# 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/LP3738XP

The Operator is: Yeo Valley Farms (Production) Limited

The Installation is: Cannington Creamery
This Variation Notice number is: EPR/LP3738XP/V003

## What this document is about

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

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

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

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

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

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

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# 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

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## 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 25/07/2022.

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.

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# 2.2 Review of our own information in respect to the capability of the Installation to meet revised standards included in the BAT Conclusions document.

Based on our records and previous experience in the regulation of the installation we consider that the Operator will be able to comply with the techniques and standards described in the BAT Conclusions other than for those techniques and requirements described in BAT Conclusion 4, 8 and 12-AEL. The Operator does not currently comply with the requirements of BATc 4, 8 and 12-AEL. In relation to this BAT Conclusion, the operator has committed compliance by 4 December 2023. We have therefore included Improvement Conditions 6, 7 and 8 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 requests on 29/12/2023 regarding Waste & Resources Action Programme, ETP, Noise Management Techniques, Underground Structures, . 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.

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## 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

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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	IERAL 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.	сс	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 an EMS externally accredited to ISO14001 standard.
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.	СС	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 future compliance with BATc 2.  The operator has information regarding:  Part of Waste & resources action program  Characteristics of the waste water streams Simplified process flow sheets Average concentration and load values of relevant pollutants
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).	СС	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 future compliance with BATc 3.  The operator conducts daily monitoring of:  • Volume, COD, ammoniacal nitrogen, suspended solids, pH, and oil and grease.  Following the on-site biological and physicochemical effluent treatment, this is discharged to Cannington Brook.
4	Monitoring emissions to water to the required frequencies and standards.	FC	The operator has provided information to support compliance with BATc 4. We have

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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
	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		assessed the information provided and we are not satisfied that the operator has demonstrated compliance with BATc 4.
	ensure the provision of data of an equivalent scientific quality.		The operator is currently monitoring the following parameters as per their current permit:
			Flow, BOD, ammoniacal nitrogen, SS, pH. COD
			The operator is not monitoring:
			TN and TP
			We consider that the operator will be future compliant with BATc 4. Improvement Condition 6 has been included in the permit to achieve compliance with BATc 4 (see Annex 3).
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.	NA	We are satisfied that BATc 5 is not applicable to this Installation. There are no channelled emissions to air associated with this installation.
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.	СС	The operator has provided information to support compliance with BATc 6. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 6.
			The operator is currently using or in the proves of implementing:
			<ul> <li>Energy efficiency plan</li> <li>Burner regulation and control</li> <li>LED lighting</li> <li>Optimisation of steam distribution</li> <li>Process control systems</li> <li>Insulation to prevent heat loss</li> <li>Variable speed drivers</li> </ul>

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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
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 implemented:  • Water flow optimisation • Optimised water nozzles and hoses • CIP is in use • Low pressure foam is used • Optimisation of equipment design • Timely cleaning
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	FC	The operator has provided information to support compliance with BATc 7. We have assessed the information provided and we are not satisfied that the operator has demonstrated compliance with BATc 8.  The Operator is in the process of identifying less harmful alternatives and declares to be compliant by 04/12/2023.  We consider that the operator will be future compliant with BATc 8. Improvement Condition 6 has been included in the permit to achieve compliance with BATc 8 (see Annex 3).
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.

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BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
			The operator uses low GWP gases (R407A) in all areas of production and storage.  'Refrigerant gases CA' spreadsheet shows the reference number of machinery using this gas and volume.
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 (f) Use of waste water for land spreading	CC	The operator has provided information to support compliance with BATc 10. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 10.  The operator is using a waste hierarchy procedure in relation to waste produced on site that includes:  • Waste creation prevention system • Send suitable waste for animal feed production • Anaerobic digestion, composting, land-spreading • Incineration with and without heath recovery
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.  • There is current Hazard Risk Assessment of the relevant hazardous substances identified  • Risk assessment of uncontrolled emissions to water with no further actions identified  • Up to date drainage and release points map  • Emergency shut-off valves are used
12	Emissions to water – treatment	cc	The operator has provided information to support compliance with BATc 12. We have assessed the information provided and we are

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BATC No.	Summary of BAT Conclusion require Industries	ement 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
	In order to reduce emissions to water, I of the techniques given below.	BAT is to use an appropriate combination		satisfied that the operator has demonstrated compliance with BATc 12.
	Preliminary, primary and general treatm (a) Equalisation (b) Neutralisation (c) Physical separate (eg screens, sieved Aerobic and/or anaerobic treatment (seed) Aerobic and/or anaerobic treatment (e) Nitification and/or denitrification (f) Partial nitration - anaerobic ammonic Phosphorus recovery and/or removal (g) Phosphorus recovery as struvite (h) Precipitation (i) Enhanced biological phosphorus rentinal solids removal (j) Coagulation and flocculation (k) Sedimentation	es, primary settlement tanks etc) condary treatment) (eg activated sludge, aerobic lagoon etc) um oxidation		The operator is using the following treatment stages:
	(I) Filtration (eg sand filtration, microfiltr (m) Flotation	ation, ultrafiltration)		
12			FC	The operator has provided information to support compliance with BAT AEL. We have assessed the information provided and we are not satisfied that the operator has demonstrated compliance with BAT AEL.
	Parameter	BAT-AEL (1) (2) (daily average)		The operator has reported values only for:
	Chemical oxygen demand (COD) (3) (4)	25-100 mg/l ( <sup>5</sup> )		• COD – 124 mg/l
	Total suspended solids (TSS)	Total suspended solids (TSS) 4-50 mg/l (°)		• SS – 26 mg/l
	Total nitrogen (TN)	2-20 mg/l ( <sup>7</sup> ) ( <sup>8</sup> )		The current permit has no limits associated with these parameters, thus the following
	Total phosphorus (TP)	0,2-2 mg/l (°)		upper range limits will be included in the consolidated permit:
				<ul> <li>COD – 125 mg/l</li> <li>TN – 20 mg/l</li> </ul>

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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
			TP – 4 mg/l TSS is now replacing SS and keep exiting limit of 30 mg/l. We consider that the operator will be future compliant with BAT AELs. Improvement Condition 7 has been included in the permit to achieve compliance with BAT AEL (see Annex 3).
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.	NA	We are satisfied that BATc 13 is not applicable to this Installation.  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.
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.  • Equipment operation by experienced staff  • Provisions for noise control  • Noise Management Plan  • Inspection and maintenance of equipment
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:	NA	We are satisfied that BATc 15 is not applicable to this Installation.  An odour management plan is only required where odour nuisance at sensitive receptors is expected or has been substantiated. There

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BATC No.	Sumi	_	onclusion requirement 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
	- a pr - a pr - an c source of the	otocol for conductorol for respondence of the conductor o	g actions and timelines; cting odour monitoring. nse to identified odour incidents eg complaints; and reduction programme designed to identify the elestimate odour exposure: to characterise the contributions o implement prevention and/or reduction measures.		have been no substantiated odour nuisance from the site therefore an OMP is not a requirement for this site.  The operator has decided to put an OMP in place of its own volition but this has not been approved by the Environment Agency. This is now part of the site EMS and will be reviewed by the site officer during routine inspections.
	DAIR	Y SECTOR BA	T CONCLUSIONS (BAT 21-23)		
21	In ord		energy efficiency, BAT is to use an appropriate combination ecified in BAT 6 and of the techniques given below.	СС	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
	Techni	ique	Description	СО	compliance with BATc 21.
	(a)	(a) Partial milk 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.		The operator is using:	
	(b)			<ul><li>Partial milk homogenisation</li><li>Energy efficient homogeniser</li></ul>	
	(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.		<ul><li>Use of continuous pasteuriser</li><li>Regenerative heat exchange in</li></ul>
	(d) Regenerative heat ex- change in pasteurisa- tion The incoming milk is	The incoming milk is preheated by the hot milk leaving the pasteurisation section.		pasteurisation	
	(e)	(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.	UHT milk is produced in one step from raw milk, thus avoiding the energy needed for pasteurisation.		
	(f)	(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.				

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BATC No.	Indus	stries		ement 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
22	In order to reduce the quantity of waste sent for disposal, BAT is to combination of the techniques given below.			·	NA	We are satisfied that BATc 22 is not applicable to this Installation. The operator declared that none of the techniques described in this BATc
		Technique		Description		are applicable to yogurt manufacturing.
	Techniq	ues related to the use	of centrifuges			
	(a)	Optimised operat of centrifuges	ion Operation of centrifug of product.	es according to their specifications to minimise the rejection		
	Techniq	ues related to butter j	production			
	(b)	Rinsing of the cre heater with skims milk or water		eater with skimmed milk or water which is then recovered cleaning operations.		
	Techniq	ues related to ice crea	m production			
	(c) Continuous freezing of ice cream using optimised start-up procedures and control loops that reduce the frequency of stoppages.					
	Techniq	Techniques related to cheese production				
	(d)	Minimisation of t generation of acid whey	he Whey from the manuf il mozzarella) is processo acid.	acture of acid-type cheeses (e.g. cottage cheese, quark and ed as quickly as possible to reduce the formation of lactic		
	(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. The operator declared that
	Technique Description		Description	Applicability		drying process is not a technique used at this site.
	(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	1 0161			
	The a	associated m	onitoring is given in	BAT 5.		

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BATC	Industries		sion requirement for Foo		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	d emission	level (BAT-AEL) for chann	elled dust emissions to air	NA	We are satisfied that BATc 23 AEL is not applicable to this Installation. There are no
	Parameter	Descrip	otion BAT-AEL (av sampling per	rerage over the iod)		channelled emissions to air associated with this installation.
	Dust	Mg/Nm	<sup>3</sup> <2-10 <sup>(1)</sup>			
	(1) The upper end casein and lactos		is 20 mg/Nm <sup>3</sup> for drying of demin	eralised whey powder,		
Dair	y Sector Enviro	nmental Pe	erformance Levels			
	Environmenta sector	Environmental Performance Level – Energy consumption for the dairy sector				The operator has provided information to support compliance with the Energy-EPL. We have assessed the information provided and
	Main product (at least 80 Ur % of the production)		Unit Specific energy consumption (yearly average)			we are satisfied that the operator has demonstrated compliance with Energy-EPL.
EPL	Market milk			0.1-0.6		The operator has reported energy
•	Cheese		MWh/tonne of raw	0.10-0.22 (1)		consumption to be 0.3 MWh/t for Fermented milk product.
	Powder		materials	0.2-0.5		
	Fermented milk	ented milk		0.2-1.6		
	(1) The specific energy	consumption level	may not apply when raw materials other that	an milk are used.		
	Environmenta dairy sector	l Performa	nce Level – Specific was	te water discharge for the	СС	The operator has provided information to support compliance with the Wastewater
т		Main product (at least 80 Unit % of the production)		Specific waste water discharge (yearly average)		Discharge-EPL. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance
P	Market milk			0.3 - 3.0		with Wastewater Discharge-EPL
	Cheese		m <sup>3</sup> /tonne of raw materials	0.75 - 2.5		
	Powder			1.2 – 2.7		The operator has reported Wastewater discharge to be 2.17 m <sup>3</sup> /t.

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

#### Updating permit during permit review consolidation

List any administrative changes made to the permit for future reference

- Introductory note updated
- Site plan
- Table S1.1 overhaul
  - o Activity Reference (AR) renumbering
  - Updated listed activities
  - Addition of production capacity
  - o Directly associated activities (DAAs) standardisation

We have updated permit conditions to those in the current generic permit template as a part of permit consolidation. The conditions will provide the same level of protection as those in the previous permit.

#### **Capacity Threshold**

The Environment Agency is looking to draw a "line in the sand" for permitted production capacity; a common understanding between the Operator and regulator for the emissions associated with a (maximum) level of production, whereby the maximum emissions have been demonstrated as causing no significant environmental impact.

We have included a permitted production level (capacity) within table S1.1 of the permit for the section 6.8 listed activity and we need to be confident that the level of emissions associated with this production level have been demonstrated to be acceptable.

The Operator has completed a H1 assessment of emissions for typical figures of production at the time of permitting.

The existing H1 assessment of emissions of process effluent to sewer remains valid for the revised capacity threshold now placed within table S1.1 of the permit.

#### **Emissions to Air**

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

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

#### Implementing the requirements of the Medium Combustion Plant Directive

Existing Medium Combustion Plant (1MW-50MW)

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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.	1.6 MWth
2. Type of the medium combustion plant (diesel engine, gas turbine, dual fuel engine, other engine or other medium combustion plant).	Boiler x 1
3. Type and share of fuels used according to the fuel categories laid down in Annex II.	Natural Gas 100%
4. Date of the start of the operation of the medium combustion plant or, where the exact date of the start of the operation is unknown, proof of the fact that the operation started before 20 December 2018.	February 1984

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.

# 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

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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 risk assessment which does not includes a description of the condition of the site, and consideration of the possibility of soil and groundwater contamination at the installation. No site baseline condition was included in the submission.

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 / groundwater to be possible and monitoring is required for these hazardous substances.

The operator is required to submit a relevant hazardous substances monitoring plan for review to the Environment Agency via improvement condition (IC8).

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#### **Climate Change Adaptation**

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

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

However, the site is situated in a flood plain next to an Environment Agency flood alleviation scheme. EasiMap hydrology map showed that part of the Creamery and ETP are prone to 1:30 flooding events.

We do not consider the operator to have submitted a suitable climate change adaptation plan for the installation. We have included an improvement condition into the permit (IC9) to request a climate change adaptation plan is submitted by the operator for approval from the Environment Agency.

#### **Containment**

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

The Operator provided details of all tanks;

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

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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.

The Area Officer, following a site inspection carried out in January 2023, has observed that the ETP does not have a bund and areas around the tanks are laid to gravel. The 40 years old aeration tank has not had a thorough NDT and is located at 25 meters from Cannington Brook. The primary containment and transfer pipework need to be examined to an approved standard as currently there is no examination scheme in in place. Similarly, secondary containment needs to be asset to CIRIA C376.

We have set improvement conditions in the permit to address the deficiencies in the existing tanks and containment measures on site (IC10). 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).

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 provide written proposals to bund all above-ground tanks containing liquids whose spillage could be harmful to the environment. The proposals shall have regard to the requirements set out in section 2.2.5.5 of the sector guidance note IPPC S6.13, General Guidance for the Dairy and Milk Processing Sector, October 2003. The report shall include a time-tabled plan for the installation of individual measures required. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the report. The plan shall be implemented by the operator from the date of approval in writing by the Agency.			
IC2	The operator shall provide written proposals to reduce and record any fugitive emissions of refrigerant gases from site chilling systems. The proposals shall have regard to the requirements set out in section 2.2.4.1 of the sector guidance note IPPC S6.13 - General Guidance for the Dairy and Milk Processing Sector, October 2003. Where appropriate the plan shall contain dates for the implementation of individual measures. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the plan.			

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	The plan shall be implemented by the operator from the date of
	approval by the Agency
IC3	A written plan shall be submitted to the Agency for approval detailing the results of a
	survey of hard-standing, kerbing and secondary containment for raw material, intermediate
	product and waste storage areas and the measures to comply with the requirements of
	section 2.2.5 of the sector guidance note IPPC S6.13 -General Guidance for the Dairy and
	Milk Processing Sector, October 2003. Where appropriate the plan shall contain dates for
	the implementation of individual measures.
	The notification requirements of condition 2.5.2 shall be deemed to have been complied
	with on submission of the plan.
	The plan shall be implemented by the operator from the date of approval in writing by the Agency.
IC4	A written plan shall be submitted to the Agency for approval detailing the work to be undertaken to achieve MCERTS accreditation for effluent flow to release point W8 by 30 June 2009. Where appropriate the plan shall contain dates for the implementation of individual measures. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the plan. The plan shall be implemented by the operator from the date of approval by the Agency.
IC5	A written report shall be submitted to the Agency for approval detailing an assessment of
	the need for and the feasibility of installing an emergency system to prevent any on site
	spillage entering Cannington Brook. Where a need for such a system is identified the
	report shall include a time-tabled plan for the installation of individual measures required.
	The notification requirements of condition 2.5.2 shall be deemed to have been complied
	with on submission of the report.
	The plan shall be implemented by the operator from the date of approval in writing by the
	Agency

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

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Improveme	Improvement programme requirements			
Reference	Reason for inclusion	Justification of deadline		
IC6	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: 1) Methodology for achieving BAT 2) Associated targets /timelines for reaching compliance by 4 December 2023 3) Any alterations to the initial plan (in progress reports). The report shall address the BAT Conclusions for Food, Drink and Milk Industries with respect to BAT 4 and 8. Refer to BAT Conclusions for a full description of the BAT requirement.	04/12/2023		
IC7	The operator shall submit, for approval by the Environment Agency, a report setting out progress to achieving the BAT conclusion AELs where a derogation has been applied for and granted. The report shall include, but not be limited to, the following:  1) Current performance against the BAT-AELs. 2) Methodology for reaching the BAT-AELs. 3) Associated targets / timelines for reaching compliance by 04/12/2023 time limited date in granted derogation for emissions to water. 4) Any alterations to the initial plan (in progress reports). The report shall address the BAT Conclusions for Food, Drink and Milk industries with respect to the following:  • BAT 12 Table 1 (compliance with BAT-AELs for direct discharges to a receiving water body)	04/12/2023		
IC8	The operator shall produce a monitoring plan detailing how the management of relevant hazardous substances which did not screen out as low risk, based on the RHS baseline assessment, will be maintained and monitored to mitigate the risks of pollution. The plan shall be submitted for approval. The plan shall be implemented in accordance with the Environment Agency's written approval.	04/12/2023		

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IC9	The operator shall submit as climate change adaptation plan to the Environment Agency for approval.	12 months from permit issue
	The plan shall include, but not be limited to:	or other date as agreed in writing with the Environment Agency
	Details of how the installation has or could be affected by severe weather;	
	The scale of the impact of severe weather on the operations within the installation;	
	• An action plan and timetable for any improvements to be made to minimise the impact of severe weather at the installation.	
	The Operator shall implement any necessary improvements to a timetable agreed in writing with the Environment Agency.	
IC10	The Operator shall undertake a comprehensive review and assessment of the primary containment provisions onsite for tanks, pipework and associated primary containment infrastructure, by a suitably qualified person, against the relevant standards (such as EEMUA 159).	12 months from permit issue
	The operator shall submit a written report to the Environment Agency for approval which outlines the results of the review and provides details of:	
	current primary containment measures	
	<ul> <li>any deficiencies identified in comparison to relevant standards</li> </ul>	
	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, and incorporate an ongoing routine inspection and maintenance programme as part the EMS.	

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IC11 The Operator shall undertake a comprehensive review 12 months and assessment of the secondary and tertiary from permit containment provisions onsite, by a suitably qualified issue person, against the relevant standards (such as CIRIA C736). The operator shall submit a written report to the Environment Agency for approval which outlines the results of the review and provides details of: current secondary/tertiary 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, and incorporate an ongoing routine inspection and maintenance programme as part the EMS.

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