission points and abatement method used. However, this BATc brings forth monitoring requirements only for malt handling and processing but not for malt production, which is the case here.<br>**We will not be adding monitoring requirements for the emission points below:**<br>• **Handling: A3, A4, A12, A13**<br>• **Milling: A32**<br>The feasibility and opportunity to monitor this emission points has been previously assessed on 15/01/2008 and the conclusion shown in the 'FP3132PH Permit – IC6 Particulate Monitoring' document, Ref. no. HP3634UG issued by the Environment Agency concluded that existing abatement techniques used are sufficient and that no monitoring is required as it would be more costly than the environmental benefits obtained.<br>**We agree that the situation has not changed therefore, monitoring of the above emission points is not considered at this time.**<br>Emission points A1 (Delta Boiler), A6 (No1 dryer exhaust), A7 (No2 dryer exhaust), and A26 (3 steam boilers) have been decommissioned as well as the MCPs these were servicing. |
| 6 | **Energy Efficiency**<br>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. | **CC** | 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.<br>The operator has an Energy efficiency plan externally accredited to the ISO50001 standard.<br>In addition, the Operator is using the following energy efficiency techniques:<br>• Cogeneration |

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| | | | • Energy efficient motors<br>• Heat recovery with heat exchangers<br>• LED lighting to in part of the installation<br>• Optimised steam distribution system<br>• Preheating feed water<br>• Process control systems<br>• Reduced heat loss though insulation<br>• Variable speed drives<br>• Multi effect evaporation |
| 7 | **Water and wastewater minimisation**<br>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.<br>(a) water recycling and/or reuse<br>(b) Optimisation of water flow<br>(c) Optimisation of water nozzles and hoses<br>(d) Segregation of water streams<br>Techniques related to cleaning operations:<br>(e) Dry cleaning<br>(f) Pigging system for pipes<br>(g) High-pressure cleaning<br>(h) Optimisation of chemical dosing and water use in cleaning-in-place (CIP)<br>(i) Low-pressure foam and/or gel cleaning<br>(j) Optimised design and construction of equipment and process areas<br>(k) Cleaning of equipment as soon as possible | **CC** | 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.<br>The Operator declared using the following techniques:<br>• Water recycling<br>• Segregation of water streams<br>• Optimisation of chemical dosing and water use in CIP<br>• Cleaning of equipment as soon as possible |
| 8 | **Prevent or reduce the use of harmful substances**<br>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.<br>(a) Proper selection of cleaning chemicals and/or disinfectants<br>(b) Reuse of cleaning chemicals in cleaning-in-place (CIP)<br>(c) Dry cleaning<br>(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.<br>The Operator declared using:<br>• Proper selection of cleaning chemicals and/or disinfectants.<br>• Dry cleaning is used for e.g. band drier packer, spray drier floor, 2C6 conveyor via dry vacuuming. |

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| | | | • Optimised design and construction of equipment and process areas |
| 9 | **Refrigerants**<br>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. | **NA** | We are satisfied that BATc 9 is not applicable to this installation.<br>The production process and storage of product or raw materials does not require chilling or refrigeration, thus no refrigerants currently used at this site. |
| 10 | **Resource efficiency**<br>In order to increase resource efficiency, BAT is to use one or a combination of the techniques given below:<br>(a) Anaerobic digestion<br>(b) Use of residues<br>(c) Separation of residues<br>(d) Recovery and reuse of residues from the pasteuriser<br>(e) Phosphorus recovery as struvite<br>(f) Use of waste water for land spreading | **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.<br>The Operator declared using:<br>• Anaerobic digestion on site<br>• Use of residue<br>• Recovery and reuse of residue from pasteuriser<br>• Use of digestate as fertiliser |
| 11 | **Waste water buffer storage**<br>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.<br>The Operator declared that there is a 650 $m^3$ buffer tank in addition to a back-up lagoon of approximately 2,200 $m^3$ ready to receive uncontrolled discharges from the ETP and the site drainage system.<br>In addition, the site is using three penstock valves. |
| 12 | **Emissions to water – treatment**<br>In order to reduce emissions to water, BAT is to use an appropriate combination of the techniques given below.<br>Preliminary, primary and general treatment<br>(a) Equalisation<br>(b) Neutralisation<br>(c) Physical separate (eg screens, sieves, primary settlement tanks etc) | **CC** | The operator has provided information to support compliance with BATc 12. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 12.<br>The site operates an ETP consisting of:<br>• Upflow Anaerobic Sludge Blanket (UASB) reactor |

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| | Aerobic and/or anaerobic treatment (secondary treatment)<br>(d) Aerobic and/or anaerobic treatment (eg activated sludge, aerobic lagoon etc)<br>(e) Nitification and/or denitrification<br>(f) Partial nitration - anaerobic ammonium oxidation<br>Phosphorus recovery and/or removal<br>(g) Phosphorus recovery as struvite<br>(h) Precipitation<br>(i) Enhanced biological phosphorus removal<br>Final solids removal<br>(j) Coagulation and flocculation<br>(k) Sedimentation<br>(l) Filtration (eg sand filtration, microfiltration, ultrafiltration)<br>(m) Flotation | | • Equalisation and neutralisation<br>• DAF<br>• Aerobic treatment,<br>before discharging treated effluent to River Gipping. |
| 12 | **Emissions to water – treatment**<br>**BAT-associated emission levels (BAT-AELs) for direct emissions to a receiving water body**<br><br>**Parameter** / **BAT-AEL ([15]) ([16]) (daily average)**<br>Chemical oxygen demand (COD) ([17]) ([18]) / 25-100 mg/l ([19])<br>Total suspended solids (TSS) / 4-50 mg/l ([20])<br>Total nitrogen (TN) / 2-20 mg/l ([21]) ([22])<br>Total phosphorus (TP) / 0,2-2 mg/l ([23])<br><br>(16) The BAT-AELs may not apply to the production of citric acid or yeast<br>(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.<br>(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.<br>(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.<br>(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.<br>(22) The BAT-AEL may not apply when the temperature of the waste water is low (e.g. below 12 °C) for prolonged periods. | **FC** | The operator has provided information to support compliance with BAT-AELs. We have assessed the information provided and we are not satisfied that the operator has demonstrated compliance with BAT-AELs.<br><br>The Operator provided the following information:<br>• COD – 133 mg/l<br>• SS – 15 mg/l<br>• TN – 7.1 mg/l<br>• TP – 0.7 mg/l<br>**Although the Operator declared that AELs are not applicable because the process effluent undergoes multiple treatment stages that conclude with tertiary water treatment in the form of sand filtration, this water is eventually discharged to River Gipping therefore, the Operator does have direct discharges to water of process effluent and, consequently, the BAT-AELs are applicable.**<br>**We have applied the relevant BAT-AELs at the upper range of the limit in relation to** |

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| | | | **emissions from W1 to the River Gipping, as follows:**<br>• **TN – 20 mg/l**<br>• **TSS – 30 mg/l (retained)**<br>• **TP – 2 mg/l (retained)**<br>**However, the COD limit will be set at 150 kilograms per day (kg $d^{-1}$) as an interim measure. This is the Agency's approach in this particular case as the Operator declared that it is unable to meet the 100 mg/l limit shown in this BAT-AELs. The new limit format will provide the same level of environmental protection as it is the product of ELV at 100 mg/l multiplied by 1500 $m^3$ $d^{-1}$, representing the permitted volume of effluent discharged per day. However, IC19 will ensure the operator can meet the relevant BAT-AEL, expressed as a concentration in volume, in due course.**<br>All other parameters, BOD, pH, Fe, and $NH_3$, as well as those existing limits for flow rate via W2 and temperature of effluent discharged through W2 emission point will be retained.<br>We consider that the operator will be future compliant with BAT-AELs. Improvement condition IC16 and IC18 has been included in the permit to achieve compliance (see Annex 3). |
| 13 | **Noise management plan**<br>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:<br>- a protocol containing actions and timelines;<br>- a protocol for conducting noise emissions monitoring;<br>- a protocol for response to identified noise events, eg complaints;<br>- 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** | We are satisfied that BATc 13 is not applicable to this Installation.<br>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 nuisance from the site therefore an NMP is not a requirement for this site. |

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| 14 | **Noise management**<br>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.<br>(a) Appropriate location of equipment and buildings<br>(b) Operational measures<br>(c) Low-noise equipment<br>(d) Noise control equipment<br>(e) Noise abatement | **CC** | 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.<br>The Operator declared using the following noise minimisation techniques:<br>• Improved inspection and equipment maintenance<br>• Closing of windows and doors<br>• Equipment operated by trained staff members<br>• Avoidance of noise generating activities during night hours<br>• Provisions of noise control during maintenance operations<br>In addition, pumps and fans are located at the far end of the installation where noise is absorbed or diffracted by existing buildings. |
| 15 | **Odour Management**<br>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:<br>- a protocol containing actions and timelines;<br>- a protocol for conducting odour monitoring.<br>- a protocol for response to identified odour incidents eg complaints;<br>- 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** | We are satisfied that BATc 15 is not applicable to this Installation.<br>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. |
| **BREWING BAT CONCLUSIONS (BAT 18 – 20)** | | | |
| 18 | **Energy efficiency – Brewing Sector**<br>In order to increase energy efficiency, BAT is to use an appropriate combination of the techniques specified in BAT 6 and of the techniques given below. | **NA** | We are satisfied the BATc 18 is not applicable for this installation.<br>This BATc is looking to increase energy efficiency in the brewing sector while this installation is a malt producer therefore, this BATc is not applicable.<br>However, the Operator declared that it is using a micro-brewery on site for the purpose of |

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| | <table><tr><th colspan="2">Technique</th><th>Description</th><th>Applicability</th></tr><tr><td>(a)</td><td>Mashing-in at higher temperatures</td><td>The mashing-in of the grain is carried out at temperatures of approximately 60 °C, which reduces the use of cold water.</td><td rowspan="3">May not be applicable due to the product specifications.</td></tr><tr><td>(b)</td><td>Decrease of the evaporation rate during wort boiling</td><td>The evaporation rate can be reduced from 10 % down to approximately 4 % per hour (e.g. by two-phase boiling systems, dynamic low-pressure boiling).</td></tr><tr><td>(c)</td><td>Increase of the degree of high-gravity brewing</td><td>Production of concentrated wort, which reduces its volume and thereby saves energy.</td></tr></table> | | trailing new malt recipes. The brewing process is not completed during these trials but stopped before the fermentation stage.<br>Although this BATc does not differentiate between micro and regular breweries, considering the above reasoning and the characteristics of this installation, we believe that none of the energy efficiency techniques are applicable. |
| 19 | In order to reduce the quantity of waste sent for disposal, BAT is to use one or a combination of the techniques given below.<br><table><tr><th colspan="2">Technique</th><th>Description</th></tr><tr><td>(a)</td><td>Recovery and (re)use of yeast after fermentation</td><td>After fermentation, yeast is collected and can be partially reused in the fermentation process and/or may be further used for multiple purposes, e.g. as animal feed, in the pharmaceutical industry, as a food ingredient, in an anaerobic waste water treatment plant for biogas production.</td></tr><tr><td>(b)</td><td>Recovery and (re)use of natural filter material</td><td>After chemical, enzymatic or thermal treatment, natural filter material (e.g. diatomaceous earth) may be partially reused in the filtration process. Natural filter material can also be used, e.g. as a soil improver.</td></tr></table> | **CC** | The operator has provided information to support compliance with BATc 19. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 19.<br>The Operator declared that it is using the spent material for animal feed purposes. This is the only option applicable as this site is not a brewery but malt producing only. |
| 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** | The operator has provided information to support compliance with BATc 20. We have assessed the information provided and we are not satisfied that the operator has demonstrated compliance with BATc 20.<br>The installation uses a range of dust pollution abatement techniques in the form of cyclones, bag filters, or both. Although this BATc is not referring specifically to the malting sector, based on the description of the emission points, the processes associated with these, and the existence of some dust abatement measures already existent, we consider that the scope of this BATc is applicable to this installation. |

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| AELs | In order to reduce channelled dust emissions to air, BAT is to use one of the techniques given; a. bag filter, b. cyclone.<br><br>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 compound animal feed BAT-AELs (10mg/$m^3$ for grinding and/or 20mg/$m^3$ for cooling). However, as it is not a BAT-AEL, no derogation ins required if the operator cannot achieve this. We will ensure they have the correct abatement and set an appropriate ELV with an IC. | **NA** | Whilst the BAT-AELs do not apply to malt producing installations, we are looking to add ELVs in order to have better regulatory control over emissions of PM to air.<br><br>**However, in the context presented in relation to BATc 5, we do not consider that applying ELVs for the emission points shown below is appropriate at this time.**<br>• **Handling: A3, A4, A12, A13**<br>• **Milling: A32** |
| **Brewing Sector Environmental Performance Levels** | | | |
| EPL | **Environmental Performance Level – Energy consumption for the brewing sector**<br><br>Note: There is no BAT-EPL for malt production. However, we want to undderstand what the energy performance level is. | **NA** | We are satisfied that BAT-EPL for energy consumption for the brewing sector is not applicable to this Installation.<br>This site is not a brewery but a malt producer therefore, the specific energy consumption is not applicable.<br>However, the Operator did provided us with the value of 0.93 MWh/t malt produced. |
| EPL | **Environmental Performance Level – Specific waste water discharge for the brewing sector**<br><br>Note: There is no BAT-EPL for malt production. However, we want to undderstand what the energy performance level is. | **NA** | We are satisfied that BAT-EPL for waste water discharge for the brewing sector is not applicable to this Installation.<br>This site is not a brewery but a malt producer therefore, the specific energy consumption is not applicable.<br>However, the Operator provided us with the value of (up to) 4.5 $m^3$/t malt produced. |

<table>
<tr><th>BATC No.</th><th>Summary of BAT Conclusion requirement for Waste Treatment</th><th>Status<br>NA/ CC / FC / NC</th><th>Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement</th></tr>
<tr><td>15</td><td>BAT is to use flaring only for safety reasons or for non-routine operating conditions (e.g. start-ups, shutdowns) by using both of the techniques given below.<br><table><tr><th colspan="2">Technique</th><th>Description</th><th>Applicability</th></tr><tr><td>a.</td><td>Correct plant design</td><td>This includes the provision of a gas recovery system with sufficient capacity and the use of high-integrity relief valves.</td><td>Generally applicable to new plants.<br>A gas recovery system may be retrofitted in existing plants.</td></tr><tr><td>b.</td><td>Plant management</td><td>This includes balancing the gas system and using advanced process control.</td><td>Generally applicable.</td></tr></table></td><td>CC</td><td>The operator has provided information to support compliance with BATc 15. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 15.<br><br>The Operator declared that flaring is used only for non-routine operations including maintenance works. The technique used to achieve partial compliance with this BATc are:<ul><li>Flaring is used only for non-routine and safety reasons.</li><li>Plant management by monitoring and balancing the gas system based on pressure and volume. This includes also the modulation on flare to burn at a set gas pressure.</li></ul>We do not believe that BATc 15(a) is required in this case as flaring events are associated with non-routine operation of the AD and during maintenance of the CHP. In addition, this is an existing plant, and there are no concerns regarding excessive flaring at this installation.</td></tr>
</table>

<table>
<tr><th>BATC No.</th><th>Summary of BAT Conclusion requirement for Waste Treatment</th><th>Status<br>NA/ CC / FC / NC</th><th>Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement</th></tr>
<tr><td>16</td><td>In order to reduce emissions to air from flares when flaring is unavoidable, BAT is to use both of the techniques given below.<br><table><tr><th colspan="2">Technique</th><th>Description</th><th>Applicability</th></tr><tr><td>a.</td><td>Correct design of flaring devices</td><td>Optimisation of height and pressure, assistance by steam, air or gas, type of flare tips, etc., to enable smokeless and reliable operation and to ensure the efficient combustion of excess gases.</td><td>Generally applicable to new flares. In existing plants, applicability may be restricted, e.g. due to maintenance time availability.</td></tr><tr><td>b.</td><td>Monitoring and recording as part of flare management</td><td>This includes continuous monitoring of the quantity of gas sent to flaring. It may include estimations of other parameters (e.g. composition of gas flow, heat content, ratio of assistance, velocity, purge gas flow rate, pollutant emissions (e.g. $NO_X$, CO, hydrocarbons), noise). The recording of flaring events usually includes the duration and number of events and allows for the quantification of emissions and the potential prevention of future flaring events.</td><td>Generally applicable.</td></tr></table></td><td>CC</td><td>The operator has provided information to support compliance with BATc 16. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 16.<br><br>The Operator declared that emissions from flaring are reduced by:<ul><li>Correct design of flaring devices – optimisation of flare characteristics is achieved through utilising the flaring device designed based on the installation’s operating conditions.</li><li>Monitoring and recording – Flare run-time is recorded daily while flare combustion quality is checked annually by a third party.</li></ul></td></tr>
</table>

<table>
<tr><th>BATC No.</th><th>Summary of BAT Conclusion requirement for Waste Treatment</th><th>Status<br>NA/ CC / FC / NC</th><th>Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement</th></tr>
<tr><td>21</td><td>In order to prevent or limit the environmental consequences of accidents and incidents, BAT is to use all of the techniques given below, as part of the accident management plan (see BAT 1).<br><br>
<table>
<tr><th colspan="2">Technique</th><th>Description</th></tr>
<tr><td>a.</td><td>Protection measures</td><td>These include measures such as:<br>— protection of the plant against malevolent acts;<br>— fire and explosion protection system, containing equipment for prevention, detection, and extinction;<br>— accessibility and operability of relevant control equipment in emergency situations.</td></tr>
<tr><td>b.</td><td>Management of incidental/accidental emissions</td><td>Procedures are established and technical provisions are in place to manage (in terms of possible containment) emissions from accidents and incidents such as emissions from spillages, firefighting water, or safety valves.</td></tr>
<tr><td>c.</td><td>Incident/accident registration and assessment system</td><td>This includes techniques such as:<br>— a log/diary to record all accidents, incidents, changes to procedures and the findings of inspections;<br>— procedures to identify, respond to and learn from such incidents and accidents.</td></tr>
</table></td><td>CC</td><td>The operator has provided information to support compliance with BATc 21. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 21.<br><br>The Operator has submitted a copy of AD accident management plan in support of compliance statement. This plan contains, among others, the following chapters:<ul><li>Protection measures – inclusive of video surveillance, sensors and alarm systems, equipment and procedures for emergencies</li><li>Management of emissions – technical provisions for a range of scenarios aimed at reducing or eliminating the risks of accidental emissions to air, soil and water.</li><li>Registration and assessment system – log of accidents and incidents together with after-incident actions such as root-cause analysis to learn and update the AD management plan.</li></ul></td></tr>
</table>

| BATC No. | Summary of BAT Conclusion requirement for Waste Treatment | 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 |
|---|---|---|---|
| 38 | In order to reduce emissions to air and to improve the overall environmental performance, BAT is to monitor and/or control the key waste and process parameters.<br><br>Implementation of a manual and/or automatic monitoring system to:<br>• ensure a stable digester operation;<br>• minimise operational difficulties, such as foaming, which may lead to odour emissions;<br>• provide sufficient early warning of system failures which may lead to a loss of containment and explosions.<br>This includes monitoring and/or control of key waste and process parameters, e.g.:<br>• pH and alkalinity of the digester feed;<br>• digester operating temperature;<br>• hydraulic and organic loading rates of the digester feed;<br>• concentration of volatile fatty acids (VFA) and ammonia within the digester and digestate;<br>• biogas quantity, composition (e.g. H2S) and pressure;<br>• liquid and foam levels in the digester. | **CC** | The operator has provided information to support compliance with BATc 38. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 38.<br><br>The Operator declared that it is using an automated monitoring and alarm system, SCADA, to ensure the optimal operation of the digestor, analyse its performance and stability.<br>A range of operating parameters are being observed, inclusive of pH, temperature, digester feed quality, VFAs, and biogas produced. |

# 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 the H1 assessment of emissions at the new, increased capacity threshold and submitted the results as part of the Reg.61 Response Tool. The H1 assessment results show that the air and water emissions have been screened out, meaning that the increased capacity does not have a significant effect on the environment.

**Waste treatment**

The Operator uses anaerobic digestion (AD) to treat the process effluent from the production of malt prior to discharge to the River Gipping. As part of the permit review the Environment Agency has taken the opportunity to review the permit conditions for this activity. Where the permit doesn't already include the additional directly associate activities (DAAs) or processing monitoring requirements (Table S3.3) we have amended the permit to include them. The processing monitoring includes monitoring of biogas, leak detection, flare operation and onsite storage and containment of digester tanks and sludge tanks.

In addition we have assessed the waste treatment activity against the BAT Conclusions for Waste Treatment published 10th August 2018 in the Official Journal of the European Union.

**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

For the existing combustion plant with a rated thermal input less than 1 MW we will not be including any emission limit values or monitoring requirements within the permit, unless any site specific conditions require us to do this.

Existing Combustion Plant (under 1 MWth)

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. | 0.5 MWth |
| 2. Type of the medium combustion plant (diesel engine, gas turbine, dual fuel engine, other engine or other medium combustion plant). | CHP – 0.5 MWth |
| 3. Type and share of fuels used according to the fuel categories laid down in Annex II. | CHP - Biogas 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 - July 2016 |

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

**Because this CHP has a capacity of under 1 MWth, the plant does not fall into the MCPD requirements, so there are no applicable ELVs or monitoring requirements included as part of the permit review process. However, the extant permit does have ELVs and monitoring requirements associated with this plant and these will be retained in the consolidated permit.**

**Because the Operator has identified only one combustion unit in the RFI response, shown in the table above, the stand-by boiler of 0.25 MWth associated with air emission point A46 in Table S3.1 of the extant permit will now be removed from the consolidated permit.**

**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 provided a revised risk assessment using the Environment Agency's H1 software tool for the emission to River Gipping from water emission point W1.

The assessment shows that, applying the conservative criteria in our guidance on environmental risk assessment, all emissions may be screened out as environmentally insignificant.

**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 JAB/BJH/13.151 dated 27/09/2013] during the application variation V005 duly made on 08/12/2014. The Operator also submitted an updated SCR dated October 2022 as part of the Reg.61 Response. 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 in March 2005. 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.

**However, during the storm that has taken place on 20/10/2023, the banks of the River Gipping burst and flood waters entered the installation resulting in the partial flooding of the site. The affected areas were the warehouse units and the lagoon are located. As a result, the effluent could not be discharged, and it had to be re-circulated around the effluent treatment plant. We consider this to be a significant event and have included an improvement condition into the permit (IC19) to request a climate change adaptation plan is submitted by the operator for approval from the Environment Agency.**

## Containment

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

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 drainage, sub-surface structures, surfacing and containment measures on site. The assessment will take into account, but not be limited to the requirements of section 2.2.5 of the Agency Guidance Note IPPC S6.10, the storage of fire water in the event of a fire at the installation, the installation of an oil interceptor for releases to the 'railway ditch' adjacent to the installation and the feasibility of directing all surface water currently disposed to ground water via a soakaway to the engineered surface water drainage system. A written report summarising the findings shall be submitted to the Agency. |
| IC2 | The Operator shall develop a programme of regular integrity testing, inspection and maintenance of all liquid storage systems, subsurface structures, secondary and tertiary containment in relation to the potential to cause fugitive emissions to surface water and ground water. The program shall take into account the requirements of section 2.2.5 of the Agency Guidance Note IPPC S6.10, August 2003. A written report summarising the program shall be submitted to the Agency. |
| IC3 | The Operator shall undertake an assessment of ways in which the total phosphorous as P content of the effluent discharged from the on-site effluent treatment plant can be reduced so that it can consistently meet the lower limit set within this permit (Ref. table 2.2.5). A written report summarising the findings of this assessment with a firm timetable for the implementation of any necessary improvements, shall be provided to the Agency. |
| IC4 | The Operator shall undertake an assessment of the use of closed loop cooling systems, as a replacement for discharging cooling water to surface water release points W2 and W3. The assessment shall include, but not be limited to the installation of a cooling tower and redirecting the band dried cooling water into the evaporator 1 condenser cooling water duct. The assessment shall also include a risk-based analysis of the potential for contaminants to enter the cooling water and the subsequent impacts. A written report shall be submitted to the Agency, including timescales for implementing the proposed improvements. |
| IC5 | The Operator shall provide a written report detailing the proposed timescales and procedure for the decommissioning and removal of the oil tanks referred to as 'Old gas oil tanks'. The procedures shall include, but not be limited to the removal method(s) for the oil from both the |

| | |
|---|---|
| | tanks and pipeline(s), identification and removal of any contaminated soil and disposal methods. |
| IC6 | The Operator shall provide the Agency with written proposals for a programme of monitoring for particulate releases from emission points A3,A4, A5, A6, A7, A8, A9, , A12, A13, A15, A16, A17, A18, A21, A23, A28, A30, A31, A32 and A33. Monitoring shall be carried out to an appropriate recognised standard. The proposals shall include a justification for the frequency and method of monitoring and a justification for the exclusion of monitoring of any of the emission points. |
| IC7 | The Operator shall provide to the Agency a report confirming the installation of the spinning discs humidification system within B Block maltings at the installation. The report shall include water usage savings from the installation of this system. |
| IC8 | The Operator shall review their Environmental Management System against the requirements of section 2.3 of Agency Guidance Note S6.10, August 2003. The Operator shall submit a proposed timetable of improvements, for any deficiencies identified, to the Agency. |
| IC9 | The Operator shall develop a written Site Closure Plan with regard to the requirements set out in Section 2.11 of the Agency Guidance Note IPPC S6.10, August 2003. Upon completion of the plan a summary of the document shall be submitted to the Agency in writing. |
| IC10 | The Operator shall submit a written plan to the Agency for approval that sets out the monitoring of emissions to be undertaken from air emission points A1, A26 and A34, A40 and A41. The plan shall take into account the requirements of Agency Guidance Note IPPC S6.10 and Technical Guidance Note M2. |
| IC11 | The Operator shall undertake the monitoring set out in the plan submitted as a requirement of IC10 following its approval by the Agency. The results of the monitoring shall be submitted to the Agency along with an assessment of the impact of the emissions and potential future emissions using the Agency's H1 methodology. |
| IC12 | On completion of IC11, the Operator shall carry out air dispersion modelling for any emissions identified as being significant by the H1 screening tool and submit the results to the Agency along with a timetable for implementing any remedial action to be taken if necessary. |
| IC13 | Retained |
| IC14 | Retained |

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** |
| IC13 | The Operator shall undertake air emission monitoring (method to be agreed in writing with the Environment Agency) of oxides of nitrogen (NOx) from emission point A67 (continuous flow dryer), as defined in table S3.1. The monitoring schedule shall be designed to provide data representative of typical and worst-case operating conditions and shall be in line with Technical Guidance Notes M1 (version 8, August 2017) and M2 (version 12, August 2017). The Operator shall submit a written report to the Environment Agency detailing the monitoring undertaken and the results obtained. | 31/12/2023 |
| IC14 | Following the completion of IC13 and in the event that measured emissions from emission point A67 are significantly higher than the figures used in the air dispersion modelling report submitted with application EPR/FP3132PH/V006 (dated July 2018), the Operator shall carry out a revised air dispersion modelling using the emissions monitoring data and submit this to the Environment Agency to review. | 31/01/2024<br>or as agreed in writing with the Environment Agency |
| IC15 | The Operator shall confirm in writing to the Environment Agency that the Narrative BAT requirements for the BAT Conclusions for Food, Drink and Milk Industries with respect to BAT 4 were in place on or before 4 December 2023.<br>Refer to BAT Conclusions for a full description of the BAT requirement. | One month from permit issue |
| IC16 | 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:<br>1) Current performance against the BAT-AELs.<br>2) Methodology for reaching the BAT-AELs.<br>3) Associated targets /timelines for reaching compliance by 4 December 2023.<br>4) Any alterations to the initial plan (in progress reports).<br>The report shall address the BAT Conclusions for Food, Drink and Milk industries with respect to the following:<br>• BAT 12 Table 1 (compliance with BAT-AELs for direct discharges to a receiving water body) | One month from permit issue |

| | | |
|---|---|---|
| IC17 | The operator shall establish the methane emissions in the exhaust gas from engines burning biogas and compare these to the manufacturer's specification and benchmark levels agreed in writing with the Environment Agency. The operator shall, as part of the methane leak detection and repair (LDAR) programme, develop proposals to assess the potential for methane slip and take corrective actions where emissions above the manufacturer's specification or appropriate benchmark levels are identified. | 12 months from permit issue or other date as agreed in writing with the Environment Agency |
| IC18 | The Operator shall undertake a programme of improvements to ensure that the relevant BAT-AEL "concentration in volume" limit of 100 mg/l for COD can be achieved, with the mass emission limit in place as an interim measure.<br><br>The Operator shall submit a written report to the Environment Agency to demonstrate the feasibility of achieving the BAT-AEL. | 12 months from permit issue |
| IC19 | The operator shall produce a climate change adaptation plan, which will form part of the EMS.<br>The plan shall include, but not be limited to:<br>• Details of how the installation has or could be affected by severe weather;<br>• The scale of the impact of severe weather on the operations within the installation;<br>• An action plan and timetable for any improvements to be made to minimise the impact of severe weather at the installation.<br>The Operator shall implement any necessary improvements to a timetable agreed in writing with the Environment Agency. | 12 months from permit issue or other date as agreed in writing with the Environment Agency |