

Natural Resources Wales permitting decisions

Variation and Consolidation of a bespoke Permit – Volac International Limited

We have decided to issue a Natural Resources Wales initiated variation and consolidated permit for Volac Felinfach in Felinfach operated by Volac International Limited.

The permit number is EPR/BV4177IS.

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

The permit has been varied following the publication of the revised Best Available Techniques (BAT) Reference Documents (BREF) for Food, Drink and Milk Industries. The associated BAT conclusions to this document were published on 4 December 2019 in the Official Journal of the European Union.

This variation incorporates the changes required by the Industrial Emissions Directive following a statutory review of permits in the Food, Drink and Milk sector. These include the amendment of the wording of several permit conditions relating to notifications, changes to emissions limits and monitoring requirements.

We are satisfied that the operator will be compliant with the published BAT conclusions which will apply from 4 December 2023.

Purpose of this document

This decision document:

- explains how we have carried out our statutory review of the Operator's Permit;
- why we have decided to vary the Permit as a result of that review; and
- why we have included the specific conditions in the revised Permit through the variation notice we are issuing.

It is our record of our decision-making process, to show how we have taken into account all relevant factors in reaching our position.

Structure of this document

- Assessment of the installation against the published BAT conclusions for Food, Drink and Milk Industries.
- Annex 1 – Decision Checklist regarding relevant BAT Conclusions for Food, Drink and Milk Industries

Assessment of the installation against the published BAT conclusions for Food, Drink and Milk Industries

1. Our decision

We have issued a variation, which will allow the Operator to operate the installation, subject to the conditions in the varied permit.

The variation does three things:

- it consolidates the original permit to reflect changes made through earlier variations;
- it brings the permit into line with our modern regulatory template; and
- it varies the permit where appropriate to reflect the outcome of our statutory review and incorporate Best Available Techniques (BAT) and Associated Emission Limit Values (BAT-AELs).

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

The original permit issued on 27/06/2005 ensured that the installation employed Best Available Techniques (BAT) and ensured a high level of protection for human health and the environment. We have altered the permit as a result of the statutory review, and we are confident that the new requirements will deliver a superior level of protection to that which was previously achieved. Where a site is not currently compliant with BAT, Improvement Conditions have been included to bring the site up standard by 4 December 2023.

2. The legal framework

The Variation and Consolidation Notice (which includes the consolidated permit as Schedule 2) will be issued under Regulation 20 of the Environmental Permitting (England and Wales) Regulations 2016 (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 Industrial Emissions Directive (IED);
- subject to aspects of other relevant legislation which also have to be addressed.

We consider that, in issuing the Variation and Consolidated Permit, 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.

3. How we reached our decision

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 on 28/04/2020 requiring the operator to provide information to demonstrate how the operation of their installation currently meets, or will subsequently meet, the revised standards described in the relevant BAT Conclusions document.

The Regulation 61(1) Notice required the operator to:

- Describe the techniques that will be implemented before 4 December 2023, which will then ensure that operations meet the revised standard, or
- Justify 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 standard is not applicable to those processes, or
- Justify why an alternative technique will achieve the same level of environmental protection equivalent to the revised standard described in the BAT Conclusions.
- Where their permitted activity involves the use, production or release of a hazardous substance, as defined in Article 3(18) of the Industrial Emissions

Directive, the Operator was required to carry out a risk assessment considering the possibility of soil and groundwater contamination at the permitted installation with such substances. Where risk of such contamination is established prepare a baseline report containing information necessary to determine the state of soil and groundwater contamination so as to make a quantified comparison with the state upon definite cessation of the activity.

- Where their permitted activity involves the use, production, storage or release of priority hazardous substances and any other relevant substances., as defined by the Water Framework Directive, the Operator was required to carry out a risk screening assessment considering the presence of priority hazardous substances at the permitted installation. Where a risk of these substances is established the operator is to sample the effluent and screen for the priority hazardous substances. If these substances are found to be present in the effluent stream, then assessment using the H1 tool and potential detailed modelling will be required to demonstrate that the effluent discharge will not have a significant impact to the receiving water.

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 Food, Drink and Milk BAT Conclusions Document, the Regulation 61(1) Notice requested that the operator make a formal request for derogation from compliance with that 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(1) Notice response from the operator was received on 21/01/2021, with further information received on 07/10/2021, We considered that the response contained sufficient information for us to commence determination of the permit review. The operator made no claim for commercial confidentiality. We have not received any information in relation to the Regulation 61(1) Notice response that appears to be confidential in relation to any part.

4. Key issues/Regulation 61 response

BAT Conclusions for the Food, Drink and Milk Industries were published as Commission Implementing Decision EU 2019/2031 in the Official Journal of the EU on 4 December 2019. There are 37 BAT Conclusions. Annex 1 provides a record of

decisions made in relation to each relevant BAT Conclusion applicable to the installation. This should be read in conjunction with the permit/variation notice issued.

A response was received from the Operator. Where the operator has concluded that they have achieved BAT, and we are in agreement, no further information or justification has been sought by Natural Resources Wales.

Baseline Report

Where their permitted activity involves the use, production or release of a hazardous substance, as defined in Article 3(18) of the Industrial Emissions Directive, the Operator was required to carry out a risk assessment considering the possibility of soil and groundwater contamination at the permitted installation with such substances. Where risk of such contamination is established prepare a baseline report containing information necessary to determine the state of soil and groundwater contamination so as to make a quantified comparison with the state upon definite cessation of the activity.

The Operator did not provide any response to the request stated above in the Regulation 61(1) Notice; therefore an improvement condition has been included in the permit.

5. Changes we have made

Improvement Conditions

Based on the information provided in the Regulation 61(1) response, we consider that we need to set improvement conditions. These conditions are set out below. We are using these conditions to require the operator to provide Natural Resources Wales with details that need to be established or confirmed during operations. The improvement conditions ensure compliance by 2023 and to address deficiencies in responses to the Regulation 61(1) Notice.

IC19	The Operator shall complete and submit for approval in writing by Natural Resources Wales: • A baseline report containing information necessary to determine the current state of soil and groundwater contamination; - or • Provide a summary report referring to information previously submitted where you are satisfied that such information represents the current state of soil and groundwater contamination; so as to enable a quantified comparison to be made with the state of soil and groundwater contamination upon definitive cessation of activity.	4 June 2023 or otherwise agreed in writing with Natural Resources Wales
IC20	The Operator shall submit to Natural Resources Wales an updated written procedure(s) describing how they intend to meet the following BAT requirements in accordance with requirements specified within: • BAT Conclusion 13 of the Food, Drink and Milk Industries BRef Document (EU 2019) – Set up, implement and regularly review a Noise Management Plan (as part of the EMS)	4 June 2023 or otherwise agreed in writing with Natural Resources Wales
IC21	The Operator shall submit to Natural Resources Wales an updated written procedure(s) describing how they intend to meet the following BAT requirements in accordance with requirements specified within: • BAT Conclusion 15 of the Food, Drink and Milk Industries BRef Document (EU 2019) – Set up, implement and regularly review an Odour Management Plan (as part of the EMS)	4 June 2023 or otherwise agreed in writing with Natural Resources Wales
IC22	(a) The Operator shall submit to NRW the maximum capacity of the installation that was used in the most recent risk assessment submitted to NRW. (b) The Operator shall submit to NRW for approval the maximum capacity of the installation at the current time. (c) If the maximum capacity of the installation has increased from the time of the last submitted risk assessment and the current time, the Operator shall review and update the risk assessment to account for the current maximum capacity. The risk assessment shall be submitted to NRW for review. Notes: The capacity is to be taken and presented using the same units from the relevant sub-section of Section 6.8, Part 2, Schedule 1 of the Environmental Permitting Regulations 2016 (as from time to time amended). Capacity is to be taken as the maximum possible capacity of the installation, not the maximum actual production. The risk assessment should follow the methodology set out in The Environmental Risk Assessment (EPR-H1). You may use a methodology other than EPR-H1 however the methodology must address the same issues as in EPR-H1 to an equivalent level of detail.	(a) and (b) Within 6 months of permit variation issue (c) Within 9 months of permit variation issue (if applicable)

IC19 has been included as the Operator did not provide a response regarding this request within the Regulation 61(1) Notice. IC20 – IC21 have been included due to deficiencies in the BAT assessment provided by the Operator. See Annex 1 for full details.

Capacity creep

We have included an improvement condition (IC22) in order to establish the current maximum capacity at the installation and to determine if there has been a change since the last risk assessment submitted to NRW. If there has been an increase in the maximum capacity, what we call capacity creep, we have asked the Operator to review and update their risk assessment and submit to us for review. We have also implemented a maximum capacity limit into Table S1.1 of the permit in line with the IC response to prevent any further capacity creep at the installation.

Other changes

We have also completed a NRW-led variation during the consolidation as requested by the site regulatory compliance officer, this included correcting minor formatting errors on the permit. We have updated the monitoring frequency of emission point A15 (total particular matter parameter) from quarterly to annually and removed the previous Note 2 from Table S3.1 to reflect an agreement with NRW via the site compliance officer during the lifetime of the permit.

Operational Changes

There are no operational changes at the installation following the variation.

Medium Combustion Plant (MCP) / Specified Generator (SG)

The installation has multiple existing MCPs already listed in Table S1.1 Directly Associated Activities with associated emission points in Table S3.1. The existing MCPs include:

- 2x 2.5 MWth input thermal oil heater powered by LNG
- 2x steam raising boilers powered by LNG (1x 9.622 MW and 9.025 MW output)
- 1x 20 MWth Combined heat and power biomass plant and 10 MWe steam boiler

Emission Limit Values (ELVs) and monitoring for existing MCPs is not required until 1st January 2025 at the earliest. As this is some way off, we decided to maintain any existing ELVs and monitoring requirements in the permit and not to impose new stricter ELVs ahead of time. The installation also has one new MCP added in Variation V009 permitted using a standard rules permit SR2018 No7.

Emissions to Water

As part of our delivery of the Water Framework Directive requirements, we need to identify and assess the impact for all discharges to surface waters and/or sewer from the site for priority hazardous substances and any other relevant substances. The emissions monitoring for these substances should be carried out using the methods and standards described in the M18 guidance on “Monitoring of discharges to water and sewer”.

With reference to the risk assessment guidance on the gov.uk website entitled “Surface water pollution risk assessment for your environmental permit” (accessible via: <https://www.gov.uk/guidance/surface-water-pollution-risk-assessment-for-your-environmental-permit>) the company carried out the following assessments:

- Screening tests for priority hazardous pollutants and any other relevant priority hazardous substances.
- For any substance which is not screened out by the screening tests further modelling, as described in the risk assessment guidance “Surface water pollution risk assessment for your environmental permit”.

The Operator is permitted to discharge lead and copper among other parameters to a private sewer system to an off-site effluent treatment plant (ETP) which then discharges to surface water. The off-site effluent treatment plant is regulated under a separate permit (EPR/BP3135EB) which has just been through the Waste Treatment sector permit review to implement the Waste Treatment BAT Conclusions (EU 2018). The screening tests mentioned above were completed by the Operator of the ETP as part of an existing Improvement Condition. The permit for the off-site ETP controls the discharge to the surface water (Carmarthen Bay) and the permit for Volac International Limited controls the discharge to a private sewer system. We do not consider it necessary for Volac International Limited to complete the screening tests as we believe the discharge to surface water has been suitably assessed within the determination of the off-site ETP permit.

There are no direct discharges of process effluent to surface water associated with the permitted activity. There is an indirect discharge of process effluent to an off-site effluent treatment plant. As per the notes within BAT4 and BAT12 monitoring requirements and BAT-AELs only apply to direct discharges to surface water. Monitoring of chloride is not considered necessary for this process as stated in the UK regulator’s interpretation document.

Emissions to Water – Article 15(4) Derogations

No derogations.

Emissions to Air

There were changes to the ELVs for point source emissions to air taking into account BAT conclusions from the Food, Drink and Milk BREF. There are multiple emission points to air on the permit, the Operator has confirmed the following emission points related to dairy drying processes, and therefore subject to the BAT-AEL in BAT 23:

A1 – Genesis Drier

A4 – Riverside Drier – isolate and speciality powders

A8 & A9 – Lactose plant drying

A10 – Lactose plant drying

A11 – Lactose powder handling

A20 – Aeron Drier – isolate powders / whey protein

The Operator has stated all these emission points employ bag filter abatement which has a design specification of achieving 10 mg/Nm³ therefore in line with the BAT-AEL. The Operator has confirmed there is no grain milling carried out at the site. We had to further clarify whether the BAT-AEL applied to emission point A11, the Operator confirmed it does relate to a drying process and therefore the BAT-AEL should be applied.

The tables below outline the parameters and limits set to implement the BAT-AELs:

Effective until 3 December 2023

Release point	Parameter	Limit / BAT-AEL	Effective until
Point A1 – Feeds dryer via bag filter	None	No limit set	3 December 2023
Point A4 – Food dryer	None	No limit set	
Point A8 – Dryer	None	No limit set	
Point A9 – Dryer	None	No limit set	
Point A10 – Lactose milling via a bag filter	None	No limit set	

Point A11 – Lactose powder handling via a bag filter	None	No limit set	
Point A20 - Dryer	None	No limit set	

Effective from 4 December 2023

Release point	Parameter	Limit / BAT-AEL	Effective from
Point A1 – Feeds dryer via bag filter	Dust	10 mg/Nm ³	4 December 2023
Point A4 – Food dryer	Dust	10 mg/Nm ³	
Point A8 – Dryer	Dust	10 mg/Nm ³	
Point A9 – Dryer	Dust	10 mg/Nm ³	
Point A10 – Lactose milling via a bag filter	Dust	10 mg/Nm ³	
Point A11 – Lactose powder handling via a bag filter	Dust	10 mg/Nm ³	
Point A20 - Dryer	Dust	10 mg/Nm ³	

Where BAT associated emission levels are identified (BAT-AELs), limits may be prescribed at the top end of the range unless the proximity of sensitive receptors requires a tighter limit or if tighter limits are previously on the permit, this ensures no backsliding of emission limits.

Emissions to Air – Article 15(4) Derogations

No derogations.

Other IED BREFs relevant to the permit review

There are no specific listed activities within Table S1.1 of the permit that are within scope of other published BREFS. There is a Section 1.1 Part B (a)(ii) however this is currently not within scope of any published BREFS.

6. Conclusion

We consider that the installation already employed what used to be BAT, and that the operator has achieved significant improvements in performance since the permit was originally granted. The revised BREF and its BAT-AELs provide the opportunity to consider further environmental improvements.

Coupled with the consolidation and modernisation of the permit, we believe this variation provides a sound basis for ongoing regulation of the installation and we are satisfied that the operator is currently achieving or will be achieving all relevant BAT by 4 December 2023.

We believe that we have ensured compliance with all relevant legal requirements in carrying out this review and making our determination on the variation.

Annex 1: Decision checklist regarding relevant BAT Conclusions for Food, Drink and Milk Industries

BAT Conclusions for the Food, Drink and Milk Industries were published as Commission Implementing Decision EU 2019/2031 in the Official Journal of the EU on 4 December 2019. There are 37 BAT Conclusions. This checklist 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 permit.

All BAT Conclusions arising are listed by number in order below;

BATc number	Summary of BAT Conclusion requirement		Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
OVERALL ENVIRONMENTAL PERFORMANCE			
1	Environment Management System (EMS) – <u>ALL</u> of the following:		
	I.	Commitment, leadership and accountability of the management, including senior management for the implementation of an effective EMS	Currently Compliant The Operator has an externally accredited EMS certified to ISO14001:2015 standard. This is considered to be compliant with this BAT conclusion.
	II.	An analysis that includes the determination of the organisation’s context, the identification of the needs and expectations of interested parties, the identification of characteristics of the installation that are associated with possible risks for the environment (or human health) as well as of the applicable legal requirements relating to the environment.	

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	III.	Development of an environmental policy that includes the continuous improvement of the environmental performance of the installation	
	IV.	establishing objectives and performance indicators in relation to significant environmental aspects, including safeguarding compliance with applicable legal requirements;	
	V.	Planning and implementing the necessary procedures and actions (including corrective and preventive actions where needed), to achieve the environmental objectives and avoid environmental risks;	
	VI.	Determination of structures, roles and responsibilities in relation to environmental aspects and objectives and provision of the financial and human resources needed;	
	VII.	Ensuring the necessary competence and awareness of staff whose work may affect the environmental performance of the installation (e.g. by providing information and training);	
	VIII.	Internal and external communication	
	IX.	Fostering employee involvement in good environmental management practices;	
	X.	Establishing and maintaining a management manual and written procedures to control activities with significant environmental impact as well as relevant records;	
	XI.	Effective operational planning and process control;	
	XII.	Implementation of appropriate maintenance programmes;	

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	XIII.	Emergency preparedness and response protocols, including the prevention and/or mitigation of the adverse (environmental) impacts of emergency situations;	Currently Compliant The Operator has an externally accredited EMS certified to ISO14001:2015 standard. This is considered to be compliant with this BAT conclusion.
	XIV.	When (re)designing a (new) installation or a part thereof, consideration of its environmental impacts throughout its life, which includes construction, maintenance, operation and decommissioning;	
	XV.	Implementation of a monitoring and measurement programme, if necessary, information can be found in the Reference Report on Monitoring of Emissions to Air and Water from IED Installations;	
	XVI.	Application of sectoral benchmarking on a regular basis;	
	XVII.	Periodic independent (as far as practicable) internal auditing and periodic independent external auditing in order to assess the environmental performance and to determine whether or not the EMS conforms to planned arrangements and has been properly implemented and maintained;	
	XVIII.	Evaluation of causes of nonconformities, implementation of corrective actions in response to nonconformities, review of the effectiveness of corrective actions, and determination of whether similar nonconformities exist or could potentially occur;	
	XIX.	Periodic review, by senior management, of the EMS and its continuing suitability, adequacy and effectiveness;	
	XX.	Following and taking into account the development of cleaner techniques.	
	(i)	Noise Management Plan (BAT 13)	See BAT 13

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	(ii)	Odour Management Plan (BAT 15)	See BAT 15
	(iii)	Inventory of water, energy and raw materials consumption as well as of waste water and waste gas streams (BAT 2)	Currently Compliant See BAT 2
	(iv)	Energy Efficiency Plan (BAT 6a)	Currently Compliant See BAT 6a
	Establish and maintain a waste water and waste gas inventory as part of the EMS - <u>ALL</u> of the following:		
<i>Information about the food, drink and milk production processes, including;</i>			
2	I.(a)	simplified process flow sheets that show the origin of the emissions	Currently Compliant
	I.(b)	descriptions of process-integrated techniques and waste water/waste gas treatment techniques to prevent or reduce emissions, including their performance	As per the UK regulators interpretation guidance an externally accredited EMS to ISO14001 certification would contain the required level of information to demonstrate compliance with this BATc.
	II.	Information about water consumption and usage and identification of actions to reduce water consumption and waste water volume (BAT 7)	
	<i>Information on quantity and characteristics of the waste water streams, such as:</i>		
	III.(a)	Average values and variability of flow, pH and temperature	Currently Compliant
	III.(b)	Average concentration and load values of relevant pollutants/parameters (e.g. TOC/COD, nitrogen	As per the UK regulators interpretation guidance an externally accredited EMS to ISO14001 certification would contain the

BATc number	Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	species, phosphorus, chloride, conductivity) and their variability	required level of information to demonstrate compliance with this BATc.
	Information on characteristics of waste gas streams, such as:	
IV.(a)	<i>Mean and variability of:</i>	Currently Compliant As per the UK regulators interpretation guidance an externally accredited EMS to ISO14001 certification would contain the required level of information to demonstrate compliance with this BATc.
	Flow	
	temperature	
IV.(b)	<i>Mean concentration, load and variability of relevant substances:</i>	
	Dust	
	TVOC	
	CO	
	NOx	
IV.(c)	<i>Presence of other substances that may affect the waste gas treatment system or plant safety:</i>	
	O2	
	Water vapour	
	Dust	
V.	Information about energy consumption and usage, the quantity of raw materials used, as well as the quantity and characteristics of residues generated, and identification of actions for continuous improvement of resource efficiency (BAT 6 and BAT 10)	

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	VI.	Identification and implementation of an appropriate monitoring strategy with the aim of increasing resource efficiency, taking into account energy, water and raw materials consumption. Monitoring can include direct measurements, calculations or recording with an appropriate frequency. The monitoring is broken down at the most appropriate level (e.g. at process or plant/installation level).	
MONITORING			
3	For relevant emissions to water as identified by the inventory of waste water streams (BAT 2): monitor key process parameters at key locations		
	Key process parameters		
	Waste water flow		Currently Compliant
	pH		The Operator currently monitors the waste water discharge prior to it entering the private sewer system which leaves to the off-site effluent treatment plant. The Operator monitors flow and other parameters as specified in the permit.
	Temperature		
	Key monitoring locations		
	Pre-treatment inlet and/or outlet		Currently Compliant
	Final treatment inlet		The Operator monitors before the discharge point into the private sewer system leading to the off-site effluent treatment plant. The Operator has also stated flow meters with pre-
	Discharge point (to the environment)		
Other location			

BATc number	Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
		set volumes are used to enable real time monitoring of flow of waste water.
4	<i>Monitoring of water emissions: monitor emissions to water with at least the frequency given below and in accordance with EN standards:</i>	
	Refer to monitoring emissions to water table in BRef document	Not Applicable As per footnote 2 monitoring only applies in the case of a direct discharge to surface water. There is no direct discharge to surface water of process effluent. Monitoring of chloride is not considered necessary for this process as per the UK regulators interpretation document.
5	Refer to monitoring emissions to air table in BRef document Monitoring parameters depend on sector	Compliant in the future The monitoring requirements will be implemented through the permit. The site does have channelled emissions to air from drying activities, these have been confirmed as the following emission points: A1, A4, A8, A9, A10 and A20. There are also a number of emergency vent systems on the driers however we do not consider these 'channelled emissions to air' as for emergency use only.
6	Energy Efficiency: BAT is to use 6a and appropriate combination of common techniques	
	a.	Energy Efficiency Plan Currently Compliant

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
			The site has an EMS externally certified to ISO14001:2015 standard which includes key performance indicators for energy usage. The site also has a continual improvement programme certified to ISO50001.
	b.	Use of common techniques	Currently Compliant The Operator has stated the following techniques are in place at the site: • Process control systems • Heat recovery • Insulation of pipes, vessels and equipment • Energy efficient lighting • High-efficiency motors
7	Water consumption and waste water discharge BAT is to use 7a and one or a combination of techniques in b to k		Currently Compliant The Operator has stated the following techniques are in place: • Recovery of condensate • Cleaning in Place • Waste water recovery for use as potable water for reuse
	a.	Water recycling and/or reuse	
	b.	Optimisation of water flow	
	c.	Optimisation of water nozzles and hoses	
	d.	Segregation of water streams	
	e.	Dry cleaning	
	f.	Pigging system for pipes	
	g.	High-pressure cleaning	

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	h.	Optimisation of chemical dosing and water use in cleaning-in-place (CIP)	• Dry cleaning • Segregation of water streams
	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	
8	Harmful substances. BAT is to use one or a combination of the techniques given below:		
	a.	Proper selection of cleaning chemicals and/or disinfectants	Currently Compliant The Operator has stated the following techniques are in place: • Dry cleaning • Cleaning in Place with reuse of cleaning water • COSHH assessments are carried out
	b.	Reuse of cleaning chemicals in cleaning-in-place CIP	
	c.	Dry cleaning	
	d.	Optimised design and construction of equipment and process areas	
9	BAT is to use refrigerants without ozone depletion potential and with a low global warming potential		Currently Compliant The Operator has stated there are no refrigerants in use with an ozone depleting potential. Ammonia is the refrigerant in use at the site.
10	Increase resource efficiency, use one or a combination of the techniques given below		
	a.	Anaerobic digestion	Currently Compliant The Operator has stated the following techniques are in place:
	b.	Use of residues	
	c.	Separation of residues	

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	d.	Recovery and reuse of residues from pasteuriser	- Additional raw material is sent for Anaerobic digestion if not used - Any spoiled product is reworked and reprocessed to become fully compliant product - Any spoiled product unable to be reworked is reused and sold as animal feed - The recovery of wastewater from the off-site ETP for use in the process
	e.	Phosphorus recovery as struvite	
	f.	Use of waste water for land spreading	
EMISSIONS TO WATER			
11	Prevent uncontrolled emissions to water, provide an appropriate buffer storage capacity for waste water		Currently Compliant The Operator does not treat wastewater effluent on site. However, they do have 2x 1000 m ³ storage available.
12	Reduce emissions to water, use an appropriate combination of the techniques given below		Not Applicable Waste treated off site by a separately permitted Effluent Treatment Plant.
	a.	Equalisation	
	b.	Neutralisation	
	c.	Physical separation	
	d.	Aerobic and/or anaerobic treatment	
	e.	Nitrification and/or denitrification	
	f.	Partial nitrification	
g.	Phosphorus recovery as struvite		

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	h.	Precipitation	
	i.	Enhanced biological phosphorus removal	
	j.	Coagulation and flocculation	
	k.	Sedimentation	
	l.	Filtration	
	m.	Flotation	
	BAT-AELs for direct emissions to a receiving water body. Table 1 and associated notes. Associated monitoring given in BAT 4.		
	Chemical oxygen demand COD	25–100 mg/L	Not Applicable No direct emissions to a receiving water body of process effluent.
	Total suspended solids TSS	4–50 mg/L	
	Total nitrogen	2–20 mg/L	
	Total phosphorus	0.2–2.0 mg/L	
NOISE			
13	Set up, implement, and regularly review a Noise Management Plan (as part of the EMS) where nuisance is expected and/or has been substantiated. Include <u>ALL</u> of the following:		
	I.	A protocol containing actions and timelines	Compliant in the future The Operator has not stated whether a Noise Management Plan is in place nor have they
	II.	A protocol for conducting noise emissions monitoring	
	III.	A protocol for response to identified noise events, e.g. complaints	

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	IV.	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.	justified it is not applicable. Therefore, an Improvement Condition has been set.
14	Techniques to prevent, or where not practicable reduce noise and vibration emissions. Use one or a combination of the following:		
	a.	Appropriate location of equipment and buildings	Currently Compliant The Operator has stated that the majority of noise generating plant is located within buildings. Regular maintenance of machinery and noise surveys is carried out.
	b.	Operational measures – see examples	
	c.	Low-noise equipment – see examples	
	d.	Noise control equipment – see examples	
	e.	Noise abatement – see examples	
ODOUR			
15	Set up, implement, and regularly review an Odour Management Plan (as part of the EMS) where nuisance is expected and/or has been substantiated. Include ALL of the following:		
	I.	Protocol with actions and timelines	Compliant in the future The Operator has not stated whether an Odour Management Plan is in place nor have they justified it is not applicable. Therefore, an Improvement Condition has been set.
	II.	Odour monitoring protocol	
	III.	Odour complaint response plan/protocol	
	IV.	Odour prevention and reduction programme	
BAT CONCLUSIONS FOR DAIRIES			

BATc number	Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
21	In order to increase energy efficiency, BAT is to use an appropriate combination of the techniques specified in BAT 6 and of the techniques given below:	
	a.	Partial milk homogenisation
	b.	Energy-efficient homogeniser
	c.	Use of continuous pasteurisers
	d.	Regenerative heat exchange in pasteurisation
	e.	Ultra-high-temperature (UHT) processing of milk without intermediate pasteurisation
	f.	Multi-stage drying in powder production
	g.	Precooling of ice-water
Indicative	Indicative environmental performance levels for specific energy consumption <i>Table 8 and footnotes</i>	
	Market milk	0.1-0.6 MWh/tonne of raw materials
	Cheese	0.10-0.22 MWh/tonne of raw materials
	Powder	0.2-0.5 MWh/tonne of raw materials
	Fermented milk	0.2-1.6 MWh/tonne of raw materials
Indicative	Indicative environmental performance levels for specific waste water discharge <i>Table 9</i>	
	Market milk	0.3-3.0 m ³ /tonne of raw materials
	Cheese	0.75-2.5 m ³ /tonne of raw materials
	Powder	1.2-2.7 m ³ /tonne of raw materials

Currently Compliant

See BAT6

Indicative

The Operator has not provided a response to this BAT conclusion however it is indicative therefore does not require compliance.

Indicative

The Operator has not provided a response to this BAT conclusion however it is indicative therefore does not require compliance.

BATc number		Summary of BAT Conclusion requirement		Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
22	In order to reduce the quantity of waste sent for disposal, BAT is to use one or a combination of the techniques given below:			
	Techniques related to the use of centrifuges		Currently Compliant The Operator has stated that evaporator and membrane plants are used to recover water throughout the process.	
	a.	Optimised operation of centrifuges		
	Techniques related to butter production			
	b.	Rinsing of the cream heater with skimmed milk or water		
	Techniques related to ice cream production			
	c.	Continuous freezing of ice cream		
	Techniques related to cheese production			
	d.	Minimisation of the generation of acid whey		
e.	Recovery and use of whey			
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:			
	a.	Bag filter	Currently Compliant The Operator uses bag filter abatement on all channelled dust emissions to air from drying.	
	b.	Cyclone		
	c.	Wet scrubber		
	BAT-AELs for channelled dust emissions to air from drying Table 10			
	Dust	< 2-10 mg/Nm ³	Compliant in the future The BAT-AEL will be implemented in the permit from the compliance date on all relevant emission points. The Operator has	

BATc number	Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
		stated in their response that the bag filters on drying units can achieve a dust concentration of <10 mg/Nm ³ therefore compliant with the BAT-AEL.

Annex 2: Consultation on the draft decision where an Article 15(4) derogation has been applied

Not Applicable