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/QP3638EK

The Operator is: A. E. Rodda & Son Limited

The Installation is:

The Creamery

This Variation Notice number is: EPR/QP3638EK/V004

What this document is about

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

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

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

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

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

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

How this document is structured

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

1 Our decision

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

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

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

2 How we reached our decision

2.1 Requesting information to demonstrate compliance with BAT Conclusion techniques

We issued a Notice under Regulation 61(1) of the Environmental Permitting (England and Wales) Regulations 2016 (a Regulation 61 Notice) on 24/03/2022 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 14/07/2022.

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 Conclusions; BATc 1, BATc 2, BATc 4, BATc 6, BATc 7, BATc 9, BATc 15, BATc 21 and BATc 22.

The operator does not currently comply with the requirements of BATc 1, BATc 2, BATc 6, BATc 7, BATc 9, BATc 15, BATc 21 and BATc 22. In relation to these BAT Conclusions, the operator has committed compliance by 4 December 2023. We have therefore included Improvement Conditions IC2 and IC3 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 further information requests on 26/04/2023; clarification on all BATcs and EPLs and 26/05/2023; further clarification on BAT 8, 12(i) and (ii), 21 and 22. A copy of each further information requests was placed on our public register.

3 The legal framework

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

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

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

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

Annex 1: decision checklist regarding relevant BAT Conclusions

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

There are 37 BAT Conclusions.

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

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

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

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

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

NA - Not Applicable

CC - Currently Compliant

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

NC - Not Compliant

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
GEN	ERAL 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.	FC	We consider that the operator will be future compliant with BATc 1 (xvi) and (xvii) as well as developing an energy efficiency plan. Improvement condition IC2 has been included in the permit to achieve compliance (see Annex 3).
2	EMS Inventory of inputs & outputs. Increase resource efficiency and reduce emissions.	FC	We consider that the operator will be future compliant with BATc 2 (v).
	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.		Improvement condition IC2 has been included in the permit to achieve compliance (see Annex 3). The operator is undertaking an independent energy survey to include energy consumption and usage information into their EMS.
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. All process effluent is monitored at key locations for key process parameters.
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.	FC	The operator has provided information to support future compliance with BATc 4, where they are not current compliant. We have assessed the information provided and we are satisfied that the operator has demonstrated future compliance with BATc 4, where they are not currently compliant. The current permit contains monitoring frequencies that comply with the frequencies

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
			set out in BATc 4, with future-dated requirements for COD, TN, TP and TSS. The operator uses a UKAS accredited laboratory to analyse all samples and has a programme in place to ensure this covers all the requirements by 04/12/2023.
			All BAT monitoring frequencies will be dated to 4 th December 2023.
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 refer to BAT5 table in BATc and in accordance with EN standards.	NA	We are satisfied that BATc 5 is not applicable to this Installation. There are no air emissions released at the 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.	FC	We consider that the operator will be future compliant with BATc 6 (a) and (b) Improvement condition IC2 has been included in the permit to achieve compliance (see Annex 3). The operator is undertaking an energy saving opportunities survey to assess and adopt energy saving techniques, to implement an energy saving efficiency plan.
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. for detail of each technique, refer BAT 7 table in BATc (a) water recycling and/or reuse (b) Optimisation of water flow (c) Optimisation of water nozzles and hoses	FC	We consider that the operator will be future compliant with BATc 7, to implement a variety of techniques as detailed in the BATc. Improvement condition IC2 has been included in the permit to achieve compliance (see Annex 3).

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
	(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		The operator is undertaking water consumption and optimisation assessments.
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 for detail of each technique, refer BAT 8 table in BATc	CC	The operator has provided information to support compliance with BATc 8. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 8. The operator has demonstrated that they use a range of techniques to ensure all substances used on site are selected properly and appropriate equipment is used.
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.	FC	We consider that the operator will be future compliant with BATc 9. Improvement condition IC3 has been included in the permit to achieve compliance (see Annex 3).
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	cc	The operator has provided information to support compliance with BATc 10.

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
	 (b) Use of residues (c) Separation of residues (d) Recovery and reuse of residues from the pasteuriser (e) Phosphorus recovery as struvite (f) Use of waste water for land spreading 		We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 10. All organic residual wastes and residues are sent to Anaerobic Digestion.
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. Waste water tanks are appropriately bunded according to the CIRIA C736.
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	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 has demonstrated that they use a range of techniques as listed under BATc12. This included equalisation, coagulation and flocculation and aerobic treatment.

BATC No.	Summary of BAT Conclusion requirer Industries	nent for Food, Drink and Milk	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
	Final solids removal (j) Coagulation and flocculation (k) Sedimentation (l) Filtration (eg sand filtration, microfiltra (m) Flotation	tion, ultrafiltration)		
12	Emissions to water – treatment BAT-associated emission levels (BAT receiving water body	-AELs) for direct emissions to a	FC	The operator has provided information to support future compliance with BATc 12 (BAT-AELs). We have assessed the information provided and we are satisfied that the operator has demonstrated future compliance with BATc 12 (BAT-AELs) – the future dated
	Parameter	BAT-AEL (*) (*) (daily average)		requirements are due to the lack of monitoring
	Chemical oxygen demand (COD) (*) (*)	25-100 mg/l (°)	5	data, and links into BATc4.
	Total suspended solids (TSS)	4-50 mg/l (*)		The consistent and a state that Box letter 04
	Total nitrogen (TN)	2-20 mg/l (') (')	5 E	The operator has stated in their Regulation 61 response that they can achieve the emission
	Total phosphorus (TP)	0,2-2 mg/l (")	5	levels by 4 December 2023, supported by monitoring data.
	Note: 125mg/l COD for dairy sites Note: 4mg/l TP for dairy sites			The BAT-AELs for COD, TN and TP are future dated to apply from 4 December 2023. The extant permit limits for other parameters; TSS, BOD, and pH have been included in the varied permit
13	Noise management plan In order to prevent or, where that is not p BAT is to set up, implement and regularly part of the environmental management s the following elements: - a protocol containing actions and timeli - a protocol for conducting noise emissio - a protocol for response to identified noi	y review a noise management plan, as ystem (see BAT 1), that includes all of nes; ns monitoring;	NA	We are satisfied that BATc 13 is not applicable to this Installation. There are no recorded noise nuisances at sensitive receptors at the 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
	- 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. Note: BAT13 is only applicable where a noise nuisance at sensitive receptors is expected and/or has been substantiated.		
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 for detail of each technique, refer BAT 14 table in BATCs	FC	We consider that the operator will be future compliant with BATc 14. Improvement condition IC2 has been included in the permit to achieve compliance (see Annex 3). The operator is undertaking a noise and acoustic survey assessment to establish noise minimisation techniques.
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.	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. An Odour Management Plan as be implemented on site by the operator to mitigate fugitive odour emissions.
	DAIRY SECTOR BAT CONCLUSIONS (BAT 21-23)		
21	Energy efficiency – Dairy Sector	FC	We consider that the operator will be future compliant with BATc 22. The operator has demonstrated that they use regenerative heat exchange in pasteurisation, (technique d) however the BATc target is to

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
		nergy efficiency, BAT is to use an appropriate combination cified in BAT 6 and of the techniques given below.		use a combination of the described techniques.
Techni	íque	Description		Improvement condition IC2 has been included
(a)	Partial milk homoge- nisation	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.		in the permit to achieve compliance (see Annex 3).
(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,		The operator has stated that they currently use technique (d) as listed in the BATC and are
(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.		also undertaking an Energy Saving Opportunities Survey to identify further
(d)	Regenerative heat ex- change in pasteurisa- tion	The incoming milk is preheated by the hot milk leaving the pasteurisation section.		techniques to utilizse on site.
(c)	Ultra-high-tempera- ture (UHT) processing of milk without inter- mediate 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.		

ВАТС	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
22			the quantity of wast e techniques given b	e sent for disposal, BAT is to use one or a elow.	FC	We consider that the operator will be future compliant with BATc 22. Improvement condition IC2 has been included
		Technique		Description		in the permit to achieve compliance (see Annex 3).
	Techniq	pues related to the use	of centrifuges			Affilex 5).
	(a)	Optimised operat of centrifuges	Operation of centrifug of product.	es according to their specifications to minimise the rejection		Operator is undertaking Energy Saving Opportunities Survey to identify techniques to
	Techniq	ues related to butter	production	-		utilise on site.
	(b) Rinsing of the cream heater with skimmed milk or water Rinsing of the cream heat and reused, before the cle		mad Kinsing of the cream f	neater with skimmed milk or water which is then recovered cleaning operations.		
	Techniq	ues related to ice crea	ım production			
	(c) Continuous freezing of ice cream using optimised start-up procedures and control loops that reduce the frequency of stoppages.					
	Techniques related to cheese production					
	(d) Minimisation of the generation of acid whey 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.					
	(e) Recovery and use of whey 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.					
23	In order to reduce channelled dust emissions to air from drying, BAT is to use one or a combination of the techniques given below.			, ,	NA	We are satisfied that BATc 23 is not applicable to this Installation.
	Tecl	hnique	Description	Applicability		The operator has confirmed that no drying processes are used during their processes.
	(a)	Bag filter	See Section 14.2	May not be applicable to the abatement of sticky dust.		
	(b)	Cyclone	Page 34 of the	Generally applicable.		
	(c)	Wet scrubber	Diei			
	The a	associated m	onitoring is given in	BAT 5.		

BATC	Industries		sion requirement for Fo		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
23	BAT-associated from drying	emission I	evel (BAT-AEL) for chanr	elled dust emissions to air	NA	We are satisfied that BATc 23 is not applicable to this Installation.
	Parameter			verage over the riod)		The operator has confirmed that no drying processes are used during their processes.
	Dust	t Mg/Nm ³ <2-1				
	(1) The upper end casein and lactose	-	s 20 mg/Nm ³ for drying of demii	neralised whey powder,		
Dair	y Sector Environ	mental Pe	rformance Levels			
	Environmental sector	Performa	nce Level – Energy cons	sumption for the dairy	NA	We are satisfied that BAT-AEPL is not applicable to this Installation.
	Main product (at least 80 % of the production)		Unit	Specific energy consumption (yearly average)		The operator has provided evidence to show that the site specific energy consumption is currently 0.18 MWh/tonne of raw material. Although the main product is not listed in the
EPL	Market milk			0.1-0.6		EPL the operator has demonstrated that they
'	Cheese		MWh/tonne of raw	0.10-0.22 (1)		are energy efficient.
	Powder		materials	0.2-0.5		
	Fermented milk			0.2-1.6		
	(1) The specific energy c	onsumption level	may not apply when raw materials other th	an milk are used.		
	Environmental	Performa	nce Level – Specific was	te water discharge for the	NA	We are satisfied that BAT-AEPL is not applicable to this Installation.
	dairy sector					
			Unit	Specific waste water discharge (yearly average)		The product produced on site does not fall within the EPL categories however the
EPL	dairy sector Main product (at		Unit			The product produced on site does not fall within the EPL categories however the operator has provided information on the
EPL	dairy sector Main product (at % of the product		Unit m³/tonne of raw materials	discharge (yearly average)		The product produced on site does not fall within the EPL categories however the

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

Updating permit during permit review consolidation

- Introductory note
- Site plan
- Table S1.1 overhaul
 - Activity Reference (AR) renumbering
 - Updated listed activities
 - o 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.

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 volume of raw milk permitted at the site has not increased since the site was originally permitted and therefore the assessment for emissions to water remain valid for capacity threshold now placed within table S1.1 of the permit.

Emissions to Air

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

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

Implementing the requirements of the Medium Combustion Plant Directive

Existing Medium Combustion Plant (1MW-50MW)

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

• Number of combustion plant (CHP engines, back-up generators, boilers);

- Size of combustion plant rated thermal input (MWth)
- Date each combustion plant came into operation

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

Boilers

Rated thermal input (MW) of the medium combustion plant.	2.8 MWth
2. Type of the medium combustion plant (diesel engine, gas turbine, dual fuel engine, other engine or other medium combustion plant).	Boiler 1
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.	January 2008

We have reviewed the information provided and we consider that the declared combustion plant qualify 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.

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.

<u>Emissions to Water and implementing the requirements of the Water Framework Directive</u>

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 undergone a H1 assessment when the site was first permitted, however during this variation dosing of ferric chloride has been identified and as such we have requested an H1 assessment of these emissions to be submitted to the Environment Agency under an improvement condition (IC6).

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 Variation - EP004b - Land Quality baseline survey report 11681737 – April 2014) during the original application received on 30/05/2014. The site condition report included a report on the baseline conditions as required by Article 22. We reviewed that report and considered that it adequately described the condition of the soil and groundwater at that time.

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

Hazardous Substances

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

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

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

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

Climate Change Adaptation

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

The operator has 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 the each above ground tanks which contain potentially polluting liquids at the site, including tanks associated with the effluent treatment process where appliable.

The Operator provided details of all tanks;

- Tank reference/name
- Contents
- Capacity (litres)
- Location
- Construction material(s) of each tank
- The bunding specification including
 - Whether the tank is bunded
 - o 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.

We have set improvement conditions in the permit to address the deficiencies in the existing tanks and containment measures on site (IC4). 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).

We also consider that we need to set improvement conditions relating to changes in the permit not arising from the review of compliance with BAT conclusions. The justifications for these are provided in Annex 2 of this decision document.

Previous improvement conditions marked as complete in the previous permit.

Superseded Improvement Conditions – Removed from permit as marked as "complete"					
Reference	Improvement Condition	Date			
IC1	The operator shall establish and implement a management plan that ensures progress toward meeting water quality emission limits specified in Schedule 3 Table S3.2. This should be reviewed at a minimum frequency of six months until the limits come into force 1st December 2017. The results of each 6 month review shall be reported promptly and in writing to Environment agency.	Completed			
	 The management plan and 6 monthly reviews shall include but not be limited to: The establishment of a timetable for achieving improvements in effluent quality being discharged and meeting the emission limits; Assessment of progress against the timetable; Review of effluent quality and volume discharge and the performance of the integrated wetland effluent treatment systems; An appraisal and selection of options for further improvements and contingency actions necessary to ensure compliance with the limits. The operator shall provide written evidence of the implementation of this management plan within 2 months of permit issue. 				

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

Reference	Reason for inclusion	Justification of deadline
IC2	The operator shall submit, for approval by Environment Agency, a report setting out progress to achieving the 'Narrative' BAT where BAT is currently not achieved, but will be achieved before 4 December 2023. The report shall include, but not be limited to, the following:	04/12/2023
	1) Methodology for achieving BAT	
	2) Associated targets /timelines for reaching compliance by 4 December 2023.	
	3) Associated targets/timelines, if applicable, for reaching compliance by 4 December 2023.	
	The report shall address the BAT Conclusions for Food, Drink and Milk Industries with respect to BATc 1 (xvi and xvii), BATc 2 (v), BATc 6, BATc 7, BATc 21 and BATc 22.	
	Refer to BAT Conclusions for a full description of the BAT requirement.	
IC3	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.	04/12/2023
	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.	
	The plan should include, but not be limited to, the following:	
	 Where practicable, retro filling systems containing high GWP refrigerants e.g. R-404A with lower GWP alternatives as soon as possible. 	
	 An action log with timescales, for replacement of end-of-life equipment using refrigerants with the lowest practicable GWP. 	

IC4	The Operator shall undertake a survey of the primary, secondary and tertiary containment at the site and review measures against relevant standard including:	12 months from date of issue
	CIRIA Containment systems for the prevention of pollution (C736) – Secondary, tertiary and other measures for industrial and commercial premises,	
	EEMUA 159 - Above ground flat bottomed storage tanks	
	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	
	current containment measures	
	any deficiencies identified in comparison to relevant standards,	
	improvements proposed	
	time scale for implementation of improvements.	
	The operator shall implement the proposed improvements in line with the timescales agreed by the Environment Agency.	
IC5	The operator shall review and update the H1 risk assessment for emissions to water, specifically the effect of Ferric Chloride on the discharge, at the capacity levels stated within table S1.1 of this permit. The H1 shall be submitted to the Environment Agency for review.	12 months from date of issue
	If the concentration of emissions do not screen out as insignificant, then additional monitoring will be required for those parameters. Where the screening shows an impact that may exceed an EQS; the operator shall confirm the measures implemented to ensure no deterioration in water quality, including but not limited to minimisation methods, appropriate measures, and monitoring.	
IC6	The Operator shall review the use of the Cationic Polymer on site and implement a programme to replace they with an alternative less harmful substance or process.	3 months from date of issue
	The programme shall include (but not be limited to):	
	 alternative chemical(s) or process associated impact assessment(s) for the alternative chemical(s) or process. detail any commissioning required for alternative chemical(s) or process. 	
	Along with a timetable for implementing the changes and this shall be agreed in writing by the Environment Agency prior to implementation.	