

Variation and Consolidation of a bespoke Permit – Dairy Partners (Cymru Wales) Limited

We have decided to issue a Natural Resources Wales initiated variation and consolidated permit for The Creamery in Aberarad operated by Dairy Partners (Cymru Wales) Limited.

The permit number is EPR/WP3231NB.

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 Creamery 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 Creamery 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 03/11/2005 ensured that the installation, employed 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 29/01/2021.

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 detailed 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 site condition 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 has not provided any response with regards to this request within 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 December 2023.

IC17	(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 V005 issue (c) Within 9 months of permit variation V005 issue (if applicable)
IC18	The Operator shall review and update (where required) their Environment Management System to include all the requirements as stated in BAT Conclusion 1 of the Food, Drink and Milk Industries BRef Document (EU 2019). A copy of the reviewed and if applicable revised EMS shall be provided to Natural Resources Wales.	4 October 2023 or otherwise agreed in writing with Natural Resources Wales
IC19	The Operator shall submit to Natural Resources Wales an updated written procedure following additional investigatory work describing how they intend to meet the following BAT requirements in accordance with the requirements specified within: • BAT Conclusion 9 of the Food, Drink and Milk Industries BRef Document (EU 2019) – 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 The report should include but not limited to: • a review of the use of the current refrigerant(s) as to whether they meet the BAT requirements as specified above and; • a feasibility study and implementation plan (if appropriate) regarding the replacement of the current refrigerant(s) with one with a lower global warming potential and no ozone depletion potential. Suitable alternatives include but not limited to ammonia, water and carbon dioxide. The report shall be submitted to Natural Resources Wales by the date specified for review. Natural Resources Wales will review the report to determine if the above BAT requirements have been achieved.	4 October 2023 or otherwise agreed in writing with Natural Resources Wales
IC20	The Operator shall review and update (where required) their Odour Management Plan to ensure all the requirements as stated in: • BAT Conclusion 15 of the Food, Drink and Milk Industries BRef Document (EU 2019) – 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, that includes all of the following elements: ○ a protocol containing actions and timelines ○ a protocol for conducting odour monitoring. It may be complemented by measurement/estimation of odour exposure or estimation of odour impact.	4 October 2023 or otherwise agreed in writing with Natural Resources Wales

	- o a protocol for response to identified odour incidents e.g. complaints - o an odour 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. The reviewed and revised (if applicable) Odour Management Plan will be submitted to Natural Resources Wales by the date specified for approval. Natural Resources Wales will review the Odour Management Plan to determine if the BAT requirements have been achieved.	
IC21a	The Operator shall carry out an assessment of the noise impact from the installation by completing an assessment in line with BS4142:2014 "Methods for Rating and Assessing Industrial and Commercial Sound" and UK Environment Agencies' and guidance "Noise and vibration management: environmental permits" by a suitably qualified person. The noise impact assessment must consider all the sound resulting from the installation and consider the following points below: • The Background sound level used in the assessment will be measured during day time and night time (inclusive of weekend) to establish the sound level in the absence of all operations on the Dairy Partners Installation at Newcastle Emlyn. • If it is not feasible for the operator to disable all sound sources from the Dairy Partners Installation at Newcastle Emlyn, the operator will instead undertake a day time and night time Background sound assessment (inclusive of weekend) at a "surrogate" location which is not subject to the operational sounds from the installation. The "surrogate" location will have a Residual sound which is comparable to that of the assessment location. Prior to undertaking the Background sound assessment at a "surrogate" location, the operator will submit to NRW their justification for the choice of "surrogate" location. The operator will have regard to the Annex A (Example 10) BS4142:2014 "Methods for Rating and Assessing Industrial and Commercial Sound" which provides guidance when choosing a "surrogate" monitoring location. On completion of the BS4142 assessment, a report shall be submitted to NRW, for approval, by the deadline specified. The operator will include the raw measurement data in a format which is auditable and can be interrogated.	Within 9 months of variation V005 issue
IC21b	The Operator shall carry out a BAT review assessment of the noise pollution from the whole installation. Paying attention to the potential for minimising noise pollution from the whole installation. The review shall include: • Determination of the level of impact by completion of a noise impact assessment as required by IC21a • Review of the noise control techniques and measures outlined in BAT Conclusion 14 of the Food, Drink and Milk Industries BRef Document (EU 2019) to demonstrate noise emissions have been prevented or minimised as far as reasonably practicable. The review should include a feasibility study of installing further noise control techniques and measures, including a cost-benefit analysis where required. • An implementation plan where improvements to the noise control techniques and measures are identified including a timetable for their installation. The BAT review assessment shall be submitted to Natural Resources Wales by the date specified for approval.	Within 4 months of the date the IC21a submission is approved by NRW in writing

	The implementation plan shall be implemented in accordance with Natural Resources' Wales written approval.	
IC22	The Operator shall review and update (where required) their Noise Management Plan to ensure it incorporates: - any recommendations from the BAT review assessment in IC21b - the requirements as stated in BAT Conclusion 13 of the Food, Drink and Milk Industries BRef Document (EU 2019). The reviewed and revised (if applicable) Noise Management Plan will be submitted to Natural Resources Wales by the date specified for approval. Natural Resources Wales will review the Noise Management Plan to determine if the BAT requirements have been achieved.	Within 2 months of the date the IC21b submission is approved by NRW in writing
IC23	To enable a quantified comparison to be made with the state of soil and groundwater contamination upon definitive cessation of activity 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.	Within 12 months of permit variation V005 issue
IC24	The Operator shall submit a written 'secondary and tertiary containment plan' for the installation and shall obtain Natural Resources Wales's written approval to it. The plan shall contain the results of a review conducted, by a competent person, in accordance with the risk assessment methodology detailed within CIRIA C736 (2014) guidance, of the condition and extent of the secondary and tertiary containment systems where all potentially polluting liquids and relevant solids are being stored, treated and/or handled within the installation. The review shall consider, but not be limited to, the legacy effluent storage and treatment vessels that are not considered new from V004 variation, chemical reagent storage vessels, bunds, transfer pipework/pumps and milk silos. The plan must contain dates for the implementation of individual improvement measures necessary for the secondary and tertiary containment systems to adhere to the standards detailed/referenced within CIRIA C736 (2014) guidance and How to Comply with your environmental permit guidance or equivalent. The plan shall be implemented in accordance with Natural Resources Wales's written approval.	Within 12 months of permit variation V005 issue.

Improvement conditions IC18, 19 and 20 have been included due to the response provided by the Operator to the regulation 61(1) notice, see Annex 1 for further information.

Improvement conditions IC21a, IC21b and IC22 have been included in order for NRW to assess noise impact at the installation and ensure noise reduction measures are considered BAT.

Improvement condition IC23 has been included as there was no response from the Operator in relation to this specific request in the regulation 61(1) notice, see above for further information.

Improvement condition IC24 has been included as NRW require the Operator to ensure the secondary containment measures on site are considered BAT.

Capacity creep

We have included an improvement condition (IC17) 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

There have been changes to the operating techniques table within the permit to include submissions from the Operator relating to existing improvement conditions. The improvement condition table has also been updated to detail which conditions are now complete. An existing condition IC13 has been superseded following information provided by the Operator in response to the Regulation 61(1) Notice. An existing condition IC14 has been superseded by two additional new improvement conditions.

Operational Changes

There are no operational changes at the installation. It should be noted that a recent variation to upgrade the Effluent Treatment Plant (ETP) (PAN-017188) has been issued by NRW.

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

The installation has two existing MCPs already listed in Table S1.1 as a Directly Associated Activity and with a combined stack emission point (A1) in Table S3.1. The existing MCPs are dual fuel boilers (LNG and light fuel oil), each 5.33 MWth input. 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.

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 operator was requested to carry out the following:

- 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 has one discharge of process effluent to surface water (Afon Teifi). Although the response from the Operator to the Regulation 61(1) Notice did not include the screening tests, the screening tests were completed by the Operator and audited by NRW during the recent variation. Therefore, we consider we do not need to request any additional information as a full review of the process effluent discharge has just been completed by NRW.

The specific BAT Conclusions on water emissions were also reviewed and no changes are made to the ELVs for emissions to water, the existing permit already implements all BAT requirements. Where the existing ELVs are tighter than the BAT-AEL they continue to apply.

Emissions to Water – Article 15(4) Derogations

No derogations.

Emissions to Air

There are no changes to the point source emissions to air associated with the permitted activity. The only point source emission to air is from the two combustion sources, therefore not in scope of any BAT-AELs listed within the BREF.

Emissions to Air – Article 15(4) Derogations

No derogations.

Other IED BREFs

There is also a Section 5.4 activity listed within Table S1.1 of the permit relating to the Effluent Treatment Process of process effluent from the main activity. We consider this activity to be suitably covered by the BAT conclusions within the Food, Drink and Milk BREF and therefore no additional assessment has been completed against the Waste Treatment BREF.

6. Conclusion

The revised BREF provides 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) – ALL of the following:	
	I.	Commitment, leadership and accountability of the management, including senior management for the implementation of an effective EMS
	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.
	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
Compliant in the future The Operator has stated the EMS is developed in line with the requirements set out in ISO14001 although is not externally accredited. The Operator has stated that some components of the BAT conclusion are already implemented in the EMS, with some to be added by the compliance date. We consider a review of the EMS is required to ensure it contains all the requirements by the compliance date therefore an improvement condition is included in the permit.		

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
	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;	
	XIII.	Emergency preparedness and response protocols, including the prevention and/or mitigation of the adverse (environmental) impacts of emergency situations;	
	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
	(ii)	Odour Management Plan (BAT 15)	See BAT 15

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)	Inventory of water, energy and raw materials consumption as well as of waste water and waste gas streams (BAT 2)	See BAT 2
	(iv)	Energy Efficiency Plan (BAT 6a)	See BAT 6a
2	Establish and maintain a waste water and waste gas inventory as part of the EMS - ALL of the following:		
	Information about the food, drink and milk production processes, including;		
	I.(a)	simplified process flow sheets that show the origin of the emissions	Compliant in the future
	I.(b)	descriptions of process-integrated techniques and waste water/waste gas treatment techniques to prevent or reduce emissions, including their performance	The Operator has stated there are process flow sheets in place however they will be updated with origins of the emissions in I.(b).
	II.	Information about water consumption and usage and identification of actions to reduce water consumption and waste water volume (BAT 7)	Compliant in the future The Operator has stated they currently record and trend water usage consumption however they have stated they will implement a new Water Management Plan. See also BAT 7.
	Information on quantity and characteristics of the waste water streams, such as:		
	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 species, phosphorus, chloride, conductivity) and their variability	The Operator has stated that flow, pH and temperature are monitored daily. All other parameters are monitored as per the existing permit requirements which is considered appropriate.
	Information on characteristics of waste gas streams, such as:		
	IV.(a)	Mean and variability of: Flow temperature	Currently compliant The boilers are maintained under external contract and stack emissions monitoring is carried out for NOx and O ₂ flow rates by external company. No waste gas treatment system on the combustion sources.
	IV.(b)	Mean concentration, load and variability of relevant substances:	
		Dust	
		TVOC	
		CO	
		NOx	

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.(c)	SOx		
		Presence of other substances that may affect the waste gas treatment system or plant safety:		
		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)	Currently compliant See BAT 6 and BAT 10	
	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).	Compliant in the future The Operator has stated there is already monitoring and trending in place for resource efficiency however improvements are needed and the implementation of a resource efficiency plan to drive the necessary BAT requirements by the compliance date.	
	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			Currently compliant The Operator has stated flow, temperature and pH and other relevant parameters as identified in BAT 2 are monitored at different locations including inlet, within the treatment process and at the discharge point.
	Key process parameters			
	Waste water flow			
	pH			
	Temperature			
	Key monitoring locations			
	Pre-treatment inlet and/or outlet			
	Final treatment inlet			
	Discharge point (to the environment)			
	Other location			
4	Monitoring of water emissions: monitor emissions to water with at least the frequency given below and in accordance with EN standards:			

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
		Refer to monitoring emissions to water table in BRef document	Currently compliant The monitoring requirements are already implemented in the permit. There are no changes to any monitoring requirements.
5		Refer to monitoring emissions to air table in BRef document Monitoring parameters depend on sector	Not Applicable No point source emissions to air from drying at the dairy.
6	Energy Efficiency: BAT is to use 6a and appropriate combination of common techniques		
	a.	Energy Efficiency Plan	Compliant in the future The Operator has stated they currently record and monitor energy usage for electricity with sub metering on key areas of the plant. They also record LNG and LFO fuel usage and calculate energy usage as KWh per tonne of cheese/raw material. The Operator stated they are implementing an updated energy efficiency plan which will ensure compliance by the compliance date.
	b.	Use of common techniques	Currently compliant The Operator has stated the following techniques are in place: - Boilers fitted with burner regulation - Motors have been replaced with energy efficient motors with variable speed drives - Heat recovery with heat exchanges – all pasteurisers and chillers operate as energy efficient heat exchange units - 50 % of lighting has LED bulbs and where possible timer PR sensor controlled with the other 50 % being changed in due course

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
			- Boilers are maintained via external contract therefore reducing blowdown from the boilers, reduction from daily to weekly blow down automatic setting - Insulation used on steam and water pipes to reduce heat loss - Majority of process PLC controlled to optimise efficiency
7	Water consumption and waste water discharge BAT is to use 7a and one or a combination of techniques in b to k		
	a.	Water recycling and/or reuse	Currently compliant The Operator has stated that they operate a reverse osmosis plant to recover water and produce a concentrated whey product. Water recovery is around 69 %. Recovered water is reused for plant cleaning.
	b.	Optimisation of water flow	Currently compliant
	c.	Optimisation of water nozzles and hoses	The Operator has stated the following techniques are in place: - CIP – automatic control with in-line flow monitoring, conductivity measurements to optimise chemical dosing. Final rinse water is recycled as use as the pre-rinse stage - Cleaning of equipment as soon as possible – plant runs for 22 hours then a cycle of cleaning for 6 hours is carried out - Low pressure foaming units in place for non CIP areas - Water streams are segregated – uncontaminated surface water run off
	d.	Segregation of water streams	
	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	

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
			separated from process effluent/cleaning effluent which goes through ETP - Knee operated pressure valves for sinks or photo cell operated.
8	Harmful substances. BAT is to use one or a combination of the techniques given below:		Currently compliant The Operator has stated the following techniques are in place: - Use of cleaning-in-place where detergent is recircled and final rinse water is recycled back as use in the pre rinse stage - Proper selection of cleaning chemicals where no cleaning chemicals contain any priority substances within the Water Framework Directive.
	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	
9	BAT is to use refrigerants without ozone depletion potential and with a low global warming potential		Compliant in the future: The Operator has stated the following refrigerants are used: - R134A ODP = 0, GWP = 1300 - R404A ODP = 0, GWP = 3922 - R410a ODP = 0, GWP = 1725 - R4220 ODP = 0, GWP = 2729 We consider improvements may be possible to these refrigerants as they have a relatively high GWP. An improvement condition has been set.
10	Increase resource efficiency, use one or a combination of the techniques given below		Currently compliant The Operator has stated the following techniques are in place:
	a.	Anaerobic digestion	
	b.	Use of residues	
	c.	Separation of residues	
	d.	Recovery and reuse of residues from pasteuriser	

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
	e.	Phosphorus recovery as struvite	- Separation of residues – whey is separated through reverse osmosis plant and sold to third party - Separation of residues – cheese fines are fed back into the process where food safety standards allow - Use of residues – residues of cheese fines are sold to third party for use as animal feed - Use of residues – sludge from ETP sent for Anaerobic Digestion
	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 has stated there is capacity in the ETP to hold up to 2-days' worth of effluent, if this were close to exceedance then they would employ tankering for disposal off-site. We consider this an appropriate storage capacity.
12	Reduce emissions to water, use an appropriate combination of the techniques given below		Currently compliant The Operator has recently upgraded the ETP and confirmed the following techniques are in place: • Equalisation using the buffer tank • Neutralisation with pH control • Physical separation by screening • Aerobic treatment via activated sludge process and dissolved air flotation • Coagulation and flocculation and flotation
	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	
	h.	Precipitation	
	i.	Enhanced biological phosphorus removal	
	j.	Coagulation and flocculation	
	k.	Sedimentation	

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
	I.	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	Currently compliant The existing emission limit values (ELVs) in the permit for the discharge to water are compliant with the BAT-AELs and there is no change to any ELVs. Any existing ELVs lower than BAT-AELs continue to apply.
	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 ALL of the following:		
	I.	A protocol containing actions and timelines	Compliant in the future Given there are ongoing noise issues at the site and nuisance has been substantiated, we are not satisfied the current noise management plan is appropriate. An improvement condition has been set in the permit.
	II.	A protocol for conducting noise emissions monitoring	
	III.	A protocol for response to identified noise events, e.g. complaints	
	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.	
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	Compliant in the future Given there are ongoing noise issues at the site and nuisance has been substantiated, we are not satisfied the current combination of techniques is appropriate. An improvement condition has been set in the permit.
	b.	Operational measures – see examples	
	c.	Low-noise equipment – see examples	
	d.	Noise control equipment – see examples	
	e.	Noise abatement – see examples	
ODOUR			

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
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 Given there has been odour complaints we are not satisfied the current odour management plan is appropriate. An improvement condition has been set in the permit.
	II.	Odour monitoring protocol		
	III.	Odour complaint response plan/protocol		
	IV.	Odour prevention and reduction programme		
BAT CONCLUSIONS FOR DAIRIES				
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		Currently Compliant The Operator has stated the following techniques are in place: - Use of continuous pasteurisers - Use of heat exchange in pasteurisation See also BAT 6.
	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 Table 8 and footnotes			
	Market milk	0.1-0.6 MWh/tonne of raw materials		Indicative The Operator has stated they are currently achieving within the range for cheese production. These values are indicative only.
	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 Table 9			
	Market milk	0.3-3.0 m³/tonne of raw materials		Indicative
	Cheese	0.75-2.5 m³/tonne of raw materials		

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
	Powder	1.2-2.7 m³/tonne of raw materials	The Operator has stated they are currently achieving 1.3 m³/tonne of raw material. These values are indicative only.
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 the following techniques are in place: - Optimised operation of centrifuges where cream is separated off and sold to third party as a bi-product. Separation of cheese fines are fed back into the process. - Recovery of whey using membrane filtration/reverse osmosis The whey is recovered into whey concentrate which is then sold onto a third party for further processing. Water is also recovered via this process and recycled for cleaning use.
	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	Not Applicable No channelled emissions to air of dust from drying.
	b.	Cyclone	
	c.	Wet scrubber	
	BAT-AELs for channelled dust emissions to air from drying Table 10		
	Dust	< 2-10 mg/Nm³	Not Applicable No channelled emissions to air of dust from drying.

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

Not applicable. No derogation requested.