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/AP3530KM
The Operator is:	Unilever UK Limited
The Installation is:	Gloucester Ice Cream Factory
This Variation Notice number is:	EPR/AP3530KM/V006

What this document is about

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

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

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

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

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

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

How this document is structured

1. Our decision
2. How we reached our decision
3. The legal framework
4. Annex 1 – Review of operating techniques within the Installation against BAT Conclusions.

5. Annex 2 – Review and assessment of changes that are not part of the BAT Conclusions derived permit review
6. Annex 3 – Improvement Conditions

1 Our decision

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

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

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

2 How we reached our decision

2.1 Requesting information to demonstrate compliance with BAT Conclusion techniques

We issued a Notice under Regulation 61(1) of the Environmental Permitting (England and Wales) Regulations 2016 (a Regulation 61 Notice) on 25/03/2022 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 11/08/2022.

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 BATc 6 Energy Efficiency Plan. The operator does not currently comply with the requirements of BATc 6. In relation to this BAT Conclusion, the operator has committed compliance by 4 December 2023. We have therefore included Improvement Condition 11 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 07/11/2023 requesting the operator provide information on BATc 7 water minimisation techniques, BATc 8 cleaning chemicals, BATc 9 refrigeration, BATc 11 buffer storage, BATc 15 minimising flaring and Relevant Hazardous Substances. 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

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

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

BAT 15, 16, 21 & 38.

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

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

NA – Not Applicable
CC – Currently Compliant
FC – Compliant in the future (within 4 years of publication of BAT Conclusions)
NC – Not Compliant

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
GENERAL BAT CONCLUSIONS (BAT 1-15)			
1	**Environmental Management System - Improve overall environmental performance.** Implement an EMS that incorporates all the features as described within BATc 1.	**CC**	The operator has provided information to support compliance with BATc 1. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 1. The operator has a EMS based on (but not accredited to the ISO14001 standard) which incorporates all the required standards.
2	**EMS Inventory of inputs & outputs. Increase resource efficiency and reduce emissions.** Establish, maintain and regularly review (including when a significant change occurs) an inventory of water, energy and raw materials consumption as well as of waste water and waste gas streams, as part of the environmental management system (see BAT 1), that incorporates all of the features as detailed within the BATCs.	**CC**	The operator has provided information to support compliance with BATc 2. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 2. The operator has confirmed the site tracks water, energy and raw material consumption as well as waste water and waste gas streams. Energy and water usage is continually monitored by production line and reviewed monthly to consider areas to improve. The site innovations team review recipes to ensure efficient use of raw materials.
3	**Monitoring key process parameters at key locations for emissions to water.** For relevant emissions to water as identified by the inventory of waste water streams (see BAT 2), BAT is to monitor key process parameters (e.g. continuous monitoring of waste water flow, pH and temperature) at key locations (e.g. at the inlet and/or outlet of the pre-treatment, at the inlet to the final treatment, at the point where the emission leaves the installation).	**CC**	The operator has provided information to support compliance with BATc 3. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 3. Monitoring of the waste water is undertaken at the AD and DAF plants prior to discharging to sewer at emission point S1. This monitoring is governed by the Severn Trent Trade Effluent Consent (TEC) and is conducted daily on site.

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
			This is in addition to continuous measurement of flow, pH and temperature
4	**Monitoring emissions to water to the required frequencies and standards.** BAT is to monitor emissions to water with at least the frequency given [refer to BAT 4 table in BATc] and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.	**N/A**	BATc 4 applies in the case of direct discharge of effluent to a water body. All process effluent from the Gloucester Site is discharged to sewer. We are therefore satisfied that BATc 4 is not applicable for this site.
5	**Monitoring channelled emissions to air to the required frequencies and standards.** BAT is to monitor channelled emissions to air with at least the frequency given and in accordance with EN standards.	**N/A**	The site produces ice cream. No drying is undertaken, as such the relevant BAT monitoring requirements for the diary sector do not apply. We are therefore satisfied that BATc 5 is not applicable for this site
6	**Energy Efficiency** In order to increase energy efficiency, BAT is to use an energy efficiency plan (BAT 6a) and an appropriate combination of the common techniques listed in technique 6b within the table in the BATc.	**CC**	The operator has provided information to support compliance with BATc 6. We have assessed the information provided and we are satisfied that the operator was compliant on or before the 4th Dec. The site has undertaken energy audits and energy assessments in order to review and identify energy saving opportunities which they consider encompass the requirements of an energy efficiency plan. They also confirm their commitment to identifying ways to reduce and manage energy use. For example: • energy improvement targets including to become Carbon neutral by the end of 2030 • reducing compressed air consumption at the point of use,

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			• reduce steam energy loss through proper insulation • lighting efficiency improvements. • temperature increases in Auto Palletising area and cold stores • improve energy tracking at each production bay • insulation on CIP pipework in mix and replacing motors on some equipment. The site however doesn't have an Energy Efficiency Plan as described in BAT currently in place. We have therefore included IC 11 to demonstrate compliance with BATc 6 was achieved on or before 04/12/2023.
7	**Water and wastewater minimisation** In order to reduce water consumption and the volume of waste water discharged, BAT is to use BAT 7a and one or a combination of the techniques b to k given below. (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	**CC**	The operator has provided information to support compliance with BATc 7. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 7. The operator has confirmed the following techniques are used on site: a) water recycling and/or reuse. Cleaning-In-Place (CIP) water has a recovery system for the final rinse that is reused as prerinse and then drained. (c) Optimisation of water nozzles and hoses Cleaning hoses are equipped with nozzles and lances to improve cleaning efficiency. (e) Dry cleaning Dry cleaning is used mainly for non-process parts of production line where heavy soiling is not present. (f) Pigging system for pipes

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			Site has an automatic pigging system for waste materials. (h) Optimisation of chemical dosing and water use in cleaning-in-place (CIP) Chemical is automatically dosed and controlled through telemetry. Dosing level is based on conductivity readings. After initial stage of detergent clean in CIP sequence, remainder is recovered back into detergent tank to be reused. (i) Low-pressure foam and/or gel cleaning All production areas are equipped with foaming units on low pressure water system that allows application of chemicals as foam at set concentration (j) Optimised design and construction of equipment and process areas Process lines and systems are designed in a way to allow easy cleaning by CIP systems within set parameters. (k) Cleaning of equipment as soon as possible CIP and line cleans are completed immediately after end of production as delay of the clean would result in increased microbiological risk.
8	**Prevent or reduce the use of harmful substances** In order to prevent or reduce the use of harmful substances, e.g. in cleaning and disinfection, BAT is to use one or a combination of the techniques given below. (a) Proper selection of cleaning chemicals and/or disinfectants (b) Reuse of cleaning chemicals in cleaning-in-place (CIP) (c) Dry cleaning (d) Optimised design and construction of equipment and process areas	**CC**	The operator has provided information to support compliance with BATc 8. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 8. The operator has confirmed they use the following combination of techniques: (a) Proper selection of cleaning chemicals and/or disinfectants

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			Chemicals are chosen based on chemical supplier recommendation to maximise cleaning efficiency with the least harmful chemical capable of completing the task. (b) Reuse of cleaning chemicals in cleaning-in-place (CIP) Only initial phase of detergent is drained as its contaminated with soil residue, after a set time the remainder of the CIP fluid is then recovered and fed back into the detergent tank (c)Dry cleaning Dry cleaning is used mainly for non-process parts of production line where heavy soiling is not present. (d) Optimised design and construction of equipment and process areas. Process lines and systems are designed in a way to allows easy cleaning by CIP systems within set parameters.
9	**Refrigerants** In order to prevent emissions of ozone-depleting substances and of substances with a high global warming potential from cooling and freezing, BAT is to use refrigerants without ozone depletion potential and with a low global warming potential.	**CC**	The operator has provided information to support compliance with BATc 9. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 9. The operator stated both in their Reg 61 and further information request that the only refrigerant used within their manufacturing processes is Ammonia.
10	**Resource efficiency** In order to increase resource efficiency, BAT is to use one or a combination of the techniques given below: (a) Anaerobic digestion (b) Use of residues (c) Separation of residues (d) Recovery and reuse of residues from the pasteuriser (e) Phosphorus recovery as struvite	**CC**	The operator has provided information to support compliance with BATc 10. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 10.

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	(f) Use of waste water for land spreading		The operator confirmed the site has applied the Waste Hierarchy for the food and drink sector to ensure waste product can be used for rework, animal feed or AD as follows: • Waste rework/mix products are used for pig feed • Contaminated process waste including product residues and utilities waste are treated in the onsite Anaerobic Digester • Primary wastewater plant by-product (DAF sludge) is used for AD by Andigestion.
11	**Waste water buffer storage** In order to prevent uncontrolled emissions to water, BAT is to provide an appropriate buffer storage capacity for waste water.	**CC**	The operator has provided information to support compliance with BATc 11. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 11. The operator confirmed the site has 3 balance tanks prior to the AD plant that serve as buffer storage capacity. The tanks help homogenise any fluctuations in pH. Each tank has a maximum individual capacity of 400m^3. Any uncontrolled releases can be captured by bunding around the tanks. There is one emission point to surface water (W1). The operator has confirmed this has been sealed up and surface water is currently directed to the ETP prior to discharge to sewer. They have requested W1 be retained within the permit although state there is no plan to reopen the discharge. If it was a new pipe would be put in place with *"control systems fitted to BAT".*

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12	**Emissions to water – treatment** In order to reduce emissions to water, BAT is to use an appropriate combination of the techniques given below. Preliminary, primary and general treatment (a) Equalisation (b) Neutralisation (c) Physical separate (eg screens, sieves, primary settlement tanks etc) Aerobic and/or anaerobic treatment (secondary treatment) (d) Aerobic and/or anaerobic treatment (eg activated sludge, aerobic lagoon etc) (e) Nitification and/or denitrification (f) Partial nitration - anaerobic ammonium oxidation Phosphorus recovery and/or removal (g) Phosphorus recovery as struvite (h) Precipitation (i) Enhanced biological phosphorus removal Final solids removal (j) Coagulation and flocculation (k) Sedimentation (l) Filtration (eg sand filtration, microfiltration, ultrafiltration) (m) Flotation	**CC**	The operator has provided information to support compliance with BATc 12. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 12. The operator treats process effluent on site within the permitted Effluent Treatment Plant. Waste is first treated by sieve filters and balance tanks prior to Dissolved Air Flotation (DAF). Secondary biological treatment is carried out by the AD plant. Both discharge to foul sewer at S1.
12	**Emissions to water – treatment** **BAT-associated emission levels (BAT-AELs) for direct emissions to a receiving water body** 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)	**N/A**	The site discharges process effluent to the foul sewer, there are no direct discharges of effluent to the water course, as such BAT-AELs do not apply. We are therefore satisfied that BAT AELs associated with BATc 12 is not applicable for this site.

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
	Note: 125mg/l COD for dairy sites **Note: 4mg/l TP for dairy sites**		
13	**Noise management plan** 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: - a protocol containing actions and timelines; - a protocol for conducting noise emissions monitoring; - a protocol for response to identified noise events, eg complaints; - a noise reduction programme designed to identify the source(s), to measure/estimate noise and vibration exposure, to characterise the contributions of the sources and to implement prevention and/or reduction measures.	**N/A**	A noise management plan is only required where noise nuisance at sensitive receptors is expected or has been substantiated. There have been no substantiated noise nuisance from the site therefore an NMP is not a requirement for this site. We are satisfied that BATc 13 is not applicable to this site.
14	**Noise management** In order to prevent or, where that is not practicable, to reduce noise emissions, BAT is to use one or a combination of the techniques given below. (a) Appropriate location of equipment and buildings (b) Operational measures (c) Low-noise equipment (d) Noise control equipment (e) Noise abatement	**CC**	The operator has provided information to support compliance with BATc 14. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 14. The operator confirmed they undertook an Environmental Noise Survey in 2020 to evaluate the impact of noise produced on site on the surrounding area. They state the report concluded that the site did not significantly impact the surroundings however it made the following recommendations: • Locate pumps and motors internally. If located outside, noise reduction measures such as anti-vibratory resilient mounts should be used • Closing doors and windows where possible • Carry out routine maintenance on the equipment to ensure equipment is used in good working order with no

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
			loose fittings or noisy unlubricated moving parts • Use low-noise equipment such as "Quiet Fan Technology" to minimise noise production of process fans.
15	**Odour Management** In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to set up, implement and regularly review an odour management plan, as part of the environmental management system (see BAT 1), that includes all of the following elements: - a protocol containing actions and timelines; - a protocol for conducting odour monitoring. - a protocol for response to identified odour incidents eg complaints; - an odour prevention and reduction programme designed to identify the source(s); to measure/estimate odour exposure: to characterise the contributions of the sources; and to implement prevention and/or reduction measures.	**N/A**	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. We are therefore satisfied that BATc 15 is not applicable for this site.
	DAIRY SECTOR BAT CONCLUSIONS (BAT 21-23)		
21	**Energy efficiency – Dairy Sector**	**CC**	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. The operator has confirmed they use an energy efficient homogeniser.

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	In order to increase energy efficiency, BAT is to use an appropriate combination of the techniques specified in BAT 6 and of the techniques given below.		

Technique		Description
(a)	Partial milk homogenisation	The cream is homogenised together with a small proportion of skimmed milk. The size of the homogeniser can be significantly reduced, leading to energy savings.
(b)	Energy-efficient homogeniser	The homogeniser's working pressure is reduced through optimised design and thus the associated electrical energy needed to drive the system is also reduced.
(c)	Use of continuous pasteurisers	Flow-through heat exchangers are used (e.g. tubular, plate and frame). The pasteurisation time is much shorter than that of batch systems.
(d)	Regenerative heat exchange in pasteurisation	The incoming milk is preheated by the hot milk leaving the pasteurisation section.
(e)	Ultra-high-temperature (UHT) processing of milk without intermediate pasteurisation	UHT milk is produced in one step from raw milk, thus avoiding the energy needed for pasteurisation.
(f)	Multi-stage drying in powder production	A spray-drying process is used in combination with a downstream dryer, e.g. fluidised bed dryer.
(g)	Precooling of ice-water	When ice-water is used, the returning ice-water is precooled (e.g. with a plate heat exchanger), prior to final cooling in an accumulating ice-water tank with a coil evaporator.

Applicable in addition to BAT6

<table>
<tr><th>BATC No.</th><th>Summary of BAT Conclusion requirement for Food, Drink and Milk Industries</th><th>Status
NA/ CC / FC / NC</th><th>Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement</th></tr>
<tr><td>22</td><td>In order to reduce the quantity of waste sent for disposal, BAT is to use one or a combination of the techniques given below.

<table>
<tr><th colspan="2">Technique</th><th>Description</th></tr>
<tr><td colspan="3">Techniques related to the use of centrifuges</td></tr>
<tr><td>(a)</td><td>Optimised operation of centrifuges</td><td>Operation of centrifuges according to their specifications to minimise the rejection of product.</td></tr>
<tr><td colspan="3">Techniques related to butter production</td></tr>
<tr><td>(b)</td><td>Rinsing of the cream heater with skimmed milk or water</td><td>Rinsing of the cream heater with skimmed milk or water which is then recovered and reused, before the cleaning operations.</td></tr>
<tr><td colspan="3">Techniques related to ice cream production</td></tr>
<tr><td>(c)</td><td>Continuous freezing of ice cream</td><td>Continuous freezing of ice cream using optimised start-up procedures and control loops that reduce the frequency of stoppages.</td></tr>
<tr><td colspan="3">Techniques related to cheese production</td></tr>
<tr><td>(d)</td><td>Minimisation of the generation of acid whey</td><td>Whey from the manufacture of acid-type cheeses (e.g. cottage cheese, quark and mozzarella) is processed as quickly as possible to reduce the formation of lactic acid.</td></tr>
<tr><td>(e)</td><td>Recovery and use of whey</td><td>Whey is recovered (if necessary using techniques such as evaporation or membrane filtration) and used, e.g. to produce whey powder, demineralised whey powder, whey protein concentrates or lactose. Whey and whey concentrates can also be used as animal feed or as a carbon source in a biogas plant.</td></tr>
</table></td><td>CC</td><td>The operator has provided information to support compliance with BATc 22. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 22.

The operator confirmed the only technique applicable to the site is the continuous freezing process. They confirmed this is achieved through an optimised start-up procedure and control loops to reduce the frequency of process stoppages.

Additionally, the site reduces ice cream waste by reworking ice cream that did not meet the customer quality standards (such as misshapen product) back into the process.</td></tr>
<tr><td>23</td><td>In order to reduce channelled dust emissions to air from drying, BAT is to use one or a combination of the techniques given below.

<table>
<tr><th colspan="2">Technique</th><th>Description</th><th>Applicability</th></tr>
<tr><td>(a)</td><td>Bag filter</td><td rowspan="3">See Section 14.2 Page 34 of the Bref</td><td>May not be applicable to the abatement of sticky dust.</td></tr>
<tr><td>(b)</td><td>Cyclone</td><td rowspan="2">Generally applicable.</td></tr>
<tr><td>(c)</td><td>Wet scrubber</td></tr>
</table>
The associated monitoring is given in BAT 5.</td><td>N/A</td><td>We are satisfied that BATc 23 is not applicable to this Installation.

The Operator has confirmed that no drying operations as described by BATc 23 are undertaken at this installation.</td></tr>
</table>

<table>
<tr><th>BATC No.</th><th>Summary of BAT Conclusion requirement for Food, Drink and Milk Industries</th><th>Status
NA/ CC / FC / NC</th><th>Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement</th></tr>
<tr><td>23</td><td>BAT-associated emission level (BAT-AEL) for channelled dust emissions to air from drying

<table><tr><td>Parameter</td><td>Description</td><td>BAT-AEL (average over the sampling period)</td></tr><tr><td>Dust</td><td>Mg/Nm^3</td><td><2-10 (1)</td></tr><tr><td colspan="3">(1) The upper end of the range is 20 mg/Nm^3 for drying of demineralised whey powder, casein and lactose.</td></tr></table></td><td>N/A</td><td>We are satisfied that the BAT-AEL is not applicable to this installation.

This BAT-AEL is applicable only to dust emissions from production processes, as detailed above dust is not released to air.</td></tr>
<tr><td colspan="2">Dairy Sector Environmental Performance Levels</td><td></td><td></td></tr>
<tr><td>EPL</td><td>Environmental Performance Level – Energy consumption for the dairy sector

<table><tr><td>Main product (at least 80 % of the production)</td><td>Unit</td><td>Specific energy consumption (yearly average)</td></tr><tr><td>Market milk</td><td rowspan="4">MWh/tonne of raw materials</td><td>0.1-0.6</td></tr><tr><td>Cheese</td><td>0.10-0.22 (1)</td></tr><tr><td>Powder</td><td>0.2-0.5</td></tr><tr><td>Fermented milk</td><td>0.2-1.6</td></tr><tr><td colspan="3">(1) The specific energy consumption level may not apply when raw materials other than milk are used.</td></tr></table></td><td>N/A</td><td>The operator does not manufacture any of the stated products, we are therefore satisfied the EPL for energy efficiency does not apply to the installation.</td></tr>
<tr><td>EPL</td><td>Environmental Performance Level – Specific waste water discharge for the dairy sector

<table><tr><td>Main product (at least 80 % of the production)</td><td>Unit</td><td>Specific waste water discharge (yearly average)</td></tr><tr><td>Market milk</td><td rowspan="3">m^3/tonne of raw materials</td><td>0.3 - 3.0</td></tr><tr><td>Cheese</td><td>0.75 - 2.5</td></tr><tr><td>Powder</td><td>1.2 – 2.7</td></tr></table></td><td>N/A</td><td>The operator does not manufacture any of the stated products, we are therefore satisfied the EPL for waste water discharge does not apply to the installation.</td></tr>
</table>

<table>
<tr><th>BATC No.</th><th>Summary of BAT Conclusion requirement for Waste Treatment</th><th>Status
NA/ CC / FC / NC</th><th>Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement</th></tr>
<tr><td>15</td><td>BAT is to use flaring only for safety reasons or for non-routine operating conditions (e.g. start-ups, shutdowns) by using both of the techniques given below.
<table><tr><th colspan="2">Technique</th><th>Description</th><th>Applicability</th></tr><tr><td>a.</td><td>Correct plant design</td><td>This includes the provision of a gas recovery system with sufficient capacity and the use of high-integrity relief valves.</td><td>Generally applicable to new plants.
A gas recovery system may be retrofitted in existing plants.</td></tr><tr><td>b.</td><td>Plant management</td><td>This includes balancing the gas system and using advanced process control.</td><td>Generally applicable.</td></tr></table></td><td>CC</td><td>The operator has provided information to support compliance with BATc 15. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 15.

The operator has confirmed that a new biogas storage tank has been installed and will be commissioned when biogas is being produced. This will ensure flaring only takes place in an emergency.

Emergency use only has been conditioned within the permit and IC10 retained whilst biogas utilization on site comes on line.

The operator provided their biogas control document which provides details of the gas balancing systems.</td></tr>
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<table>
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NA/ CC / FC / NC</th><th>Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement</th></tr>
<tr><td>16</td><td>In order to reduce emissions to air from flares when flaring is unavoidable, BAT is to use both of the techniques given below.
<table><tr><th colspan="2">Technique</th><th>Description</th><th>Applicability</th></tr><tr><td>a.</td><td>Correct design of flaring devices</td><td>Optimisation of height and pressure, assistance by steam, air or gas, type of flare tips, etc., to enable smokeless and reliable operation and to ensure the efficient combustion of excess gases.</td><td>Generally applicable to new flares. In existing plants, applicability may be restricted, e.g. due to maintenance time availability.</td></tr><tr><td>b.</td><td>Monitoring and recording as part of flare management</td><td>This includes continuous monitoring of the quantity of gas sent to flaring. It may include estimations of other parameters (e.g. composition of gas flow, heat content, ratio of assistance, velocity, purge gas flow rate, pollutant emissions (e.g. NO_x, CO, hydrocarbons), noise). The recording of flaring events usually includes the duration and number of events and allows for the quantification of emissions and the potential prevention of future flaring events.</td><td>Generally applicable.</td></tr></table></td><td>CC</td><td>The operator has provided information to support compliance with BATc 16. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 16.

Flare is 5m heigh with 2m flare tip, pressure operated at start 35mbar to stop 7mbar. This is to allow continuous flaring to ensure complete combustion and constant operation of equipment rather than stop/starting.

The. flare tip is monitored for colour and smoke content. They state no smoke has ever been recorded. 5 Breakdowns have been recorded in a 12 year period – 1. seized Back Pressure Regulator 2. Low pressure switch failure 3. Condensate trap blockage 4. Loss of stage burning 5. Thermocouple worn.

The raw biogas flow is continuously monitored. Biogas volume is also calculated via analysis loading rate.</td></tr>
</table>

<table>
<tr><th>BATC No.</th><th>Summary of BAT Conclusion requirement for Waste Treatment</th><th>Status
NA/ CC / FC / NC</th><th>Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement</th></tr>
<tr><td>21</td><td>In order to prevent or limit the environmental consequences of accidents and incidents, BAT is to use all of the techniques given below, as part of the accident management plan (see BAT 1).

<table><tr><th colspan="2">Technique</th><th>Description</th></tr><tr><td>a.</td><td>Protection measures</td><td>These include measures such as:
— protection of the plant against malevolent acts;
— fire and explosion protection system, containing equipment for prevention, detection, and extinction;
— accessibility and operability of relevant control equipment in emergency situations.</td></tr><tr><td>b.</td><td>Management of incidental/accidental emissions</td><td>Procedures are established and technical provisions are in place to manage (in terms of possible containment) emissions from accidents and incidents such as emissions from spillages, firefighting water, or safety valves.</td></tr><tr><td>c.</td><td>Incident/accident registration and assessment system</td><td>This includes techniques such as:
— a log/diary to record all accidents, incidents, changes to procedures and the findings of inspections;
— procedures to identify, respond to and learn from such incidents and accidents.</td></tr></table></td><td>CC</td><td>The operator has provided information to support compliance with BATc 21. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 21.

The operator has confirmed they have an Accident and Incident Management Plan in place which covers:

Plant operation, key features, roles, responsibilities, training and drills along with the purpose to Identify the events or failures that could cause damage to the system, staff, environment or local community. The emergency procedure covers breakdowns, abnormal general operations, accidents/incidents including low and high pressure biogas leak, explosion and fire, chemical spills, pipe and tank leaks, pipework blockages.

Protection measures are in place for:
- Malevolent actions
- Fire and explosion
- Clarified access routes and remote operation of equipment in event of emergency situation

Accidents are logged as part of a site wide system, Incidents as well as control changes are logged within the department log book.</td></tr>
</table>

BATC No.	Summary of BAT Conclusion requirement for Waste Treatment	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
38	In order to reduce emissions to air and to improve the overall environmental performance, BAT is to monitor and/or control the key waste and process parameters. Implementation of a manual and/or automatic monitoring system to: • ensure a stable digester operation; • minimise operational difficulties, such as foaming, which may lead to odour emissions; • provide sufficient early warning of system failures which may lead to a loss of containment and explosions. This includes monitoring and/or control of key waste and process parameters, e.g.: • pH and alkalinity of the digester feed; • digester operating temperature; • hydraulic and organic loading rates of the digester feed; • concentration of volatile fatty acids (VFA) and ammonia within the digester and digestate; • biogas quantity, composition (e.g. H2S) and pressure; • liquid and foam levels in the digester.	**CC**	The operator has provided information to support compliance with BATc 38. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 38. The operator confirmed the waste treatment plant on site has an automatic system for continuous monitoring of pH, temperature, tank level, flow, pressure, biogas pressure and flow. Manual monitoring through laboratory analysis is undertaken for COD, VFA, TSS, pH, TN, NH3, PO4, Alkalinity, Manual Biogas composition. They consider due to the digester technology foaming should not be an issue, foaming can be detected via a sample line on recirculation loop as well as the explosion hatch on the digester roof. Setpoints are interlinked with permissive values that interlock when out of specification to protect the plant from entering into an unsafe operational state.

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 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.

For the dairy sector the threshold for the activity is based on the quantity of milk received at the site. We have included a daily limit of the volume of milk permitted at the site 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.

Whilst the volume of raw milk permitted at the site has increased since the previous variation we are satisfied that the associated risks have not changed, due to the effluent treatment plant capacity being assessed when originally permitted.

Waste treatment

The Operator uses anaerobic digestion (AD) to treat the process effluent from the production of ice cream prior to discharge to the foul sewer. As a part of the permit review the Environment Agency has taken the opportunity to review the permit conditions for this activity. Where the permit doesn’t already include the additional directly associate activities (DAAs) or processing monitoring requirements (Table S3.4) we have amended the permit to include them. The processing monitoring includes monitoring of biogas, leak detection, flare operation and onsite storage and containment of digester tanks and sludge tanks.

In addition we have assessed the waste treatment activity against the BAT Conclusions for Waste Treatment published 10th August 2018 in the Official Journal of the European Union. Where the site has not be able to demonstrate compliance with the relevant BAT conclusions additional improvement conditions have been added See Improvement condition(s) in Annex 3 of this decision document.

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:

Combined heat and power (CHP) engines

1. Rated thermal input (MW) of the medium combustion plant.	5.67 MWth
2. Type of the medium combustion plant (diesel engine, gas turbine, dual fuel engine, other engine or other medium combustion plant).	CHP Gas engine
3. Type and share of fuels used according to the fuel categories laid down in Annex II.	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.	March 2010

Boilers

	Boiler 1	Boiler 2
1. Rated thermal input (MW) of the medium combustion plant.	5.69 MWth	5.69 MWth
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 with gas oil as back up	Natural gas with gas oil as back up. From Spring 2024 this will run on a blend of natural gas and biogas.
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	June 2003	Jan 1991

started before 20 December 2018.		

We have reviewed the information provided and we consider that the declared combustion plant qualify as “existing” medium combustion plant. However once running on a blend of biogas and natural gas boiler 2 will be considered “new” with emission limits and monitoring requirements required within 4 months of operation.

For existing medium combustion plant with a rated thermal input greater than 5 MW, the emission limit values set out in tables 2 and 3 of Part 1 of Annex II MCPD shall apply from 1 January 2025.

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 condition report (Application Site Report, March 2005). The site condition report included a report on the baseline conditions as required by Article 22. We reviewed that report and considered that it adequately described the condition of the soil and groundwater at that time.

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 assessment is appended to the above site condition document, submitted March 2005. The operator confirms it is in the process of being updated and appears to be in hand.

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

Containment

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

The Operator provided details of all tanks;

- Tank reference/name
- Contents
- Capacity (litres)
- Location
- Construction material(s) of each tank
- The bunding specification including
    - Whether the tank is bunded
    - If the bund is shared with other tanks
    - The capacity of the bund
    - The bund capacity as % of tank capacity
    - Construction material of the bund
    - Whether the bund has a drain point
    - Whether any pipes penetrate the bund wall

- Details of overfill prevention
- Drainage arrangements outside of bunded areas
- Tank filling/emptying mitigation measures (drips/splashes)
- Leak detection measures
- Details of when last bund integrity test was carried out
- Maintenance measures in place for tank and bund (inspections)
- How the bund is emptied
- Details of tertiary containment

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

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

Annex 3: Improvement Conditions

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

Previous improvement conditions marked as complete in the previous permit.

Superseded Improvement Conditions – Removed from permit as marked as "complete"	
Reference	**Improvement Condition**
IC1	The Operator shall ensure that the storage facilities for caustic soda, detergent, cleaning chemicals and kalic (calcium hydroxide) are adequately bunded. The Operator shall provide the Agency with a written report detailing the capacity, construction material, and integrity of each bund.
IC2	The Operator shall undertake a review of the condition of the effluent drainage system using appropriate methodologies and techniques to verify the integrity of the system, and develop an action plan based on the findings of the review. The operator shall provide a written report of the findings to the Agency.
IC3	The Operator shall demonstrate to the Agency that the instrumentation used to monitor continuously and record the pH of the effluent at release point S1 complies with the relevant MCERTS standards or other standards as agreed by the Agency. The Operator shall provide a report in writing to the Agency detailing the monitoring method used and an assessment of the method with the requirements given in the MCERTS standard "Continuous water monitoring equipment, Part 2: Performance standards for on-line analysers" version 1, Feb 2003.
IC4	The Operator shall demonstrate to the Agency that the flow meter installed at S1 is fit for purpose by comparing the manufacturers stated performance of the flow meter with the performance criteria for equivalent equipment having an MCERTs certificate as given in the document "Continuous water monitoring equipment part 3: Performance standards for water flow meters version 1, February 2003. The Operator shall also assess the method for effluent flow with the requirements given in the MCERTs standard "Minimum requirements for the self-monitoring of effluent flow" version 2, Aug 2004.
IC5	The Operator shall undertake an assessment of the refrigeration plant, this assessment to include: • An audit of repair and maintenance procedures taking into account system takes down for maintenance. • A review of the operational procedures for the plant, in particular routine monitoring of plant performance. • A detailed mass-balance breakdown to demonstrate where current refrigerant fugitive losses are arising from. • An audit of measures to prevent fugitive releases, and a timeframe for implementation of those measures.

Superseded Improvement Conditions – Removed from permit as marked as "complete"	
Reference	**Improvement Condition**
	A report summarising the findings shall be submitted to the Agency, with any improvements identified. A timetable for implementation of proposed works shall be agreed with the Agency.
IC6	The Operator shall provide to the Agency a site closure plan in accordance with Condition 2.11 of this permit.
IC7	Following completion of the commissioning process for the CHP plant the Operator shall submit a report to the Environment Agency, which shall include: • A review of performance in terms of what the emission values are for releases to air set against the manufacturers guide values. • A review of performance in terms of energy efficiency against the target values in the application. Details of procedures developed during commissioning for achieving and demonstrating satisfactory process control.
IC8	Following completion of the commissioning process for the effluent treatment plant the operator shall submit a report to the Environment Agency, which shall include: • A review of performance in terms of what the emission values are for releases to sewer set against the manufacturers guide values. Details of procedures developed during commissioning for achieving and demonstrating satisfactory process control.
IC9	Following completion of the commissioning process for the biogas flare stack the operator shall submit a report to the Environment Agency, which shall include: • A review of performance in terms of what the emission values are for releases to air set against the manufacturers guide values. • A review of the characteristics of the biogas including methane and energy content. An options appraisal for the use of biogas including a timetable for the implementation of the improvements. The improvements shall be implemented by the operator from the date of approval in writing by the Environment Agency

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

Improvement programme requirements		
Reference	**Reason for inclusion**	**Justification of deadline**
IC10	The operator shall submit a written plan to the Environment Agency, in respect of biogas generated by the anaerobic treatment plant, which must contain: • A review of performance of the flare stack in terms of what the emission values are for releases to air from biogas combustion, set against the manufacturers guide values.	3 months from permit issue **Retained from previous variation and**

	• A review of the characteristics of the biogas including methane and energy content. • An options appraisal for the use of the biogas. • A plan for the use of the biogas, including designs/equipment required for the utilisation of the gas, anticipated recovery rate, environmental risk assessment (including odour) and relevant mitigation proposals, and a timetable for the implementation of the improvements. The plan must contain dates for the implementation of individual measures. The report shall be approved in writing by the Environment Agency. You must implement the plan as approved, and from the date stipulated by the Environment Agency.	**deadline amended. Biogas should be coming online March 2024**
IC11	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. 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
IC12	The operator shall establish the methane emissions in the exhaust gas from engines burning biogas and compare these to the manufacturer's specification and benchmark levels agreed in writing with the Environment Agency. The operator shall, as part of the methane leak detection and repair (LDAR) programme, develop proposals to assess the potential for methane slip and take corrective actions where emissions above the manufacturer's specification or appropriate benchmark levels are identified.	6 months from permit issue or other date as agreed in writing with the Environment Agency