

## Natural Resources Wales permitting decisions

### Variation and Consolidation of a bespoke Permit – Radnor Hills Mineral Water Company Limited

We have decided to issue a Natural Resources Wales initiated variation and consolidated permit for Radnor Hills in Heartsease, Knighton, Powys, LD7 1LU operated by Radnor Hills Mineral Water Company Limited.

The permit number is EPR/AB3697CN

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 Radnor Hills 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 Radnor Hills 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 22/12/2017, 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 27/04/2020 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 22/01/2021 and additional information received on 10/02/2022.

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. Following assessment of the Regulation 61(1) response, further information was requested 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**

A Baseline site condition report was not supplied with the regulation 61 response. However, the site has had a recent site condition report with their application in 2017.

#### **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.

**Table S1.3 Improvement programme requirements**

Reference	Requirement	Date
IC7	<p>(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.</p> <p>(b) The Operator shall submit to NRW for approval the maximum capacity of the installation at the current time.</p> <p>(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.</p> <p>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.</p>	<p>(a) and (b) Within 6 months of permit variation issue</p> <p>(c) Within 9 months of permit variation issue (if applicable)</p>
IC8	<p>The Operator shall submit to Natural Resources Wales an updated written procedure following additional investigate work describing how they intend to meet the following BAT requirements in accordance with the requirements specified within:</p> <ul style="list-style-type: none"> <li>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</li> </ul> <p>The report should include but not limited to</p> <ul style="list-style-type: none"> <li>a review of the use of the current refrigerant as to whether it meets the BAT requirements as specified above and;</li> <li>a feasibility study and implementation plan (if appropriate) regarding the replacement of the current refrigerant 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.</li> </ul> <p>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.</p>	<p>4 June 2023 or otherwise agreed in writing with Natural Resources Wales</p>

IC8 has been included on the permit for the operator to demonstrate with BAT 9. The site uses the HFC R407c which has a global warming potential (GWP) of 1774 CO<sub>2</sub> equivalents. We have included this IC for the operator to conduct a feasibility study with the aim of using lower GWP refrigerants when the equipment is due for replacement.

### **Other changes**

We have amended some of the monitoring requirements in table S3.2 for both schedule 3a and schedule 3b due to previous discussion and agreements made prior to the BRef review.

The reference period in table S3.2 for total suspended solids and ammoniacal nitrogen was changed from daily to weekly as agreed by Natural Resources Wales and Radnor Hills (email dated 09/05/2018) to be incorporated in the next variation, which we have done during this review.

### **Operational Changes**

There were no additional operation changes

### **Capacity creep**

We have included an improvement condition (IC7) 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.

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

The installation has four existing MCPs already listed in Table S1.1 and with emission points (A1 – A5) in Table S3.1. The existing MCPs are natural gas boilers. These boilers were installed and operating before 20/12/2018 and therefore classified as existing. Emission Limit Values (ELVs) and monitoring for existing MCPs is not required until 1<sup>st</sup> 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.

We have identified one potential MCP in the return that was commissioned in 2019 with thermal input of 1.25 MWth, which would be classified as a new MCP and subject to medium combustion plant directive. However as this is not part of the BRef review

we will not assess at this stage, but the operator will need to make an application for a separate variation to incorporate this into the permit, if confirmed as new MCP.

### **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 substances were screened out by the Phase 1 screening tests and therefore there was no need to carry out Phase 2 modelling, as described in H1 Annex D1.

The company used the H1 electronic screening tool to present the emissions data and to carry out the Phase 1 screening tests and a copy was provided as part of the response to the Regulation 61 Notice.

The specific BAT Conclusions on water emissions were also reviewed based on the Food, Drink and Milk BREF and the following changes are made to the ELVs for emissions to water taking into account BAT Conclusion 12 from the BREF.

<b>Parameter</b>	<b>Limit</b>	<b>Compliance period</b>
Chemical Oxygen Demand	100 mg/l	04/12/2023
Total Nitrogen	20 mg/l	04/12/2023
Total Phosphorus	2 mg/l	04/12/2023

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 Water – Article 15(4) Derogations**

no derogations

#### **Emissions to Air**

There were no changes to the Emission Limit Values (ELVs) for emissions. All five emission points are from existing MCP (see medium combustion plant). As we are not reviewing these as part of the BRef review we have not changed any existing emissions requirements to the site.

#### **Emissions to Air – Article 15(4) Derogations**

No derogations

#### **Other IED BREFs relevant to the permit review**

There is 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 covered by the BAT conclusions with the Food, Drink and Milk BREF and therefore no additional assessment has been completed against the Waste Treatment BREF.

## **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 OR 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
<b>OVERALL ENVIRONMENTAL PERFORMANCE</b>		
<b>1</b>	<b>Environment Management System (EMS) – <u>ALL</u> of the following:</b>	
	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;
		<b>Currently Compliant</b> Operator has an ISO 14001:2015 accredited EMS

BATc number		Summary of BAT Conclusion requirement	Status/comment <b>One of the following:</b> Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	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;	
	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;	

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
	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)	BAT 15
	(iii)	Inventory of water, energy and raw materials consumption as well as of waste water and waste gas streams (BAT 2)	BAT 2
	(iv)	Energy Efficiency Plan (BAT 6a)	BAT 6a
2	<b>Establish and maintain a waste water and waste gas inventory as part of the EMS - <u>ALL</u> of the following:</b>		
	<b>Information about the food, drink and milk production processes, including;</b>		
	I.(a)	simplified process flow sheets that show the origin of the emissions	Currently Compliant- Operator has an ISO 14001:2015 accredited EMS
	I.(b)	descriptions of process-integrated techniques and waste water/waste gas treatment techniques to prevent or reduce emissions, including their performance	
	II.	Information about water consumption and usage and identification of actions to reduce water consumption and waste water volume (BAT 7)	
	<b>Information on quantity and characteristics of the waste water streams, such as:</b>		
III.(a)	Average values and variability of flow, pH and temperature		

BATc number	Summary of BAT Conclusion requirement	Status/comment <b>One of the following:</b> Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	III.(b) Average concentration and load values of relevant pollutants/parameters (e.g. TOC/COD, nitrogen species, phosphorus, chloride, conductivity) and their variability	Currently Compliant- Operator has an ISO 14001:2015 accredited EMS
<b>Information on characteristics of waste gas streams, such as:</b>		
IV.(a)	<i>Mean and variability of:</i>	
	Flow temperature	
IV.(b)	<i>Mean concentration, load and variability of relevant substances:</i>	Currently Compliant- Operator has an ISO 14001:2015 accredited EMS
	Dust	
	TVOC	
	CO	
	NOx SOx	
IV.(c)	<i>Presence of other substances that may affect the waste gas treatment system or plant safety:</i>	Currently Compliant- Operator has an ISO 14001:2015 accredited EMS
	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- Operator has an ISO 14001:2015 accredited EMS
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	Currently Compliant- Operator has an ISO 14001:2015 accredited EMS

BATc number	Summary of BAT Conclusion requirement	Status/comment <b>One of the following:</b> Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	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).	
<b>MONITORING</b>		
<b>3</b>	<b>For relevant emissions to water as identified by the inventory of waste water streams (BAT 2): monitor key process parameters at key locations</b>	
	<b>Key process parameters</b>	
	Waste water flow	<b>Currently compliant</b>
	pH	-waste water flow, Temperature and pH are currently monitored as part of the requirements under the current permit at discharge point W1
	Temperature	
	<b>Key monitoring locations</b>	
	Pre-treatment inlet and/or outlet	Complaint in the future- Operator stated
	Final treatment inlet	
	Discharge point (to the environment)	<b>Currently compliant</b> - operator takes sampling at discharge point
Other location		
<b>4</b>	<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	<p style="text-align: center;"><b>Phosphorus and suspended solids</b> currently monitored to the same standard as laid out in BAT 4 (Soluble reactive phosphorus-BS EN ISO 15681-1 or BS EN ISO 15681-2</p> <p>BOD uses SCA blue book 130 and Ammonia uses BS EN ISO 11732</p>

BATc number	Summary of BAT Conclusion requirement	Status/comment <b>One of the following:</b> Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant	
5	<p style="color: red;">Refer to monitoring emissions to air table in BRef document</p> <p>Monitoring parameters depend on sector</p>	<p><b>Currently compliant</b></p> <p>Operator is currently reporting on NOx and particulates but do not have annual limits in place. These are for the 5 gas boilers that are at present not yet subject to the medium combustion plant directive</p> <p>The operator had to use an alternative method to MCERTS. This had been agreed by NRW (CAR Form- NRW0039147)</p> <p>None of the sector specific monitoring standards apply as this site does not fall under any of these.</p>	
6	<b>Energy Efficiency: BAT is to use 6a and appropriate combination of common techniques</b>		
	a.	Energy Efficiency Plan	<p><b>Currently compliant</b></p> <p>The Operator has implemented a plan for energy</p>
b.	Use of common techniques	<p><b>Currently compliant</b></p> <p>Water recovered from tertiary effluent treatment (reverse osmosis) is reused</p>	
7	<b>Water consumption and waste water discharge BAT is to use 7a and one or a combination of techniques in b to k</b>		
	a.		Water recycling and/or reuse
	b.		Optimisation of water flow
c.	Optimisation of water nozzles and hoses		

BATc number	Summary of BAT Conclusion requirement		<b>Status/comment</b> <b>One of the following:</b> Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	d.	Segregation of water streams	Currently compliant
	e.	Dry cleaning	Currently compliant Operator applies BAT 7 h-k
	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	
8	<b>Harmful substances. BAT is to use one or a combination of the techniques given below:</b>		
	a.	Proper selection of cleaning chemicals and/or disinfectants	Currently compliant
	b.	Reuse of cleaning chemicals in cleaning-in-place CIP	The operator uses a combination of BAT 8a,8b and 8d.
	c.	Dry cleaning	
	d.	Optimised design and construction of equipment and process areas	
9	<b>BAT is to use refrigerants without ozone depletion potential and with a low global warming potential</b>		<b>Complaint in the future</b> Operator uses the HFC, R407C. this refrigerant has a Global Warming Potential (GWP) of 1774, higher than R134a (GWP 1430). While R407C is currently suitable there is a need to move away from HFCs with high GWP to alternatives. Therefore we have put an IC for the operator to submit as long term plan with replacing the HFC with lower GWP alternatives when the equipment comes to the end of its life.

BATc number	Summary of BAT Conclusion requirement	Status/comment <b>One of the following:</b> Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant	
10	<b>Increase resource efficiency, use one or a combination of the techniques given below</b>		
	a.	Anaerobic digestion	<b>Currently Compliant:</b> operator uses BAT 10 f under standard rules permit
	b.	Use of residues	
	c.	Separation of residues	
	d.	Recovery and reuse of residues from pasteuriser	
	e.	Phosphorus recovery as struvite	
f.	Use of waste water for land spreading		
<b>EMISSIONS TO WATER</b>			
11	<b>Prevent uncontrolled emissions to water, provide an appropriate buffer storage capacity for waste water</b>	<b>Currently Compliant</b> Site has reception and balancing tanks for buffering of process water	
12	<b>Reduce emissions to water, use an appropriate combination of the techniques given below</b>		
	a.	Equalisation	<b>Currently Compliant</b> Operator uses techniques includes techniques under BAT 12 d, 12 e and 12 j.  The operator uses the techniques including  Aerobic treatment within a bioreactor treating waste water to reduce organics 12d, Ultra filtration membrane  A requirement needed of the bioreactor is daily sludge wasting to remove solids and organics from the system. The sludge produced is treated by a
	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		

BATc number	Summary of BAT Conclusion requirement		<b>Status/comment</b> <b>One of the following:</b> Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	k.	Sedimentation	centrifuge system to remove the solids from the liquid into a cake product suitable for an offsite AD plant.
	l.	Filtration	
	m.	Flotation	
<b>BAT-AELs for direct emissions to a receiving water body.</b> Table 1 and associated notes. Associated monitoring given in BAT 4.			
	Chemical oxygen demand COD	25–100 mg/L	<b>Complaint in the Future</b> The site is permitted to monitored for BOD at discharge point but not COD, however the site has reported for COD with a limit at 100 mg/l, (within the limit of AEL in BAT 12).  The site will be required to monitor for COD with the BAT-AEL limit of 100 mg/l from the 4 <sup>th</sup> December 2023.
	Total suspended solids TSS	4–50 mg/L	<b>Currently compliant</b> BAT AEL already set at 5 mg/L for TSS
	Total nitrogen	2–20 mg/L	<b>Complaint in the Future</b> Currently monitor for Ammoniacal nitrogen as 0.5 mg/l. This limit is to remain in the permit.  Currently does not have limits or monitoring for total Nitrogen. The site will be required to monitor for total nitrogen with the BAT-AEL upper limit of 20 mg/l from the 4 <sup>th</sup> December 2023.
	Total phosphorus	0.2–2.0 mg/L	<b>Complaint in the Future</b> Currently monitors for soluble reactive phosphorous at 0.2 mg/l limit is already set on the permit from 2017. This limit is to remain in the permit.

BATc number	Summary of BAT Conclusion requirement		<b>Status/comment</b> <b>One of the following:</b> Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
			Currently does not have limits or monitoring for total phosphorous. The site will be required to monitor for total phosphorous with the BAT-AEL upper limit of 2 mg/l from the 4 <sup>th</sup> December 2023.
<b>NOISE</b>			
<b>13</b>	<b>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:</b>		
	I.	A protocol containing actions and timelines	
	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.	
<b>14</b>	<b>Techniques to prevent, or where not practicable reduce noise and vibration emissions. Use one or a combination of the following:</b>		
	a.	Appropriate location of equipment and buildings	
	b.	Operational measures – see examples	
	c.	Low-noise equipment – see examples	
	d.	Noise control equipment – see examples	
	e.	Noise abatement – see examples	
<b>ODOUR</b>			
<b>15</b>	<b>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:</b>		
	I.	Protocol with actions and timelines	

BATc number	Summary of BAT Conclusion requirement		<b>Status/comment</b> <b>One of the following:</b> Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	II.	Odour monitoring protocol	Odour management plan is not present in the BAT but will be integrated as part of the EMS by 04/12/2023
	III.	Odour complaint response plan/protocol	
	IV.	Odour prevention and reduction programme	
<b>BAT CONCLUSIONS FOR SOFT DRINKS AND NECTAR/JUICE MADE FROM PROCESS FRUIT AND VEGETABLES</b>			
<b>33</b>	<b>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.</b>		<b>Currently compliant</b> The operator uses liquid sugar and pre-blended fructose. Mixing limited to 5 minutes
	a.	Single pasteuriser for nectar/juice production	
	b.	Hydraulic sugar transportation	
	c.	Energy-efficient homogeniser for nectar/juice production	
<b>Indicative</b>	<b>Indicative environmental performance levels for specific energy consumption</b> <i>Table 23</i>		<b>Currently compliant</b> The energy consumption is within the range of the indicative BAT.
	0.01–0.035 MWh/hl of products		
	<b>Indicative environmental performance levels for specific waste water discharge</b> <i>Table 24</i>		
0.08–0.20 m <sup>3</sup> /hl of products		<b>Currently compliant</b> Figures from 2019 and 2020 showed waste water discharge of 0.03 m <sup>3</sup> /h and 0.04 m <sup>3</sup> /hl of product. Operator will reduce waste water through techniques used in BAT 7	

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

Not Applicable