

# **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/NP3731AZ  
The Operator is:                         Mizkan Euro Limited  
The Installation is:                     Mizkan Bury St Edmunds  
This Variation Notice number is:   EPR/NP3731AZ/V002

### **What this document is about**

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

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

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

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

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

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

## **How this document is structured**

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

# 1 Our decision

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

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

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

## 2 How we reached our decision

### 2.1 Requesting information to demonstrate compliance with BAT Conclusion techniques

We issued a Notice under Regulation 61(1) of the Environmental Permitting (England and Wales) Regulations 2016 (a Regulation 61 Notice) on 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 31/10/2022.

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 have no reason to consider that the Operator will not be able to comply with the techniques and standards described in the BAT Conclusions.

## 2.3 Requests for further information during determination

Although we were able to consider the Regulation 61 Notice response generally satisfactory at receipt, we did in fact need more information in order to complete our permit review assessment, and issued a further information request on 06/10/2023 regarding BATc 1 (ISO14001 certification) and Containment. A copy of the further information request was placed on our public register.

# **3 The legal framework**

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

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

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

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

## Annex 1: decision checklist regarding relevant BAT Conclusions

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

There are 37 BAT Conclusions.

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

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

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

This annex provides a record of decisions made in relation to each relevant BAT Conclusion applicable to the installation. This annex should be read in conjunction with the Consolidated Variation Notice.

The overall status of compliance with the BAT conclusion is indicated in the table as:

**NA – Not Applicable**

**CC – Currently Compliant**

**FC – Compliant in the future (within 4 years of publication of BAT Conclusions)**

**NC – Not Compliant**

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
<b>GENERAL BAT CONCLUSIONS (BAT 1-15)</b>			
1	<p><b>Environmental Management System - Improve overall environmental performance.</b></p> <p>Implement an EMS that incorporates all the features as described within BATc 1.</p>	CC	<p>The operator has provided information to support compliance with BATc 1. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 1.</p> <p>The operator has a EMS externally accredited to the ISO14001 standard.</p>
2	<p><b>EMS Inventory of inputs &amp; outputs. Increase resource efficiency and reduce emissions.</b></p> <p>Establish, maintain and regularly review (including when a significant change occurs) an inventory of water, energy and raw materials consumption as well as of waste water and waste gas streams, as part of the environmental management system (see BAT 1), that incorporates all of the features as detailed within the BATCs.</p>	CC	<p>The operator has provided information to support compliance with BATc 2. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 2.</p> <p>The Operator has provided a process flow summary and declared that it is using the following techniques:</p> <ul style="list-style-type: none"> <li>• Pre Water treatment on site.</li> <li>• Sludge and contaminated liquid waste disposal via tankers.</li> <li>• Discharge to mains from site Effluent Treatment Plant.</li> <li>• Deodorisers and filtration systems in place.</li> <li>• Boilers serviced and maintained regularly.</li> <li>• submetering (smart meters) on site for water processes in each area.</li> <li>• Manual meter readings on weekly basis.</li> <li>• Energy analysis software includes water data, analysis, reporting and alarms.</li> <li>• Weekly, monthly KPIs analysis and reporting.</li> </ul>

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
			<ul style="list-style-type: none"> <li>• Anglian Water discharge consent in place.</li> <li>• Site services team sampling and monitor effluent treatment plant.</li> <li>• Sampling on daily basis to ensure compliance.</li> <li>• Automated PH monitoring and alarm system cover 24/7</li> <li>• Service scheduled, Planned Maintenance in place.</li> <li>• Burner management and efficiency system updated during upgrading project in 2020.</li> <li>• Flue gases monitoring and reviews scheduled.</li> <li>• H1 assessment attached. Completed for boiler plant.</li> <li>• EMS ISO14001 in place.</li> <li>• Environmental and operational KPIs.</li> <li>• Weekly and monthly analysis of Energy, waste streams, raw materials, packaging, water and effluent.</li> <li>• Various analysis based on available data, systems and audits carried out regularly.</li> </ul>
3	<p><b>Monitoring key process parameters at key locations for emissions to water.</b> 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 declared that the following monitoring processes are involved:</p> <ul style="list-style-type: none"> <li>• Effluent treatment manned 24/7.</li> <li>• Monitoring and testing before and after treatment process.</li> </ul>

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
			<ul style="list-style-type: none"> <li>• Final discharge point tested 24/7 via automated sampler.</li> <li>• Daily manual sampling in place.</li> <li>• Records and analysis as part of Planned ETP operations.</li> <li>• Automated PH control/alarm system.</li> <li>• Flow managed to increase efficiency.</li> </ul>
4	<p><b>Monitoring emissions to water to the required frequencies and standards.</b></p> <p>BAT is to monitor emissions to water with at least the frequency given [refer to BAT 4 table in BATc] and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.</p>	CC	<p>The operator has provided information to support compliance with BATc 4. We have assessed the information provided and we are not satisfied that the operator has demonstrated compliance with BATc 4.</p> <p>The Operator has declared that it is monitoring the following parameters as standards shown below:</p> <ul style="list-style-type: none"> <li>• Trade Effluent is discharge to town's sewer for Sewage work treatment.</li> <li>• Consent for the site in place to meet COD, PH, Temperature and suspended solids.</li> <li>• Rain water from roofs and carpark goes to tributary of river Lark. Shut off valves and automated system installed as additional PH monitoring controls.</li> <li>• Daily spot sampling and proportional flow sampling in line with Water authority requirements.</li> <li>• Only clean roof and surface water discharged direct to river</li> <li>• Sluice gate in place to close in case of spillage</li> <li>• External storage tanks bunded to contain spills</li> </ul>



BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
5	<p><b>Monitoring channelled emissions to air to the required frequencies and standards.</b>            BAT is to monitor channelled emissions to air with at least the frequency given [refer to BAT5 table in BATc] and in accordance with EN standards.</p>	NA	<p>We are satisfied that BATc 5 is not applicable to this Installation.</p> <p>There are no relevant emissions to air in relation to BAT 5.</p>
6	<p><b>Energy Efficiency</b>            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 supplied a copy of the ISO 50001 certification and we agree this satisfies the requirements under BATc 6(a).</p> <p>Pertinent to BATc 6(b), the operator declared using the following energy efficiency techniques:</p> <ul style="list-style-type: none"> <li>• EMS ISO14001 system in place.</li> <li>• Energy analysis and efficiency improvements projects in place.</li> <li>• KPIs set up for utilities significant aspects to monitor and plan improvements.</li> <li>• Performance analysed base on production tonnage output.</li> <li>• Techniques at BSE include : condensation return, cooling towers, motor invertors, burner management, blow down optimisation by improved water quality, steam and air leak surveys and repairs, economisers, insulation, maintenance.</li> </ul>
7	<p><b>Water and wastewater minimisation</b>            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. [for detail of each technique, refer BAT 7 table in BATc]</p>	CC	<p>The operator has provided information to support compliance with BATc 7. We have assessed the information provided and we are</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) water recycling and/or reuse (b) Optimisation of water flow (c) Optimisation of water nozzles and hoses (d) Segregation of water streams Techniques related to cleaning operations: (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		satisfied that the operator has demonstrated compliance with BATc 7.  The Operator declared that it using the following minimisation techniques: <ul style="list-style-type: none"> <li>• Water analysis and efficiency improvements projects in place.</li> <li>• KPIs set up for utilities significant aspects to monitor and plan improvements.</li> <li>• Close loop cooling system,</li> <li>• Optimisation of water nozzles and hoses,</li> <li>• Pigging system for pipes,</li> <li>• Foam cleaning</li> <li>• Clean as you go policy</li> <li>• Trained/skilled hygiene, environmental awareness training.</li> <li>• Standard Operation Procedures consider water usage wastage and optimisation.</li> </ul>
8	<b>Prevent or reduce the use of harmful substances</b> 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 [for detail of each technique, refer BAT 8 table in BATc]	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: <ul style="list-style-type: none"> <li>• Cleaning contractor supplier advises on best chemicals for the process.</li> <li>• Hygienic design being considered and implementing new projects on site.</li> <li>• Trained and competent hygiene department on site.</li> <li>• Technical department to review and assess cleaning/chemical use</li> </ul>

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
			<p>techniques against newest guidance and available resources.</p> <ul style="list-style-type: none"> <li>• Dry clean-up is encouraged</li> </ul>
9	<p><b>Refrigerants</b> In order to prevent emissions of ozone-depleting substances and of substances with a high global warming potential from cooling and freezing, BAT is to use refrigerants without ozone depletion potential and with a low global warming potential.</p>	CC	<p>The operator has provided information to support compliance with BATc 9. We have assessed the information provided and we are not satisfied that the operator has demonstrated compliance with BATc 9.</p> <p>The Operator declared that the Site is compliant with F-gases legislation. Majority of high GWP refrigerants already replaced. Maintenance records are available for refrigeration in line with F gas regulations.</p>
10	<p><b>Resource efficiency</b> 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 (e) Phosphorus recovery as struvite (f) Use of waste water for land spreading</p>	CC	<p>The operator has provided information to support compliance with BATc 10. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 10.</p> <p>The Operator has declared that it is using the following resource efficiency techniques:</p> <p>b) Waste segregation on site. Some waste send to AD plant or land spread for recycling.</p> <p>c) All waste streams are segregated and separated</p> <p>f) Percentage of site treated liquid waste send to land spread</p>
11	<p><b>Waste water buffer storage</b> In order to prevent uncontrolled emissions to water, BAT is to provide an appropriate buffer storage capacity for waste water.</p>	CC	<p>The operator has provided information to support compliance with BATc 11. We have assessed the information provided and we are</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>satisfied that the operator has demonstrated compliance with BATc 11.</p> <p>The Operator has declared that it has effluent plant on site. There is a 50m<sup>3</sup> divert tank which will account for 2-3 hours production at peak plus the 485m<sup>3</sup> balance tanks are normally run at 50% fill levels so there is spare capacity to hold effluent in these. Suitable contractors have been identified to remove waste by tanker at short notice. Shut off valves and monitoring system in place to prevent sewer/ sewerage works contamination.</p>
12	<p><b>Emissions to water – treatment</b></p> <p>In order to reduce emissions to water, BAT is to use an appropriate combination of the techniques given below.</p> <p>Preliminary, primary and general treatment</p> <p>(a) Equalisation</p> <p>(b) Neutralisation</p> <p>(c) Physical separate (eg screens, sieves, primary settlement tanks etc)</p> <p>Aerobic and/or anaerobic treatment (secondary treatment)</p> <p>(d) Aerobic and/or anaerobic treatment (eg activated sludge, aerobic lagoon etc)</p> <p>(e) Nitrification and/or denitrification</p> <p>(f) Partial nitrification - anaerobic ammonium oxidation</p> <p>Phosphorus recovery and/or removal</p> <p>(g) Phosphorus recovery as struvite</p> <p>(h) Precipitation</p> <p>(i) Enhanced biological phosphorus removal</p> <p>Final solids removal</p> <p>(j) Coagulation and flocculation</p> <p>(k) Sedimentation</p> <p>(l) Filtration (eg sand filtration, microfiltration, ultrafiltration)</p> <p>(m) Flotation</p>	CC	<p>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.</p> <p>The Operator has declared that it is using the following techniques:</p> <p>(c) Pre-treatment - physical separation - screens</p> <p>(d) Secondary treatment - biological aerobic treatment</p> <p>Final solids removal in clarifier tank –</p> <p>(j) coagulation and flocculation, and</p> <p>(k) sedimentation.</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										
	[for detail of each technique, refer BAT 12 table 1]												
12	<p><b>Emissions to water – treatment</b>  <b>BAT-associated emission levels (BAT-AELs) for direct emissions to a receiving water body</b></p> <table border="1" data-bbox="282 453 1211 655"> <thead> <tr> <th>Parameter</th> <th>BAT-AEL (°) (°) (daily average)</th> </tr> </thead> <tbody> <tr> <td>Chemical oxygen demand (COD) (°) (°)</td> <td>25-100 mg/l (°)</td> </tr> <tr> <td>Total suspended solids (TSS)</td> <td>4-50 mg/l (°)</td> </tr> <tr> <td>Total nitrogen (TN)</td> <td>2-20 mg/l (°) (°)</td> </tr> <tr> <td>Total phosphorus (TP)</td> <td>0,2-2 mg/l (°)</td> </tr> </tbody> </table> <p><b>Note: 125mg/l COD for dairy sites</b>  <b>Note: 4mg/l TP for dairy sites</b></p>	Parameter	BAT-AEL (°) (°) (daily average)	Chemical oxygen demand (COD) (°) (°)	25-100 mg/l (°)	Total suspended solids (TSS)	4-50 mg/l (°)	Total nitrogen (TN)	2-20 mg/l (°) (°)	Total phosphorus (TP)	0,2-2 mg/l (°)	NA	<p>We are satisfied that BATc 12 is not applicable to this Installation.</p> <p>There are no discharges of process effluent directly to surface water.</p>
Parameter	BAT-AEL (°) (°) (daily average)												
Chemical oxygen demand (COD) (°) (°)	25-100 mg/l (°)												
Total suspended solids (TSS)	4-50 mg/l (°)												
Total nitrogen (TN)	2-20 mg/l (°) (°)												
Total phosphorus (TP)	0,2-2 mg/l (°)												
13	<p><b>Noise management plan</b></p> <p>In order to prevent or, where that is not practicable, to reduce noise emissions, BAT is to set up, implement and regularly review a noise management plan, as part of the environmental management system (see BAT 1), that includes all of the following elements:</p> <ul style="list-style-type: none"> <li>- a protocol containing actions and timelines;</li> <li>- a protocol for conducting noise emissions monitoring;</li> <li>- a protocol for response to identified noise events, eg complaints;</li> <li>- a noise reduction programme designed to identify the source(s), to measure/estimate noise and vibration exposure, to characterise the contributions of the sources and to implement prevention and/or reduction measures.</li> </ul> <p>Note: BAT13 is only applicable where a noise nuisance at sensitive receptors is expected and/or has been substantiated.</p>	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>										
14	<p><b>Noise management</b></p> <p>In order to prevent or, where that is not practicable, to reduce noise emissions, BAT is to use one or a combination of the techniques given below.</p> <p>(a) Appropriate location of equipment and buildings</p> <p>(b) Operational measures</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>										

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
	(c) Low-noise equipment (d) Noise control equipment (e) Noise abatement [for detail of each technique, refer BAT 14 table in BATCs]		The Operator has ISO14001 as part of EMS . They are using the following techniques: <ul style="list-style-type: none"> <li>• Noise management plan procedure in place.</li> <li>• Maintenance schedule and procedure to minimise noise levels.</li> <li>• Equipment design and screens where applicable.</li> <li>• Noise and environmental audits carried out.</li> <li>• No complaints reported.</li> </ul>
15	<p><b>Odour Management</b></p> <p>In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to set up, implement and regularly review an odour management plan, as part of the environmental management system (see BAT 1), that includes all of the following elements:</p> <ul style="list-style-type: none"> <li>- a protocol containing actions and timelines;</li> <li>- a protocol for conducting odour monitoring.</li> <li>- a protocol for response to identified odour incidents eg complaints;</li> <li>- an odour prevention and reduction programme designed to identify the source(s); to measure/estimate odour exposure: to characterise the contributions of the sources; and to implement prevention and/or reduction measures.</li> </ul> <p>BAT 15 is only applicable to cases where an odour nuisance at sensitive receptors is expected and/or has been substantiated.</p>	CC	<p>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.</p> <p>An Odour management plan is in place which incorporates the following techniques:</p> <ul style="list-style-type: none"> <li>• Under normal operation the ETP does not emit significant odours. If odours do occur the abatement unit is effective.</li> <li>• Odour abatement units were designed and installed to manage maximum loads and are regularly maintained</li> <li>• Extractors above the Branston pans take odours to deodorising plant designed to remove vinegar odours.</li> <li>• Carbon filters in other extractor units</li> </ul>
	<b>Fruit and Vegetables CONCLUSIONS (BAT 27)</b>		
27	<p><b>Energy efficiency – Fruit and vegetables sector</b></p> <p>In order to increase energy efficiency, BAT is to use an appropriate combination of the techniques specified in BAT 6 and to cool fruit and vegetables before deep freezing.</p>	NA	<p>We are satisfied that BATc 27 is not applicable to this Installation.</p> <p>The site does not produce frozen products.</p>

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement								
	The temperature of the fruit and vegetables is lowered to around 4 °C before they enter the freezing tunnel by bringing them into direct or indirect contact with cold water or cooling air. Water can be removed from the food and then collected for reuse in the cooling process.										
<b>Fruit and vegetables sector - Environmental Performance Levels</b>											
EPL	<p style="text-align: center;"><i>Table 12</i></p> <p style="text-align: center;"><b>Indicative environmental performance levels for specific energy consumption</b></p> <table border="1" data-bbox="280 571 1234 743"> <thead> <tr> <th>Specific process</th> <th>Unit</th> <th>Specific energy consumption (yearly average)</th> </tr> </thead> <tbody> <tr> <td>Potato processing (excluding starch production)</td> <td rowspan="2">MWh/tonne of products</td> <td>1,0-2,1 <sup>(1)</sup></td> </tr> <tr> <td>Tomato processing</td> <td>0,15-2,4 <sup>(2)</sup> <sup>(3)</sup></td> </tr> </tbody> </table> <p><sup>(1)</sup> The specific energy consumption level may not apply to the production of potato flakes and powder.  <sup>(2)</sup> The lower end of the range is typically associated with the production of peeled tomatoes.  <sup>(3)</sup> The upper end of the range is typically associated with the production of tomato powder or concentrate.</p>	Specific process	Unit	Specific energy consumption (yearly average)	Potato processing (excluding starch production)	MWh/tonne of products	1,0-2,1 <sup>(1)</sup>	Tomato processing	0,15-2,4 <sup>(2)</sup> <sup>(3)</sup>	<b>NA</b>	EPL is not applicable as the described specific processes are not being conducted on this site.
Specific process	Unit	Specific energy consumption (yearly average)									
Potato processing (excluding starch production)	MWh/tonne of products	1,0-2,1 <sup>(1)</sup>									
Tomato processing		0,15-2,4 <sup>(2)</sup> <sup>(3)</sup>									
EPL	<p style="text-align: center;"><i>Table 13</i></p> <p style="text-align: center;"><b>Indicative environmental performance levels for specific waste water discharge</b></p> <table border="1" data-bbox="280 954 1234 1142"> <thead> <tr> <th>Specific process</th> <th>Unit</th> <th>Specific waste water discharge (yearly average)</th> </tr> </thead> <tbody> <tr> <td>Potato processing (excluding starch production)</td> <td rowspan="2">m<sup>3</sup>/tonne of products</td> <td>4,0-6,0 <sup>(1)</sup></td> </tr> <tr> <td>Tomato processing when water recycling is possible</td> <td>8,0-10,0 <sup>(2)</sup></td> </tr> </tbody> </table> <p><sup>(1)</sup> The specific waste water discharge level may not apply to the production of potato flakes and powder.  <sup>(2)</sup> The specific waste water discharge level may not apply to the production of tomato powder.</p>	Specific process	Unit	Specific waste water discharge (yearly average)	Potato processing (excluding starch production)	m <sup>3</sup> /tonne of products	4,0-6,0 <sup>(1)</sup>	Tomato processing when water recycling is possible	8,0-10,0 <sup>(2)</sup>	<b>NA</b>	EPL is not applicable as the described specific processes are not being conducted on this site.
Specific process	Unit	Specific waste water discharge (yearly average)									
Potato processing (excluding starch production)	m <sup>3</sup> /tonne of products	4,0-6,0 <sup>(1)</sup>									
Tomato processing when water recycling is possible		8,0-10,0 <sup>(2)</sup>									

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

### **Updating permit during permit review consolidation**

- Activity name
- Introductory note
- 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.

### **Production/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.

This production capacity is lower than previously permitted, thus the Operator has completed a H1 assessment of emissions for typical figures of production at the time of permitting.

As the revised production capacity is lower than previously understood, the existing H1 assessment remains valid for the revised capacity threshold now placed within table S1.1 of the permit.

### **Emissions to Air**

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

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



Implementing the requirements of the Medium Combustion Plant Directive

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:

Boilers

1. Rated thermal input (MW) of the medium combustion plant.	Boiler 1: 9.9 MWth Boiler 2: 9.9 MWth
2. Type of the medium combustion plant (diesel engine, gas turbine, dual fuel engine, other engine or other medium combustion plant).	Boiler
3. Type and share of fuels used according to the fuel categories laid down in Annex II.	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.	Boiler 1: Dec 2019 Boiler 2: Dec 2019

We have reviewed the information provided and we consider that 2 new boilers (2 X 9.9 MWth) have replaced the 3 old boilers (2 X 11 MWth & 1 X 2MWth) which were already permitted. As the total thermal input at the site is not increasing and the new boilers are using the same fuels as per the permitted boilers, we have incorporated them into this review. The new plant is also considered to be cleaner, as they are “new” and can meet the requirements of the MCPD.

On that basis, we have included the appropriate emission limit values for new medium combustion plants as part of this permit review. See Table S 3.1 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.

**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 during the original application received on 16/06/2016 . The site condition report included a report on the baseline conditions as required by Article 22. We reviewed that report and considered that it adequately described the condition of the soil and groundwater at that time.

The Operator submitted a summary report which referenced the site condition report and baseline report. We have reviewed the information and we consider that it adequately describes the current condition of the soil and groundwater. Consequently, we are satisfied that the baseline conditions have not changed.

### **Hazardous Substances**

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

The operator has provided a short risk assessment on the hazardous substances stored and used at the installation. The risk assessment was a stage 1-3 assessment as detailed within EC Commission Guidance 2014/C 136/03.

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

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

### **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 identified the installation as likely to be or has been affected by flooding and the unavailability of land for land spreading of waste.

The operator has mitigation and contingency plans in place, which considers, as a minimum the impact of severe weather on the operations within the installation.

We considered the plans to be appropriate for the installation when this site was first permitted.

### **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

No new improvement conditions have been added.

The previous improvement conditions are deemed as complete and have been removed from the permit.

<b>Superseded Improvement Conditions – Removed from permit as marked as “complete”</b>		
Reference	Requirement	Date
ICO1	Upon reinstatement of surface water discharge point EPW2 the operator shall provide the Environment Agency with a revised drainage plan detailing the new arrangements.	Complete
ICO2	The operator shall collect additional baseline reference data for the site of the facility in order to establish existing ground conditions and identify any historical contamination. This should include surface water testing of the River Lark to establish if there is any off site contamination.	Complete
ICO3	The operator shall review the containment measures provided for the storage of raw materials and wastes at the installation. The review shall consider the measures in place against the guidance document ' <i>Containment systems for the prevention of pollution - Secondary, tertiary and other measures for industrial and commercial premises, CIRIA report 736</i> ' and the Environment Agency Web Guide ' <a href="#">Control and Monitor Emissions for your Environmental Permit</a> '. The review shall show how the design and operation of the regulated facility meets the requirements detailed in this document. The operator shall provide the Environment Agency with a written copy of the review detailing any deficiencies identified, the improvements proposed and the timescales for their implementation.	Complete
ICO4	The operator shall review the measures set out in the Flood Risk Action Plan as submitted with the permit application. In particular consideration should be given to the feasibility of moving raw materials stored externally, from the north east of the installation to the car park near the entrance prior to a flood event. Consideration should be given to the circumstances when this would be initiated and whether there is sufficient time to achieve this safely. Alternative measures should be proposed as necessary.	Complete