# 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/SP3835EK

The Operator is: Muller UK & Ireland Group LLP

The Installation is: Trafford Park Dairy
This Variation Notice number is: EPR/SP3835EK/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 4<sup>th</sup> December 2019 in the Official Journal of the European Union. In this decision document, we set out the reasoning for the consolidated variation notice that we have issued.

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

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

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

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

#### How this document is structured

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

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

#### 1 Our decision

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

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

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

#### 2 How we reached our decision

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

We issued a Notice under Regulation 61(1) of the Environmental Permitting (England and Wales) Regulations 2016 (a Regulation 61 Notice) on 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 26/07/2022.

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 Conclusion BATc 11 Buffer Capacity and BATc 12 Effluent Treatment. In relation to these BAT Conclusions, we do not fully agree with the Operator in respect of their current stated capability as recorded in their response to the Regulation 61 Notice. We have therefore included Improvement Conditions 9 and 10 in the Consolidated Variation Notice to ensure that the requirements of the BAT Conclusions are delivered within 3 and 12 months of the variation being issued.

#### 2.3 Requests for further information during determination

Although we were able to consider the Regulation 61 Notice response generally satisfactory at receipt, we did in fact need more information in order to complete our permit review assessment, and issued a further information request on the 16/04/2024 requesting BATc 6 energy efficiency plan, BATc 7 water saving techniques, BATc 9 refrigerants, BATc 11 buffer storage, BATc 12 effluent treatment, EPLs for waste water and energy, Medium Combustion Plant and RHS baseline.

We also requested additional information regarding the site's surface water drainage infrastructure. Surface water drainage (to the adjacent Manchester Ship Canal) had previously been controlled under the Water resources Act under consent 016992594 which dates back to 1994.

Clean uncontaminated surface water emissions are usually permitted within the installations permit. It is unusual to see separate consent and as part of the review, where possible we are bringing such emission points into the main installation permit.

We therefore assessed the site surface water drainage infrastructure as part of the permit review. Three separate drainage systems are in place – effluent (to foul sewer), contaminated surface water (collected from reception and tanker filling areas to foul sewer) and clean surface water. We are satisfied that only the clean surface water from roofs and external yard areas drains to the Manchester Ship Canal. As such these discharges have been bought into the installations permit and are referenced as W1, W2 and W3.

A copy of the further information request was placed on our public register.

#### 3 The legal framework

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

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

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

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

#### Annex 1: decision checklist regarding relevant BAT Conclusions

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

There are 37 BAT Conclusions.

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

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

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

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

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

NA - Not Applicable

**CC - Currently Compliant** 

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

**NC - Not Compliant** 

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
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 a EMS externally accredited to the ISO14001 standard which incorporates all the features described within BAT.
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 compliance with BATc 2.  The operator confirms the site tracks energy, raw material and water use along with waste
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	disposed of.  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.  The operator monitors continuously for effluent flow and pH. Chemical Oxygen Demand (COD) is monitored monthly.
4	Monitoring emissions to water to the required frequencies and standards.  BAT is to monitor emissions to water with at least the frequency given [refer to BAT 4 table in BATc] and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.	N/A	BATc 4 applies in the case of direct discharge of effluent to a water body. All process effluent from the site is discharged to sewer.  We are therefore satisfied that BATc 4 is not applicable for this site.

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	and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
N/A	The site only processes liquid milk products, no drying is undertaken at the site, as such the relevant BAT monitoring requirements for the diary sector do not apply.
	We are therefore satisfied that BATc 5 is not applicable for this site
CC	The operator has provided information to support compliance with BATc 6. We have assessed the information provided and we are not satisfied that the operator has demonstrated compliance with BATc 6  The operator confirms they are subject to ESOS assessment and track energy use and set benchmarks for future improvements. They also provided further documentation linking their Energy Management System through Net-zero strategy, Carbon Desktop platform, Energy performance Dashboard with improvements driven through their Cost Improvement Catalogue.  The operator has confirmed the following energy efficiency techniques are in use at the installation:  Boiler regulation and control Instalment of co-generation - CHP Energy efficient motors Lighting surveys to ensure effective illumination and LED replacement Annual steam survey Pre heat and feed water Process control systems Reducing compressed air system

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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
			<ul> <li>inspections and an annual survey are carried out.</li> <li>Reducing heat loss by insulation. Pipe cladding in place with inspection programme. Cladding in place and a survey to be carried out on single skinned walls and single pain glass.</li> <li>Variable speed drives.</li> </ul>
7	Water and wastewater minimisation In order to reduce water consumption and the volume of waste water discharged, BAT is to use BAT 7a and one or a combination of the techniques b to k given below.  (a) water recycling and/or reuse (b) Optimisation of water flow (c) Optimisation of water nozzles and hoses (d) Segregation of water streams Techniques related to cleaning operations: (e) Dry cleaning (f) Pigging system for pipes (g) High-pressure cleaning (h) Optimisation of chemical dosing and water use in cleaning-in-place (CIP) (i) Low-pressure foam and/or gel cleaning (j) Optimised design and construction of equipment and process areas (k) Cleaning of equipment as soon as possible	CC	The operator has provided information to support compliance with BATc 7. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 7.  The operator has confirmed the following water saving techniques are used on site:  • water recycling and/or reuse - CIP • Optimisation of water flow - Calibration of water flow meters • Optimisation of water nozzles and hoses • Segregation of water streams • Dry cleaning • High-pressure cleaning • Optimisation of chemical dosing and water reuse in cleaning-in-place (CIP) • Low-pressure foam and/or gel cleaning • Optimised design and construction of equipment and process areas (opex drives continuous improvement and change management process) • Cleaning of equipment as soon as possible - clean as you go policy and culture in place.
8	Prevent or reduce the use of harmful substances	СС	The operator has provided information to support compliance with BATc 8. 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
	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		assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 8.  The operator has confirmed the following techniques are used on site:  • Proper selection of cleaning chemicals and/or disinfectants with dilution control. The operator confirms they review the chemical inventory and use their risk and opportunities register to research where they can lower or eliminate hazardous chemicals.  • Reuse of cleaning chemicals in cleaning-in-place (CIP)  • Dry cleaning  • Optimised design and construction of equipment and process areas
9	Refrigerants In order to prevent emissions of ozone-depleting substances and of substances with a high global warming potential from cooling and freezing, BAT is to use refrigerants without ozone depletion potential and with a low global warming potential.	CC	The operator has provided information to support compliance with BATc 9. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 9.  The operator has confirmed that all systems associated with the manufacturing process are operated using ammonia.  They provided an inventory of their systems and explained the system associated with the manufacturing process comprises of 2 x cooling towers, 3 x Grasso compressors, 4 cooler units, and 2 heat exchangers. The system is a single loop which provides liquid ammonia to the 4 cooler units and heat exchangers.

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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
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 has confirmed they send waste for off-site anaerobic digestion and separate and use residues. They also separate and use residues from the pasteuriser.
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.	FC	The operator has provided information to support compliance with BATc 11. We have assessed the information provided and we are not satisfied that the operator has demonstrated compliance with BATc 11.  The site does not have an effluent treatment plant and the operator did not provide a discussion regarding their ability to contain effluent in the event of an emergency.  BAT requires operators to take responsibility for their effluent and have a means of capturing or preventing emergency emissions to the downstream treatment works. These minimum requirements are not in place and we have therefore included IC9 in order to achieve compliance.  The operator did however provide a detailed surface water drainage plan. As summarised above, we are satisfied there are sufficient protections to surface water including Penstocks and slam shut valves. Some of these protections involve diverting contaminants to the foul network.

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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
12	Emissions to water – treatment In order to reduce emissions to water, BAT is to use an appropriate combination of the techniques given below. Preliminary, primary and general treatment (a) Equalisation (b) Neutralisation (c) Physical separate (eg screens, sieves, primary settlement tanks etc) Aerobic and/or anaerobic treatment (secondary treatment) (d) Aerobic and/or anaerobic treatment (eg activated sludge, aerobic lagoon etc) (e) Nitification and/or denitrification (f) Partial nitration - anaerobic ammonium oxidation Phosphorus recovery and/or removal (g) Phosphorus recovery as struvite (h) Precipitation (i) Enhanced biological phosphorus removal Final solids removal (j) Coagulation and flocculation (k) Sedimentation (l) Filtration (eg sand filtration, microfiltration, ultrafiltration) (m) Flotation	FC	The operator has provided information to support compliance with BATc 12. We have assessed the information provided and we are not satisfied that the operator has demonstrated compliance with BATc 12.  No form of effluent treatment is undertaken on site. As above, BAT requires operators to take responsibility for their effluent. We have therefore included IC10 requiring the operator to review the current arrangements and make improvements if necessary.
13	Noise management plan In order to prevent or, where that is not practicable, to reduce noise emissions, BAT is to set up, implement and regularly review a noise management plan, as part of the environmental management system (see BAT 1), that includes all of the following elements:  - a protocol containing actions and timelines; - a protocol for conducting noise emissions monitoring; - a protocol for response to identified noise events, eg complaints; - a noise reduction programme designed to identify the source(s), to measure/estimate noise and vibration exposure, to characterise the contributions of the sources and to implement prevention and/or reduction measures.	N/A	A noise management plan is only required where noise nuisance at sensitive receptors is expected or has been substantiated. There have been no substantiated noise nuisance from the site therefore an NMP is not a requirement for this site.  We are satisfied that BATc 13 is not applicable to this site.

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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
14	Noise management In order to prevent or, where that is not practicable, to reduce noise emissions, BAT is to use one or a combination of the techniques given below.  (a) Appropriate location of equipment and buildings  (b) Operational measures  (c) Low-noise equipment  (d) Noise control equipment  (e) Noise abatement	CC	The operator has provided information to support compliance with BATc 14. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 14.  The operator has confirmed the following noise prevention measures are undertaken on site:  • Appropriate location of equipment and buildings • Maintenance programme • Noise control equipment - e.g. CHP engines located in soundproof compartments
15	Odour Management In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to set up, implement and regularly review an odour management plan, as part of the environmental management system (see BAT 1), that includes all of the following elements:  - a protocol containing actions and timelines;  - a protocol for conducting odour monitoring.  - a protocol for response to identified odour incidents eg complaints;  - an odour prevention and reduction programme designed to identify the source(s); to measure/estimate odour exposure: to characterise the contributions of the sources; and to implement prevention and/or reduction measures.	N/A	An odour management plan is only required where odour nuisance at sensitive receptors is expected or has been substantiated. There have been no substantiated odour nuisance from the site therefore an OMP is not a requirement for this site.  We are satisfied that BATc 15 is not applicable to this site.
21	DAIRY SECTOR BAT CONCLUSIONS (BAT 21-23)  Energy efficiency – Dairy Sector	CC	The operator has provided information to support compliance with BATc 21. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 21.  The operator has confirmed they use the following techniques on site:

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Indus	stries	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
		energy efficiency, BAT is to use an appropriate techniques specified in BAT 6 and of the techniques		Partial milk homogenisation. They homogenise the cream with a small
Techni	iique	Description		amount of milk before recombination
(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.		to minimise the size and energy of the
(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.		<ul><li>homogeniser plant</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 pasteurisation. 24/7 site operations including pasteurisers.</li> </ul>
(d)	Regenerative heat ex- change in pasteurisa- tion	The incoming milk is preheated by the hot milk leaving the pasteurisation section.		
(e)	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.		

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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
22			e the quantity of wation of the techniq	aste sent for disposal, BAT is to use ues given below.	N/A	We are satisfied that BATc 22 is not applicable to this Installation. The Operator has confirmed that none of the techniques
		Technique		Description		described by BATc 22 are used at this installation.
	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	1	
	Techniq	ues related to butter p	production			
	(b)	Rinsing of the cre heater with skimr milk or water		eater with skimmed milk or water which is then recovered cleaning operations.		
	Techniq	ues related to ice crea	m production		-	
	(c)	(c) Continuous freezing of ice cream using optimised start-up procedures and control loops that reduce the frequency of stoppages.			Ī	
	Techniq	ues related to cheese p	production		-	
	(d)	Minimisation of to generation of acid whey		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.		to N/A	We are satisfied that BATc 23 is not applicable to this Installation. The Operator has		
	Tec	hnique	Description	Applicability		confirmed that no drying operations as described by BATc 23 are undertaken at this
	(a)	Bag filter	See Section 14.2	May not be applicable to the abatement of sticky dust.		installation.
	(b)	Cyclone	Page 34 of the	Generally applicable.		
	(c)	Wet scrubber	Bref			
	The a	The associated monitoring is given in BAT 5.				
Dairy	y Sect	or Environm	ental Performance	Levels	<b>,</b>	

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BATC No.	Summary of BAT Conclu Industries	usion requirement for Foo	d, 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
	Environmental Performa sector	ince Level – Energy consi	umption for the dairy	cc	The operator has provided information to support compliance with the energy EPL. We have assessed the information provided and
EPL	Main product (at least 80 % of the production)	Unit	Specific energy consumption (yearly average)		we are satisfied that the operator has demonstrated compliance with the energy EPL for the dairy sector.  The operator provided information confirming the energy use figure for 2023 was 0.16 which is within the target range for market milk. The operator stated that the energy ratio includes
	Market milk		0.1-0.6		
	Cheese	MWh/tonne of raw	0.10-0.22 (1)	the energy use figure for 2023 was 0.16 is within the target range for market milk operator stated that the energy ratio incl both the dairy energy usage and blow	
	Powder	materials	0.2-0.5		
	Fermented milk		0.2-1.6		
	(1) The specific energy consumption leve	l may not apply when raw materials other than	n milk are used.		moulding and so usage may be lower for the
	Environmental Performa dairy sector	ınce Level – Specific wast	e water discharge for the	CC	The operator has provided information to support compliance with the waste water EPL.
m	Main product (at least 80 % of the production)	Unit	Specific waste water discharge (yearly average)		We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with the waste water discharge for the dairy sector.  The operator provided information confirming the discharge figure for 2023 was 0.46 which
22	Market milk		0.3 - 3.0		
	Cheese	m <sup>3</sup> /tonne of raw materials	0.75 - 2.5		
	Powder		1.2 – 2.7		
					is within the target range for market milk.

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

#### Updating permit during permit review consolidation

- Activity name
- Introductory note
- Site plan
- Table S1.1 overhaul
  - 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.

#### **Production/Capacity Threshold**

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

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

The operator stated the site capacity is 1350 tonnes per day. This is more than double the currently stated capacity of 12 million litres per week (605 tpd). We have retained the currently stated capacity as the discrepancy amounts to a substantial variation and cannot be adjusted as part of the Reg 61. The operator must apply for separate permit variation.

#### **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

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

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

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

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

#### Combined heat and power (CHP) engines

	CHP1	CHP2
Rated thermal input (MW) of the medium combustion plant.	2.4MWth	3.6MWth
2. Type of the medium combustion plant (diesel engine, gas turbine, dual fuel engine, other engine or other medium combustion plant).	CHP engine	CHP engine
3. Type and share of fuels used according to the fuel categories laid down in Annex II.	Natural gas	Natural gas
4. Date of the start of the operation of the medium combustion plant or, where the exact date of the start of the operation is unknown, proof of the fact that the operation started before 20 December 2018.	Summer 2023	Summer 2023

#### Boilers

	Boiler 1	Boiler 2
1. Rated thermal input (MW) of the medium	1.6MWth	1.6MWth
combustion plant.		
2. Type of the medium combustion plant	Steam boiler	Steam boiler
(diesel engine, gas turbine, dual fuel engine,		
other engine or other medium combustion		
plant).		
3. Type and share of fuels used according to	Natural gas	Natural gas
the fuel categories laid down in Annex II.		
4. Date of the start of the operation of the	Nov 1994	Nov 1994
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.		

We have reviewed the information provided and we consider that the declared boilers qualify as "existing" medium combustion plant. The CHP engines were permitted as new under permit variation (V003) in June 2023 with monitoring requirements and ELVs retained.

V003 however detailed the thermal power of the CHPs incorrectly, stating them to be 1MWth and 1.5MWth. We consider this to be an admin error, incorrectly referencing the electrical output (MWe) of the engines as the values of thermal input (MWth). The thermal input converts to approximately 2.4MWth and 3.6MWth.

The site lies within an industrial urban area, close to an Air Quality Management Zone. We have reviewed the operators Air Emissions Risk Assessment (AERA) (dated 2021) submitted with V003. The report considered appropriate background concentrations for the application site location, the predicted Long Term and Short Term NO<sub>2</sub> Process Environmental Contribution (PECs) do not exceed the

Environmental Standard for human health. There appears to be sufficient headroom to account for possible higher background concentrations at discrete receptor locations. The assessment also identified three local nature sites where the predicted annual and daily Process Contributions PCs do not exceed any of the relevant critical levels and loads.

We have amended the permit document to reflect the change in thermal input of the CHPs.

For existing MCP (boilers) 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 the 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 previously provided assessments for all emissions to water at the installation. The operator declares there has been no change to activities and subsequent effluents generated at the installation since this risk assessment was taken. Consequently, we agree that the original risk assessments remain valid at this time.

#### Soil & groundwater risk assessment (baseline report)

The IED requires that the operator of any IED installation using, producing or releasing "relevant hazardous substances" (RHS) shall, having regarded the possibility that they might cause pollution of soil and groundwater, submit a "baseline report" with its permit application. The baseline report is an important reference document in the assessment of contamination that might arise during the operational lifetime of the regulated facility and at cessation of activities. It must enable a quantified comparison to be made between the baseline and the state of the site at surrender.

At the definitive cessation of activities, the Operator has to satisfy us that the necessary measures have been taken so that the site ceases to pose a risk to soil or groundwater, taking into account both the baseline conditions and the site's current or approved future use. To do this, the Operator has to submit a surrender application to us, which we will not grant unless and until we are satisfied that these requirements have been met.

The Operator did not provide a response in their Reg 61 however we have located site condition report [Trafford Park Geotechnical, chemical contamination and gas emissions investigation report August 1997] submitted with the original application received in 2005. They also submitted the Ground Investigation Report Muller Milk Manchester 08 March 2021 in support of variation application V003 as the CHP engines were taking up a sperate area of land.

The permit boundary is broken up into 3 distinct areas, the main production building, store and CHP compound. The operator has confirmed that no operations within their control are undertaken outside this boundary with the wider landholding operated by separate business.

Improvement Condition 6 within the existing permit required the operator to submit a revised site condition report and relevant hazardous substance baseline report. These have been previously listed as complete however neither the Environment Agency or operator have a record of these documents. We have therefore reinstated IC6 requiring the operator to submit a revised site condition report in line with IED and our H5 guidance.

#### **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 did not provide a response. IC6 also required the operator to identify and assess the risk posed by "relevant hazardous substances" and if appropriate produce a site baseline report.

#### **Climate Change Adaptation**

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

The operator has identified the installation as likely to be or has been affected by drought, which we consider to be a severe weather event. However as they use mains water and this alone does not require the submission of a climate change adaptation plan.

#### 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
- 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.

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

#### **Annex 3: Improvement Conditions**

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

Previous improvement conditions marked as complete in the previous permit.

Superseded Improvement Conditions – Removed from permit as marked as "complete"			
Reference	Improvement Condition		
IC1	The Operator shall develop a strategy for replacing refrigerant R22 with a non-ozone depleting alternative, the development programme, including timescales for implementation shall be forwarded, in writing, to the Agency.		
IC2	The Operator shall conduct a water use audit and submit the findings with recommendations with implementation dates in a written report for approval by the Agency.		
IC3	The Operator shall investigate the application of membrane technology to enable the removal of solids from the effluent stream, the potential re-use of the effluent, the recovery of product and cleaning chemical recovery, as specified in Section 2.1.7 of TGN S6.13. A report detailing the findings of this investigation, with actions and timescales for their implementation, shall be submitted to the Agency with recommendations and timescales for improvement.		
IC4	The Operator shall investigate and review the bunding arrangements for the milk silos. The Operator shall submit a written report, for approval by the Agency, describing the adequacy of the current containment measures in order to prevent contamination of the surface water drains in the event of tank rupture or accidental release. The report shall detail any proposed improvements with associated implementation dates.		
IC5	The Operator shall investigate the feasibility of introducing an economiser to the pre–heat boiler feed. The findings shall be provided in a written report and submitted to the Agency		
IC7	The Operator shall provide written details of the inspection and maintenance work carried out on the site drainage system, demonstrating that the condition of the drainage system is adequately monitored and repaired where necessary.		
IC8	The Operator shall provide written details of the inspection and maintenance regime for the kerbs, ramps and impermeable surfaces on site, demonstrating how they comply with the relevant sections of box 5.2 in the CIRIA736 guidance.		

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

Improvement programme requirements
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Reference	Reason for inclusion	Justification of deadline
IC6	The operators provide in writing to the Environment Agency a revised Site Condition Report assessing the entire installation footprint and written in accordance with the latest version of the Environment Agency's H5 Guidance. The report must take into consideration the requirements of the Industrial Emissions Directive and identification and assessment of the risk posed by 'relevant hazardous substances' on site and where appropriate the provision of a site baseline report.	3 months from date of issue or as agreed in writing by the Environment Agency
IC9	The operator shall confirm, achievement of the 'Narrative' BAT conclusions as identified in the Food, Drink and Milk Bref published on 4 December 2019 where BAT is currently not demonstrated or achieved with respect to BATc 11 Refer to BAT Conclusions for a full description of the BAT requirement.	3 months from date of issue or as agreed in writing by the Environment Agency
IC10	The Operator shall submit a written report to the Environment Agency for technical assessment and approval on the feasibility of installing effluent treatment and include a review of treatment options available along with their associated benefits. Justification is required where no on-site treatment is provided, taking into account the nature of the wastewater and any subsequent off-site treatment. In addition the report needs to consider the appropriate on-site monitoring of the effluent stream prior to disposal. (BAT 3 and 12 Best Available Techniques Reference Document and BAT Conclusions document for the food, drink and milk industry dated December 2019).	12 months from date of issue or as agreed in writing by the Environment Agency