

# **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/AP3333HL  
The Operator is:                         Karro Foods Limited  
The Installation is:                     Little Wrating Processing Plant  
This Variation Notice number is:   EPR/AP3333HL/V005

### **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 and any changes to the operation of the installation.

Such as, in this case, there was a partial surrender application (S004) made by the operator at around the same time that the Regulation 61 notice was submitted. On that basis, this variation (V005) incorporates the surrender application together with the permit review.

#### **Summary of changes introduced by S004**

The partial surrender removes an abattoir activity permitted under Section 6.8 Part A (1)(b) and the area of land on which the activity was carried out. The permit boundary is therefore amended and included within the varied and consolidated permit.

The site lies on the eastern edge of Little Wratting, adjacent to the B1061 and A143 crossroads in Suffolk. The site is divided by the A143 into two areas. The northern section contains the meat processing activities (curing, cooking and slicing) with the main factory infrastructure, office accommodation, boilers and car park.

The southern area includes an area previously permitted as an abattoir under Section 6.8 Part A (1)(b). This includes the abattoir, associated outbuildings and service yards. An effluent treatment plant permitted under S5.4 Part A1 (a) (i) serving the installation also lies within this area.

Slaughtering operations have ceased and the abattoir has been decommissioned and infrastructure demolished in phases between 2015 and 2022. This activity and the associated land associated with the slaughtering process, materials, waste storage and infrastructure are removed from the permit.

## **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 01/12/2022.

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, 5, 6, 9, 11, 12 and 29. The operator does not currently comply with the requirements of BATc 4, 5, 6, 9, 11, 12 and 29. In relation to these BAT Conclusions, the operator has committed compliance by 4 December 2023. We have therefore included Improvement Conditions 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 30/08/2023 to clarify BATc 4 emissions to water, BATc 5 channelled emissions to air, BATc 6 energy efficiency, BATc 8 harmful substances, BATc 9 refrigerants, BATc 11 buffer capacity, BATc 12 effluent treatment, BATc 14 noise, BATc 29 smoker emissions, environmental performance levels and relative hazardous substances. A copy of the further information requests was placed on our public register.

### 2.4 Our assessment of surrender application (S004)

As part of the permit review process, we have decided to grant the concurrent permit surrender application.

The scope of the changes are detailed above.

#### 2.4.1 Decision Considerations

##### **Key issues of the decision**

The operator submitted a Site Condition Report (SCR) Reference 202021130 (6<sup>th</sup> March 2023) based on a desk study and on site observations in support of the partial surrender application. We agree a “low risk” surrender is appropriate based on evidence that control measures were put in place to minimise the potential for pollution from the installation and verification by regular site inspections. We have completed a site inspection following the decommissioning of the abattoir and subsequent removal of associated infrastructure and consider the “low risk” approach appropriate.

The SCR concluded:

- The condition of the land at permit issue was described within the original Application Site Report (ASR). Parts of the installation had been used for pig slaughtering and meat processing since 1958.
- The EA approved the sites Site Protection and Monitoring Plan (SPMP) dated Nov 2005. This detailed containment infrastructure, monitoring and inspections and was maintained until 2008 when infrastructure and inspections were integrated into the site management systems which transferred to Karro Foods in 2013.
- The control measures in place were deemed robust enough to minimise the potential for pollution and as such no intrusive investigations were required.
- No quantitative data is available to allow comparison with baseline conditions however condition of the land has been justified to be in the same state as when the permit was issued.

Measures taken to protect the land:

- Materials storage and handling only took place in areas with an impervious concrete floor.
- An inspection and maintenance programme was put in place to cover the concrete raft making up the floor.
- Manufacturing tank integrity, damage to plant, corrosion to steelwork and bunded areas were inspected to a schedule held in the companies maintenance system.
- All process equipment was serviced and maintained in accordance with the manufacturers guidelines.
- All external storage tanks were located within bunds of sufficient capacity.

- All pipework and pumps used to transport raw materials were above ground and regularly inspected.

In addition during the lifetime of the permit there are no records of any incidents that could have resulted in pollution of ground or groundwater.

### **Confidential information**

A claim for commercial or industrial confidentiality has not been made.

The decision was taken in accordance with our guidelines on confidentiality.

### **Identifying confidential information**

We have not identified information provided as part of the application that we consider to be confidential.

The decision was taken in accordance with our guidance on confidentiality.

### **The regulated facility**

The permitted regulated facilities have changed as a result of the partial surrender.

### **The site**

The extent of the facility has changed as a result of the partial surrender.

The operator has provided a plan which we consider to be satisfactory.

These show the extent of the site of the facility

The plan is included in the permit.

### **Site condition report**

The operator has provided a description of the condition of the site, which we consider is satisfactory. The decision was taken in accordance with our guidance on site condition reports [and baseline reporting under the Industrial Emissions Directive].

### **Extent of the surrender application**

The operator has provided a plan showing the extent of the site of the facility that is to be surrendered.

We consider this plan to be satisfactory.

### **Pollution risk**

We are satisfied that the necessary measures have been taken to avoid a pollution risk resulting from the operation of the regulated facility.

### **Satisfactory state**

We are satisfied that the necessary measures have been taken to return the site of the regulated facility to a satisfactory state, having regard to the state of the site before the facility was put into operation.

## Growth duty

We have considered our duty to have regard to the desirability of promoting economic growth set out in section 108(1) of the Deregulation Act 2015 and the guidance issued under section 110 of that Act in deciding whether to grant this permit variation.

Paragraph 1.3 of the guidance says:

“The primary role of regulators, in delivering regulation, is to achieve the regulatory outcomes for which they are responsible. For a number of regulators, these regulatory outcomes include an explicit reference to development or growth. The growth duty establishes economic growth as a factor that all specified regulators should have regard to, alongside the delivery of the protections set out in the relevant legislation.”

We have addressed the legislative requirements and environmental standards to be set for this operation in the body of the decision document above. The guidance is clear at paragraph 1.5 that the growth duty does not legitimise non-compliance and its purpose is not to achieve or pursue economic growth at the expense of necessary protections.

We consider the requirements and standards we have set in this permit are reasonable and necessary to avoid a risk of an unacceptable level of pollution. This also promotes growth amongst legitimate operators because the standards applied to the operator are consistent across businesses in this sector and have been set to achieve the required legislative standards.

## 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 confirmed their EMS incorporates the features listed in BATc1.</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 site holds inventories for water, energy, emissions and raw material consumption. The EMS is under regular review</p>
3	<p><b>Monitoring key process parameters at key locations for emissions to water.</b></p> <p>For relevant emissions to water as identified by the inventory of waste water streams (see BAT 2), BAT is to monitor key process parameters (e.g. continuous monitoring of waste water flow, pH and temperature) at key locations (e.g. at the inlet and/or outlet of the pre-treatment, at the inlet to the final treatment, at the point where the emission leaves the installation).</p>	CC	<p>The operator has provided information to support compliance with BATc 3. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 3.</p> <p>The site discharges treated effluent to a watercourse and currently monitors continuously for pH and flow and weekly for Biological oxygen demand (BOD), Total Suspended Solids (TSS), Ammonia, Chloride, Total Phosphorus, Iron, Cadmium and Mercury.</p>
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</p>	FC	<p>The operator has provided information to support compliance with BATc 4. 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
	not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.		<p>not satisfied that the operator has demonstrated compliance with BATc 4.</p> <p>The operator currently undertakes weekly sampling of Total Suspended Solids (TSS) and Total Phosphorus (TP). BAT requires this to be increased to daily along with the addition of daily monitoring for Chemical Oxygen Deman (COD) and Total Nitrogen (TN) measurements.</p> <p>The operator has confirmed the requirements will be in place by 4<sup>th</sup> Dec 2023. We have therefore embedded these monitoring requirements within the permit</p>
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 and in accordance with EN standards.</p>	FC	<p>The operator has provided information to support compliance with BATc 5. We have assessed the information provided and we are not satisfied that the operator has demonstrated compliance with BATc 5.</p> <p>The site has 1 smoker which has an emission point to air. This is currently unmonitored however the operator has confirmed it will be. We have included a new emission point (A6) and have included the monitoring requirements within the permit.</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>	FC	<p>The operator has provided information to support compliance with BATc 6. We have assessed the information provided and we are not satisfied that the operator has demonstrated compliance with BATc 6.</p> <p>The site doesn't currently have an energy efficiency plan in place and they did not provide specific examples of the energy saving</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
			techniques used. We have therefore added IC12 Into the permit in order to achieve compliance.
7	<p><b>Water and wastewater minimisation</b></p> <p>In order to reduce water consumption and the volume of waste water discharged, BAT is to use BAT 7a and one or a combination of the techniques b to k given below.</p> <ul style="list-style-type: none"> <li>(a) water recycling and/or reuse</li> <li>(b) Optimisation of water flow</li> <li>(c) Optimisation of water nozzles and hoses</li> <li>(d) Segregation of water streams</li> </ul> <p>Techniques related to cleaning operations:</p> <ul style="list-style-type: none"> <li>(e) Dry cleaning</li> <li>(f) Pigging system for pipes</li> <li>(g) High-pressure cleaning</li> <li>(h) Optimisation of chemical dosing and water use in cleaning-in-place (CIP)</li> <li>(i) Low-pressure foam and/or gel cleaning</li> <li>(j) Optimised design and construction of equipment and process areas</li> <li>(k) Cleaning of equipment as soon as possible</li> </ul>	CC	<p>The operator has provided information to support compliance with BATc 7. We have assessed this information and are satisfied that the operator has demonstrated compliance with BATc 7.</p> <p>The operator has confirmed they operate a “clean as you go” policy which details cleaning methods and ensures dry cleaning and solids removal is undertaken prior to any water washing. In addition water use is reduced by using pressure hoses with flow nozzles.</p>
8	<p><b>Prevent or reduce the use of harmful substances</b></p> <p>In order to prevent or reduce the use of harmful substances, e.g. in cleaning and disinfection, BAT is to use one or a combination of the techniques given below.</p> <ul style="list-style-type: none"> <li>(a) Proper selection of cleaning chemicals and/or disinfectants</li> <li>(b) Reuse of cleaning chemicals in cleaning-in-place (CIP)</li> <li>(c) Dry cleaning</li> <li>(d) Optimised design and construction of equipment and process areas</li> </ul>	CC	<p>The operator has provided information to support compliance with BATc 8. We have assessed this information and we are satisfied that the operator has demonstrated compliance with BATc 8.</p> <p>The operator has provided details of the chemicals used on site and states they work with a third party supplier and only use chemicals that have been selected for their efficiency and safety from a technical, health and safety and environmental harm perspective.</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>Any changes to the chemical inventory are assessed through the site's change management procedure before use. This is to ensure that their use and disposal via the effluent drains cannot impact the site's ability to comply with its consent.</p> <p>The equipment and process design has taken into account the hygiene requirements of the process and ensures efficient cleaning. New equipment installations go through HAZOP and HACCP processes to identify any potential issues and opportunities. Existing optimisation opportunities are identified periodically in partnership with the operators and hygiene chemical supplier.</p>
9	<p><b>Refrigerants</b></p> <p>In order to prevent emissions of ozone-depleting substances and of substances with a high global warming potential from cooling and freezing, BAT is to use refrigerants without ozone depletion potential and with a low global warming potential.</p>	FC	<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 has provided an inventory of the refrigeration system on site. A significant number of these are high GWP R404a and R410a systems serving the manufacturing process.</p> <p>The operator confirmed they will review these assets with a view to running to failure or replacing with a lower GWP system.</p> <p>BATc 9 requires a formal plan to be in place for the end of life replacement of these systems. We have therefore included IC12 and 13 into the permit in order to achieve compliance.</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
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:</p> <ul style="list-style-type: none"> <li>(a) Anaerobic digestion</li> <li>(b) Use of residues</li> <li>(c) Separation of residues</li> <li>(d) Recovery and reuse of residues from the pasteuriser</li> <li>(e) Phosphorus recovery as struvite</li> <li>(f) Use of waste water for land spreading</li> </ul>	<b>CC</b>	<p>The operator has provided information to support compliance with BATc 10. We have assessed this information and we are satisfied the operator has demonstrated compliance with BATc 10.</p> <p>The operator has confirmed that effluent sludge is sent for anaerobic digestions.</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>	<b>FC</b>	<p>The operator has not provided sufficient information to support compliance with BATc 11. We were therefore unable to fully assess this and are not satisfied the operator has demonstrated compliance with BATc 11.</p> <p>The operator stated they prevent uncontrolled emissions by using a combination of controls, including management controls combined with instrumentation and specifically designed equipment. Further stating the combination of the capacity of the buffer tanks within the treatment plant provides sufficient capacity to retain water on site without discharge until alternative means of removal can be arranged. In the event that capacity was due to be reached, production would be ceased until they could be arranged for effluent to be directed offsite via tanker for third party treatment.</p> <p>The above measures appear sound however no supporting evidence or on site documentation was provided to evidence the claims. We have therefore included IC12 To check compliance.</p>
12	<p><b>Emissions to water – treatment</b></p>	<b>CC</b>	<p>The operator has provided information to support compliance with BATc 12. We have assessed this information and we are satisfied</p>

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	<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>		<p>the operator has demonstrated compliance with BATc 12.</p> <p>The operator treats all effluent on site within the permitted effluent treatment plant prior to discharge to the River Stour via drainage ditch.</p> <p>The effluent treatment system comprises a 800m<sup>3</sup> equalization tank. Physical separation is achieved using a mesh rotary screen along with coarse and primary settlement tanks.</p> <p>In addition the site has a plug flow aerobic activated sludge system. Nitrification and denitrification take place within the aeration system with the addition of a nitrifying filter.</p> <p>Phosphorous removal within the effluent treatment plant is done via the addition of ferric aluminium sulphate and precipitation.</p> <p>Waste activated sludge is removed to sludge pits where it is decanted and removed from site weekly.</p> <p>Up flow shingle bed filtration is used as tertiary treatment.</p>
12	<p><b>Emissions to water – treatment</b></p> <p><b>BAT-associated emission levels (BAT-AELs) for direct emissions to a receiving water body</b></p>	FC	<p>The operator has provided information to support compliance with BATc 12. We have assessed the information provided and we are not satisfied that the operator has demonstrated compliance with BATc 12.</p> <p>The current permit includes weekly monitoring for the following parameters:</p> <p>BOD – 20mg/l</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										
	<table border="1" data-bbox="280 256 1211 459"> <thead> <tr> <th>Parameter</th> <th>BAT-AEL (1) (2) (daily average)</th> </tr> </thead> <tbody> <tr> <td>Chemical oxygen demand (COD) (3) (4)</td> <td>25-100 mg/l (5)</td> </tr> <tr> <td>Total suspended solids (TSS)</td> <td>4-50 mg/l (6)</td> </tr> <tr> <td>Total nitrogen (TN)</td> <td>2-20 mg/l (7) (8)</td> </tr> <tr> <td>Total phosphorus (TP)</td> <td>0,2-2 mg/l (9)</td> </tr> </tbody> </table>	Parameter	BAT-AEL (1) (2) (daily average)	Chemical oxygen demand (COD) (3) (4)	25-100 mg/l (5)	Total suspended solids (TSS)	4-50 mg/l (6)	Total nitrogen (TN)	2-20 mg/l (7) (8)	Total phosphorus (TP)	0,2-2 mg/l (9)		<p>TSS – 30mg/l Ammonia -10mg/l Chloride -1000mg/l Total Phosphorous – 2mg/l Iron – 5mg/l</p> <p>Continuous monitoring for pH is also undertaken.</p> <p>The operator also monitors for Mercury and Cadmium however these have been removed as part of the permit review.</p> <p>In line with BATc 12 we have added daily monitoring for TSS and TP to the permit and added the following additional parameters:</p> <p>COD – 100mg/l Total Nitrogen – 20mg/l</p> <p>The operator has confirmed they will be future compliant with the new requirements.</p>
Parameter	BAT-AEL (1) (2) (daily average)												
Chemical oxygen demand (COD) (3) (4)	25-100 mg/l (5)												
Total suspended solids (TSS)	4-50 mg/l (6)												
Total nitrogen (TN)	2-20 mg/l (7) (8)												
Total phosphorus (TP)	0,2-2 mg/l (9)												
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>	N/A	<p>The operator has provided information to support compliance with BATc 14. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 14.</p> <p>There is no existing permit requirement and the site has no recent history of noise complaints therefore a noise management plan is not required.</p>										

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
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  (b) Operational measures  (c) Low-noise equipment  (d) Noise control equipment  (e) Noise abatement</p>	CC	<p>The operator has provided information to support compliance with BATc 14. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 14.</p> <p>The Operator uses a combination of relevant procedures:  Enclosing noisy machinery and processes in buildings.</p>
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>	N/A	<p>An odour management plan is only required where odour nuisance at sensitive receptors is expected or has been substantiated. There have been no substantiated odour nuisance from the site therefore an OMP is not a requirement for this site.</p> <p>We are therefore satisfied that BATc 15 is not applicable for this site.</p>
<b>MEAT PROCESSING SECTOR BAT CONCLUSIONS (BAT 29)</b>			
29	<p><b>Emissions to air – Meat Processing Sector</b></p> <p>In order to reduce channelled emissions of organic compounds to air from meat smoking, BAT is to use one or a combination of the techniques given below.</p>	CC	<p>The operator has provided information to support compliance with BATc 29. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 29.</p> <p>The site operates a meat smoker. The operator has confirmed emissions pass through a wet scrubber prior to discharge to atmosphere via point A6.</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															
	<table border="1" data-bbox="295 293 1209 571"> <thead> <tr> <th data-bbox="295 293 349 331"></th> <th data-bbox="349 293 555 331">Technique</th> <th data-bbox="555 293 1209 331">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="295 331 349 399">(a)</td> <td data-bbox="349 331 555 399">Adsorption</td> <td data-bbox="555 331 1209 399">Organic compounds are removed from a waste gas stream by retention on a solid surface (typically activated carbon).</td> </tr> <tr> <td data-bbox="295 399 349 437">(b)</td> <td data-bbox="349 399 555 437">Thermal oxidation</td> <td data-bbox="555 399 1209 437">See Section 14.2.</td> </tr> <tr> <td data-bbox="295 437 349 504">(c)</td> <td data-bbox="349 437 555 504">Wet scrubber</td> <td data-bbox="555 437 1209 504">See Section 14.2. An electrostatic precipitator is commonly used as a pretreatment step.</td> </tr> <tr> <td data-bbox="295 504 349 571">(d)</td> <td data-bbox="349 504 555 571">Use of purified smoke</td> <td data-bbox="555 504 1209 571">Smoke generated from purified primary smoke condensates is used to smoke the product in a smoke chamber.</td> </tr> </tbody> </table>		Technique	Description	(a)	Adsorption	Organic compounds are removed from a waste gas stream by retention on a solid surface (typically activated carbon).	(b)	Thermal oxidation	See Section 14.2.	(c)	Wet scrubber	See Section 14.2. An electrostatic precipitator is commonly used as a pretreatment step.	(d)	Use of purified smoke	Smoke generated from purified primary smoke condensates is used to smoke the product in a smoke chamber.		
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29	<p data-bbox="273 619 1227 679">BAT-associated emission level (BAT-AEL) for channelled TVOC emissions to air from a smoke chamber.</p> <table border="1" data-bbox="295 708 1209 813"> <thead> <tr> <th data-bbox="295 708 600 769">Parameter</th> <th data-bbox="600 708 900 769">Unit</th> <th data-bbox="900 708 1209 769">BAT-AEL (average over the sampling period)</th> </tr> </thead> <tbody> <tr> <td data-bbox="295 769 600 813">TVOC</td> <td data-bbox="600 769 900 813">mg/Nm<sup>3</sup></td> <td data-bbox="900 769 1209 813">3-50 <sup>(1)</sup> <sup>(2)</sup></td> </tr> </tbody> </table> <p data-bbox="295 820 981 868"><sup>(1)</sup> The lower end of the range is typically achieved when using adsorption or thermal oxidation. <sup>(2)</sup> The BAT-AEL does not apply when the TVOC emission load is below 500 g/h.</p> <p data-bbox="273 919 797 951">The associated monitoring is given in BAT 5</p>	Parameter	Unit	BAT-AEL (average over the sampling period)	TVOC	mg/Nm <sup>3</sup>	3-50 <sup>(1)</sup> <sup>(2)</sup>	FC	<p data-bbox="1518 619 2078 769">The operator has provided information to support compliance with BATc 29. We have assessed the information provided and we are not satisfied that the operator has demonstrated compliance with BATc 29.</p> <p data-bbox="1518 836 2078 986">The smoker emission point was not previously included in the permit and not monitored. The operator has confirmed future monitoring will be undertaken in line with BATc 29. We have included annual monitoring for:</p> <ul data-bbox="1568 992 2078 1142" style="list-style-type: none"> <li>• Total Volatile Organic Compounds (TVOC) with an ELV of 50mg/m<sup>3</sup> when the emission load is above 500g/h.</li> <li>• NOx</li> <li>• CO</li> </ul> <p data-bbox="1518 1197 2078 1283">Improvement conditions IC19 (TVOC Monitoring) have been added to the permit to ensure compliance.</p>									
Parameter	Unit	BAT-AEL (average over the sampling period)																
TVOC	mg/Nm <sup>3</sup>	3-50 <sup>(1)</sup> <sup>(2)</sup>																
<b>Dairy Sector Environmental Performance Levels</b>																		

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement				
EPL	<p><b>Environmental Performance Level – Energy consumption for the meat processing sector</b></p> <table border="1" data-bbox="286 336 1218 437"> <thead> <tr> <th data-bbox="286 336 752 395">Unit</th> <th data-bbox="752 336 1218 395">Specific energy consumption (yearly average)</th> </tr> </thead> <tbody> <tr> <td data-bbox="286 395 752 437">MWh/tonne of raw materials</td> <td data-bbox="752 395 1218 437">0,25-2,6 <sup>(1)</sup> <sup>(2)</sup></td> </tr> </tbody> </table> <p data-bbox="286 437 1218 464"><sup>(1)</sup> The specific energy consumption level does not apply to the production of ready meals and soups.</p> <p data-bbox="286 464 1218 491"><sup>(2)</sup> The upper end of the range may not apply in the case of a high percentage of cooked products.</p>	Unit	Specific energy consumption (yearly average)	MWh/tonne of raw materials	0,25-2,6 <sup>(1)</sup> <sup>(2)</sup>	FC	<p>The operator provided incomplete information to support compliance with the energy consumption EPL. Providing only their energy usage figures and not raw materials despite information request. We therefore cannot assess compliance with the EPL for the meat processing sector.</p> <p>Improvement Condition IC14 has been added to ensure compliance with the EPL for energy consumption.</p>
Unit	Specific energy consumption (yearly average)						
MWh/tonne of raw materials	0,25-2,6 <sup>(1)</sup> <sup>(2)</sup>						
EPL	<p><b>Environmental Performance Level – Specific waste water discharge for the meat processing sector</b></p> <table border="1" data-bbox="286 687 1218 772"> <thead> <tr> <th data-bbox="286 687 752 730">Unit</th> <th data-bbox="752 687 1218 730">Specific waste water discharge(yearly average)</th> </tr> </thead> <tbody> <tr> <td data-bbox="286 730 752 772">m<sup>3</sup>/tonne of raw materials</td> <td data-bbox="752 730 1218 772">1,5-8,0 <sup>(1)</sup></td> </tr> </tbody> </table> <p data-bbox="286 772 1218 831"><sup>(1)</sup> The specific waste water discharge level does not apply to processes using direct water cooling and to the production of ready meals and soups.</p>	Unit	Specific waste water discharge(yearly average)	m <sup>3</sup> /tonne of raw materials	1,5-8,0 <sup>(1)</sup>	FC	<p>The operator has provided incomplete information to support compliance with the water consumption EPL, providing only the final figure - 11.79m<sup>3</sup>/tonne.</p> <p>This however is outside the target range of 1.8 – 8 MWh/tonne of raw materials.</p> <p>Improvement Condition IC15 has been added to ensure compliance with the EPL for waste water discharge consumption.</p>
Unit	Specific waste water discharge(yearly average)						
m <sup>3</sup> /tonne of raw materials	1,5-8,0 <sup>(1)</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.

The existing H1 assessment of emissions to water 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.

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

	Boiler 4	Boiler 5
1. Rated thermal input (MW) of the medium combustion plant.	4.3MWth	2.7MWth
2. Type of the medium combustion plant (diesel engine, gas turbine, dual fuel engine, other engine or other medium combustion plant).	Boiler	Boiler
3. Type and share of fuels used according to the fuel categories laid down in Annex II.	Natural gas	Natural gas
4. Date of the start of the operation of the medium combustion plant or, where the exact date of the start of the operation is unknown, proof of the fact that the operation started before 20 December 2018.	October 1965	October 2020

We have reviewed the information provided and we consider that Boiler 4 qualifies as “existing” medium combustion plant.

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

The site was permitted for a Section 1.1 Part B (a) Burning any fuel ...in a boiler with a rated thermal input of 20 MW or more but less than 50MW. The operator confirmed in their Regulation 61 response that only two boilers are now on site as detailed above. Boiler 5 was installed in October 2020 without permit variation however given boilers 1-3 are now decommissioned and the overall thermal input is well below 20MWth as previously permitted no further assessment is considered necessary. The new emission points has been included within the permit with the monitoring and ELV requirements required from permit issue.

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

### **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 Protection and Monitoring Plan (Entec Report ref 17233/c000/m002i1 Nov 2005) with the original permit application. This was maintained and updated until 2008 prior to being integrated into the current sites management system which was transferred from Vion to Karro Foods in 2013.

The SPMP did not include a report on the baseline conditions as required by Article 22. However we have accepted for the partial surrender and going forward that the report 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 identified hazardous substances used and stored onsite within the inventory provided with the Reg 61 response.

They however did not provide a risk assessment on the hazardous substances stored and used at the installation. We requested they supply a stage 1-3 assessment as detailed within EC Commission Guidance 2014/C 136/03.

The operator is required to submit a relevant hazardous substances monitoring plan for review to the Environment Agency via improvement condition (IC16).

### **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 prolonged dry weather/ drought, which we consider to be a severe weather event.

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

We do not consider the operator to have submitted a suitable climate change adaptation plan for the installation. We have included an improvement condition into the permit (IC17) to request a climate change adaptation plan is submitted by the operator for approval from the Environment Agency.

## **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 and their findings. We are not satisfied that the existing tanks and containment measures on site meet the standards set out in CIRIA C736. On site inspection is required.

We have set improvement conditions in the permit to address the deficiencies in the existing tanks and containment measures on site (IC18). See Improvement condition(s) in Annex 3 of this decision document.

## 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).

<b>Superseded Improvement Conditions – Removed from permit as marked as “complete”</b>	
<b>Reference</b>	<b>Improvement Condition</b>
IC1	<p>The Operator shall provide the Agency with a written programme of works to address inadequacies in the secondary containment of chemicals and oil within the Installation. The programme shall include, but not be limited to the following areas:</p> <ul style="list-style-type: none"> <li>• The external diesel pumps at the sewage treatment plant</li> <li>• The hygiene chemical store</li> <li>• Descalers and oxygen scavengers storage</li> <li>• Engineering storeroom oil storage</li> <li>• Clean and waste oil storage at the engineering workshop</li> <li>• Clean and waste oil drums at the abattoir</li> <li>• The waste oil pit and empty drum storage area</li> <li>• The boiler and diesel fuel tank fill point</li> <li>• Effluent and sludge holding tanks</li> </ul> <p>A firm timetable for the proposed works shall be included in the programme.</p>
IC2	<p>The Operator shall provide the Agency with a written description of measures in place or proposed to ensure that the drainage ditch, which is the receptor for water from Installation discharge points W2 to W8 in Table 2.2.4 cannot receive contaminated water, including contaminated firewater.</p>
IC3	<p>The Operator shall provide the Agency with an updated written accident management plan, to include the actions to be taken to further address priority risks, such as failure to contain firewater, taking note of the guidance given in Section 2.8 of Sector Guidance Note IPPC S6.11 Guidance for the Red Meat Processing (Cattle, Sheep and Pigs) Sector, issue1 July 2003, for discussion with the Agency.</p>
IC4	<p>The operator shall install instrumentation to monitor continuously and record the pH and flow of the effluent at release point W1. The instrumentation shall comply with the relevant MCERTS standards or other standards as agreed in writing by the Agency.</p>
IC5	<p>The operator shall install instrumentation to monitor continuously and record the pH and flow of the effluent at release point W1. The instrumentation shall comply with the relevant MCERTS standards or other standards as agreed in writing by the Agency.</p>

IC6	<p>The Operator shall submit a comprehensive noise assessment undertaken by an experienced and suitably qualified person (i.e. a noise consultant with an appropriate qualification accredited by the Institute of Acoustics), and in accordance with the procedures given in BS4142: 1997 (Rating industrial noise affecting mixed residential and industrial areas) and BS7445: 2003 (Description and measurement of environmental noise). Any noise source(s) identified as exhibiting tonal contributions shall also be quantified by means of frequency analysis.</p> <p>The report shall quantify any predictions relating to the likelihood of the decay of sound associated with increased distance from the installation boundary, noise attenuation attributed to the intervention of a suitable barrier(s), and the cumulative effect of different items of plant and equipment working concurrently. The report shall also draw comparisons with the background levels in the locality and any potential impact that the installation is likely to have upon local residents including the centres of population of Great Wrating, Little Wrating and Kedington. On completion of the assessment a copy of the survey shall be submitted to the Agency in the form of a report with an interpretation of the results and conclusions drawn.</p> <p>Where specific recommendations are made in the report to pursue improved noise attenuation measures and associated management/inspection/monitoring/maintenance regimes; a suitable time-scale for implementation and review shall be included. Such improved noise attenuation measures and regimes shall be demonstrated to be compliant with the requirements of BAT for this type of installation and will require the written agreement of the Agency, prior to adoption.</p>
IC7	<p>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 S6.11, Ver.1, July 03. Upon completion of the plan a summary of the document shall be submitted to the Agency in writing.</p>
IC8	<p>The Operator shall review the refrigerants utilised at the installation. This review will take into account the potential environmental impact of the refrigerants and the use of alternative less environmentally hazardous materials. The operator shall also establish a refrigerant accountancy system. A written report summarising the findings, proposals for improvements and a timescale for their implementation shall be submitted to the Agency.</p>

IC9	<p>The Operator shall prepare an odour management plan as follows:</p> <ol style="list-style-type: none"> <li>I. Olfactometry (odour) measurements shall be made of emissions from: <ul style="list-style-type: none"> <li>• The lairage (including unloading of animals, stabling and cleaning of empty vehicles)</li> <li>• The slaughterhouse process (e.g. kill, butchery, bleeding, evisceration and singing processes)</li> <li>• The downstream processing of pork meat paying particular attention to emissions from cooking processes</li> <li>• Materials handling during sausage casing production</li> <li>• The storage and treatment of waste materials including blood, offal and other meat waste</li> <li>• The ETP.</li> </ul> </li> <li>II. The Operator shall demonstrate that odour control from these sources is BAT</li> <li>III. The combined impact of emissions from the treatment of odour shall be investigated using a suitable dispersion model in accordance with Horizontal Guidance Note H4. The assessment shall be based on both worst case and average values.</li> <li>IV. The impact shall be compared with an odour exposure criterion as a means of assessing the likelihood of annoyance. The criterion shall be 3 ou/m<sup>3</sup> as a 98th%ile of 1-hour averages.</li> <li>V. If necessary, remedial measures shall be taken to prevent exceedance of the odour exposure criterion.</li> </ol> <p>A written report describing the measurement methodology used, the measurement results, the conclusions of the comparison against the odour exposure criterion, any remedial measures taken, and justification that odour controls meet BAT, shall be provided to the Agency.</p>
IC10	<p>Should the monitoring of emissions to water required by condition 2.10.1, show any exceedance of the limits shown in Table 2.2.5 by the 31/12/05, the Operator shall undertake a review of options available for improvement of its effluent treatment in order to meet the requirements of condition 2.2.2.4. The Operator shall have regard to the Sector Guidance Note IPPC 6.11, July 2003, Section 2.2.2 and the methods detailed therein. A written report summarising the techniques shall be submitted to the Agency and include time scales for the implementation of preferred options. The report provided shall be agreed in writing by the Agency.</p>
IC11	<p>The operator shall implement a full environmental management system, including implementation of a system of auditing to a recognised standard.</p>

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

<b>Improvement programme requirements</b>		
<b>Reference</b>	<b>Reason for inclusion</b>	<b>Justification of deadline</b>
IC12	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 6, 9 and 11, were in place on or before 4 December 2023. Refer to BAT Conclusions for a full description of the BAT requirement.	1 month from permit issue
IC13	<p>The operator shall use refrigerants without ozone depletion potential and with a low global warming potential (GWP) in accordance with BAT 9 from the Food, Drink and Milk Industries BATCs.</p> <p>To demonstrate compliance against BAT 9, the operator shall develop a replacement plan for the refrigerant system(s) at the installation. This shall be incorporated within the existing environmental management system by the specified date.</p> <p>The plan should include, but not be limited to, the following:</p> <ul style="list-style-type: none"> <li>• Where practicable, retro filling systems containing high GWP refrigerants e.g. R-404A with lower GWP alternatives as soon as possible.</li> <li>• An action log with timescales, for replacement of end-of-life equipment using refrigerants with the lowest practicable GWP.</li> </ul>	1 month from permit issue
IC14	The operator shall confirm in writing to the Environment Agency that they have achieved the specific Environmental Performance Levels (EPLs) for specific energy consumption, where compliance with the EPL was not demonstrated at the time of R61 submission. Where an operator cannot achieve the EPL, they should provide a justification and derive a site specific benchmark. Refer to BAT Conclusions for a full description of the requirements.	1 month from permit issue
IC15	The operator shall confirm in writing to the Environment Agency that they have achieved specific Environmental Performance Levels (EPLs) for specific water consumption, was not demonstrated at the time of R61 submission. Where an operator cannot achieve the EPL, they should provide a justification and derive a site specific benchmark. Refer to BAT Conclusions for a full description of the requirements.	1 month from permit issue

IC16	<p>The operator shall produce a monitoring plan detailing how the management of relevant hazardous substances which did not screen out as low risk, based on the RHS baseline assessment, will be maintained and monitored to mitigate the risks of pollution. The plan shall be submitted for approval.</p> <p>The plan shall be implemented in accordance with the Environment Agency's written approval, including timescales to undertake any infrastructure improvements.</p>	12 Months from permit issue or other date as agreed in writing with the Environment Agency
IC17	<p>The operator shall produce a climate change adaptation plan, which will form part of the EMS. The plan shall include, but not be limited to:</p> <ul style="list-style-type: none"> <li>• Details of how the installation has or could be affected by severe weather;</li> <li>• The scale of the impact of severe weather on the operations within the installation;</li> <li>• An action plan and timetable for any improvements to be made to minimise the impact of severe weather at the installation.</li> </ul> <p>The Operator shall implement any necessary improvements to a timetable agreed in writing with the Environment Agency.</p>	12 Months from permit issue or other date as agreed in writing with the Environment Agency
IC18	<p>The Operator shall undertake a survey of the primary, secondary and tertiary containment at the site and review measures against relevant standard including:</p> <ul style="list-style-type: none"> <li>• CIRIA Containment systems for the prevention of pollution (C736) – Secondary, tertiary and other measures for industrial and commercial premises,</li> <li>• EEMUA 159 - Above ground flat bottomed storage tanks</li> </ul> <p>The operator shall submit a written report to the Environment Agency approval which outlines the results of the survey and the review of standard and provide details of</p> <ul style="list-style-type: none"> <li>• current containment measures</li> <li>• any deficiencies identified in comparison to relevant standards,</li> <li>• improvements proposed</li> <li>• time scale for implementation of improvements.</li> </ul> <p>The operator shall implement the proposed improvements in line with the timescales agreed by the Environment Agency.</p>	12 Months from permit issue or other date as agreed in writing with the Environment Agency
IC19	<p>The operator shall submit a copy of the monitoring results for TVOC emissions from the smoke chambers (A6) to the Environment Agency. The monitoring shall show the TVOC emission load in g/h and mg/Nm<sup>3</sup> to establish whether the BAT-AEL for TVOC (BAT 29 from the BAT Conclusions from the Food, Drink and Milk Industries, Dec 2019) is applicable for emission point A6.</p>	12 Months from permit issue or other date as agreed in writing with the Environment Agency

