

Environment Agency permitting decisions

Variation

We have decided to issue the variation for Oakthorpe Dairy operated by Arla Foods Limited.

The variation number is EPR/BN0465IG/V003

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.

Description of the changes introduced by the Variation

This is a Substantial Variation as detailed in RGN8 (version 3.0 March 2011) paragraph 3.5.

This variation permits the installation and operation of a physico-chemical effluent treatment plant using dissolved aeration and flotation (DAF) technology under Section 5.4 A(1)(a)(ii) of the EPR regulations. The sites general effluent currently discharges into the public sewer for treatment by Thames Water at the local sewage treatment works (Deephams STW). The operator has had significant difficulty in meeting the restrictions of the discharge consent issued for the site by Thames Water for Chemical Oxygen Demand (COD) and Fats, Oil and Grease (FOG) and this plant represents a significant upgrade to the operational process allowing discharge consent limits to be met utilising partial and full chemical treatment methods. The plant will treat circa 1,100m³/day.

This variation additionally incorporates the changes required by the Industrial Emissions Directive. This includes the amendment of the wording of several permit conditions relating to notifications, and also includes the addition of a condition relating to a requirement for monitoring of groundwater and soil.

Purpose of this document

This decision document:

- explains how the application has been determined
- provides a record of the decision-making process
- shows how all relevant factors have been taken into account

Unless the decision document specifies otherwise we have accepted the applicant's proposals.

Structure of this document

- Key issues
- Annex 1 the decision checklist

Key issues of the decision

Noise

The application contained a noise impact assessment which identified local noise-sensitive receptors, potential sources of noise from the proposed DAF plant together with noise attenuation measures. Measurements were taken of the prevailing ambient noise levels whilst the current site activities were being undertaken to produce a baseline noise survey and an assessment carried out in accordance with BS4142:2014 to compare the predicted plant rating noise levels with background levels. The applicant concluded that the plant proposed as part of the permit variation will be sufficiently below the background noise level that it will give "comfortable compliance".

The applicants background data indicates that there is a significant variation (Daytime: 37dB to 66dB, Night time: 36dB to 61dB) between minimum and maximum values. The Local Environment Agency Officer has confirmed that there has been a history of noise complaints due to intermittent noise emissions from current sources on the site. It is noted that should there be a reduction in the current operational sources, this would likely reduce background noise levels (LA90). Considering this in context, for our sensitivity checks we have used the minimum background noise levels monitored by the applicant's consultant which will likely exclude noise emissions from the existing operations (including the intermittent noise source) that is causing the compliance issue, we consider this to represent a conservative approach.

The consultant did not include any corrections or penalties in the BS4142:2014 assessment for tonality (hisses, screeches, bangs thumps etc), however items such as the compressor, pumps, and piping if incorrectly installed could result in acoustic features such as totality and impulsivity features, which should such features appear further attenuation measures would be required as the plant would not meet BAT requirements. Conditions 2.3.3 and 2.8 fulfil the needs to protect the surrounding soundscape. We have reviewed the partial levels of each source at sensitivity receptors as part of our sensitivity checks to consider if these sources are likely to be perceivable at receptor locations. Our review of the partial levels indicates that the proposed noise sources should not be audible above the minimum background noise levels (LA90).

The applicant states in section 4.2 of the application paperwork that the Environment Agency has asked for the plant to meet noise levels of 5dB above background noise based on previous assessments. The operator was requested to clarify this statement as this is not consistent with the Environment Agency's approach to noise. Confirmation was received from the operator, dated 24th June 2015, via e-mail in which they confirmed that no target or limits had been set or agreed by the Environment Agency for the new DAF plant to meet, and that the response further clarified that the that the 5dB above background specification had related to another project and had been merely used as a benchmark figure in the absence of any other criteria provided by the Environment Agency."

While we do not agree with the consultants absolute numerical predictions, we agree with the consultant's conclusions that the noise levels from the proposed plant are likely to have a low impact.

The operator has provided a revised noise and vibration management plan in response to a schedule 5 request for further information dated 08/09/15.

Annex 1: decision checklist

This document should be read in conjunction with the application, supporting information and permit/notice.

Aspect considered	Justification / Detail	Criteria met
		Yes
Receipt of submission		
Confidential information	A claim for commercial or industrial confidentiality has not been made.	✓
Identifying confidential information	We have not identified information provided as part of the application that we consider to be confidential. The decision was taken in accordance with our guidance on commercial confidentiality.	✓
Consultation		
Scope of consultation	<p>The consultation requirements were identified and implemented. The decision was taken in accordance with RGN 6 High Profile Sites, our Public Participation Statement and our Working Together Agreements.</p> <ul style="list-style-type: none"> • Local Authority Environmental Protection Department • Sewerage Undertaker 	✓
European Directives		
Applicable directives	All applicable European directives have been considered in the determination of the application.	✓
The site		
Extent of the site of the facility	<p>The operator has provided a plan which we consider is satisfactory, showing the extent of the site of the facility including discharge points.</p> <p>A plan is included in the permit and the operator is required to carry on the permitted activities within the site boundary.</p>	✓
Site condition report	The operator has provided a description of the condition of the site.	✓

Aspect considered	Justification / Detail	Criteria met Yes
	<p>We consider this description is satisfactory. The decision was taken in accordance with our guidance on site condition reports and baseline reporting under IED-guidance and templates (H5).</p>	
<p>Biodiversity, Heritage, Landscape and Nature Conservation</p>	<p>The application is within the relevant distance criteria of a site of nature conservation, and/or protected species or habitat.</p> <p><u>Local Wildlife Sites</u></p> <p>Site Name: Thorold Road Allotments Site Name: Chitts Hill Allotments Site Name: New River Sports Centre, White Hart Lane Recreation Ground & Woodside Park Site Name: Stockton Road Allotments Site Name: Gosspatrick Road Allotments Site Name: Tower Gardens Site Name: Tottenham Cemetery, All Hallows Churchyard and Bruce Castle Park Site Name: Crews Hill to Winchmore Hill Railsides Site Name: New River Site Name: Devonshire Hill Allotments Site Name: Courtman Road Allotments Site Name: Tatem Park Site Name: Coles Park Allotments Site Name: The Paulin Ground Woods Site Name: Grovelands Park & Priory Hospital Site Name: Pymmes Park Site Name: Broomfield Park</p> <p><u>Special Area of Conservation (SAC)</u></p> <p>Site Name: Epping Forest Site</p> <p><u>Ramsar and Special Protection Area (SPA)</u></p> <p>Name: Lee Valley</p>	<p>✓</p>

Aspect considered	Justification / Detail	Criteria met Yes
	<p>An assessment of the application and its potential to affect the sites habitat has been carried out as part of the permitting process. We consider that the application will not affect the features of the habitat.</p> <p>Emissions to air include the existing boiler emission points as well as a new abated odour exhaust emission point A27..</p> <p>There are no direct discharges to controlled waters (or land) except existing clean uncontaminated surface waters via appropriate interceptors (Emission Point S1 and S2, Enclosure A:4).</p> <p>All process water discharges will be made to sewer under a relevant discharge consent (Reference TDEE0735) issued by Thames Water (Emission Point E2 on plan drawing 000-084 dated 01/05/201). Emissions contain mostly sanitary determinands which are readily treated at the STW. Changes represent an overall environmental improvement and relate to discharges of aqueous effluent to sewer only.</p> <p>We have not formally consulted on the application. The decision was taken in accordance with our guidance.</p>	
Environmental Risk Assessment and operating techniques		
Environmental risk	<p>We have reviewed the operator's assessment of the environmental risk from the facility.</p> <p>The operator's risk assessment is satisfactory.</p> <p>Based upon the information in the application the assessment shows that, applying the conservative criteria in our guidance on Environmental Risk Assessment, emissions may be categorised as environmentally insignificant.</p> <p>For pollutants that are readily treated/removed by the sewage treatment works, where we are satisfied that BAT has been applied at the facility, and the operator has a Trade effluent agreement in place we can accept that these emissions will be acceptable as the final discharge will be controlled by a water quality environmental permit</p>	✓

Aspect considered	Justification / Detail	Criteria met Yes
	<p>(discharge consent). There will be no increase in effluent volumes as a result of this variation.</p> <p>The new DAF effluent treatment plant is considered to be an overall environmental improvement in respect of discharges to the aquatic environment (Sewer) with significant reductions in discharge levels of FOG and COD to meet consented limits.</p> <p>We conclude that the potential for any adverse impact from the operators discharge is negligible, and agree with the sewerage undertaker that the trade effluent consent issued by them provides adequate protection, however we feel that the discharge of process waters should be part of an appropriate IPPC BAT review to further identify high product loss areas in order to reduce product losses to sewer from the site in compliance with Dairy and Milk Processing Sector Guidance S6.13 as well as Food and Drink industries BREF document. Please see improvement condition section.</p> <p>The operator has confirmed that the DAF plant conforms to CIRIA C736 containment standards for the prevention of pollution, however concern has been raised by the local Environment Agency Officer regarding tertiary containment for the protection of controlled waters in the event of a catastrophic failure of secondary containment. An improvement condition has been included in the permit to address this issue, please see improvement condition section.</p> <p>No limits have been applied for these releases by the Environment Agency within the EPR Permit.</p> <p><u>Noise</u></p> <p>Please see Key Issues section.</p> <p><u>Odour</u></p> <p>The operation of the DAF plant has the potential to generate odour pollution. Two individual (in series) activated carbon filters are to be used to abate odours from the sealed effluent treatment plant which are then exhausted to a single emission point (Point A27 Odour</p>	

Aspect considered	Justification / Detail	Criteria met
		Yes
	<p>Abatement Exhaust). Monitoring will be undertaken in-between these filters and after the second filter prior to discharge to air to ensure breakthrough of any odour is identified and to ensure efficient use of raw materials. In addition a small single (Air displacement) carbon filter has been included into the side of the bin enclosure, which is directly fed from the effluent screen. The operator has provided a risk assessment in relation to potential odour generation from the plant, and these emission points to air are included within Table 2.2.1 of the environmental permit.</p> <p>The DAF plant is a sealed system being PLC and SCADA controlled, however in order to ensure that appropriate measures are in place and in case the proposed plant fails to work as described i.e. generates. we have updated the permit to include our standard odour condition being part of our latest EPR permit wording. This will ensure appropriate environmental control is in place requiring the submission of a full odour management plan at the request of the Environment Agency should a problem occur.</p> <p>Based upon the information in the application we are satisfied that the appropriate measures will be in place to prevent or where that is not practicable to minimise odour and to prevent pollution from odour.</p>	
Operating techniques	<p>We have reviewed the techniques used by the operator and compared these with the relevant guidance notes.</p> <p>The operator has indicated the use of techniques and standards in line with technical guidance notes IPPC S6.13, S6.10 and EPR 1.00 "How to comply with your Environmental Permit.</p> <p>The Key issues for determining BAT for the effluent treatment plant are described in TGN EPR 6.13 'Dairy and Milk Processing Sector', Sections 1.1 to 1.4, 2.1, 2.2, 2.5, 2.6, 2.8, 2.9, 2.10 and 3.1 to 3.2, In addition Key issues for determining BAT are also described in the 'Food and Drink TGN EPR 6.10 Sections 1.1 to 1.4, 2.1, 2.2, 2.4 to 2.5, 2.7 and 3.1 to 3.3. The operator has provided site specific BAT conclusion documents confirming use of the standards as set out in the TGN's and relevant BREF documents</p>	✓

Aspect considered	Justification / Detail	Criteria met Yes
	<p>The operator has provided a revised pollution risk assessment and accident management plan (including preventative techniques and actions) in response to a Schedule 5 request for further information dated 08/09/15.</p> <p>The proposed techniques for control are in line with the benchmark levels contained in the TGN and we consider them to represent appropriate techniques for the facility. The permit conditions ensure compliance with relevant BREFs and BAT Conclusions.</p>	
The permit conditions		
Use of conditions other than those from the template	Based on the information in the application, we consider that we do not need to impose conditions other than those in our permit template, which was developed in consultation with industry having regard to the relevant legislation.	✓
Improvement conditions	<p>Based on the information on the application, we consider that we need to impose improvement conditions.</p> <p>We have imposed improvement conditions to ensure that appropriate measures are in place to ensure that accidents that may cause pollution are minimised and appropriate measures are in place to ensure the efficient use of raw materials and water. . We consider these conditions to be proportionate to the risk posed by the operation of the facility, as it is not classed as a 'low risk' installation.</p> <p><u>Reduction of product losses and raw material usage (IC5)</u></p> <p>Although we consider the DAF plant to represent an overall environmental improvement, we consider that a BAT review of operating techniques and to identify area of high product loss should be undertaken, together with proposals for reducing product loss where identified. We have imposed this improvement condition to ensure that appropriate measures are in place to minimise pollution by reducing effluent loading and chemicals used for treatment in order to ensure prudent use and</p>	✓

Aspect considered	Justification / Detail	Criteria met Yes
	<p>management of natural resources as required by paragraph 2 of IED.</p> <p><u>Spill prevention. Containment and Incident response (IC6)</u></p> <p>IC6 requires the operator to undertake a review of current spill prevention, containment and incident response procedures for the protection of controlled waters in accordance with Environment Agency Guidance PPG21 and PPG22. The Environment Agency have imposed this condition to ensure that appropriate incident response measures are in place to ensure accidents that may cause pollution are minimised.</p> <p><u>Site secondary and tertiary containment (IC7)</u></p> <p>IC7 requires the operator to commission a qualified engineer to undertake a full review of the sites secondary and tertiary containment to ensure that appropriate standards are met for the protection of land and controlled waters (Pymmes Brook) in the event of containment failure. The operator will be expected to undertake a topographical survey of the site and review the movement of liquids together with the identification of high risk areas such as un-surfaced ground, proximity of controlled waters etc. Design, suitability and integrity of the sites secondary and tertiary containment including holding capacities together with calculations must be provided in the plan. The plan must contain dates for the implementation of individual measures identified in order to ensure compliance with indicative BAT as set out in CIRIA C736 – Containment systems for the prevention pollution guidance.</p> <p>We have imposed this improvement condition to ensure that appropriate measures are in place to minimise pollution</p>	
Incorporating the application	We have specified that the applicant must operate the permit in accordance with descriptions in the application, including all additional information received as part of the determination process.	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
	These descriptions are specified in the Operating Techniques table 2.1.1 in the permit.	
Monitoring	<p>We have decided that monitoring should be carried out for the parameters listed in the permit, using the methods detailed and to the frequencies specified.</p> <p>Condition 2.10.2 requiring periodic monitoring of groundwater and soil and is included as part of the changes required by the Industrial Emissions Directive.</p> <p>The operator has a suitable monitoring plan in place for emissions to sewer. This monitoring has been additionally included in table 2.10.1 (Other monitoring requirements). Waste waters from raw milk dairy processing plants may be higher in 'phosphorus' if phosphoric acid is being used for FOG emulsion cracking, in addition milk and cream products may also be high phosphorus content. We have additionally specified monitoring for phosphates as 'Total Phosphorous' this is included in table 2.10.2.</p> <p>Based on the information in the application we are satisfied that the operator's techniques, personnel and equipment have either MCERTS certification or MCERTS accreditation as appropriate.</p>	✓
Operator Competence		
Environment management system	There is no known reason to consider that the operator will not have the management systems to enable it to comply with the permit conditions. The decision was taken in accordance with RGN 5 on Operator Competence.	✓
Relevant convictions	<p>The National Enforcement Database has been checked to ensure that all relevant convictions have been declared.</p> <p>No relevant convictions were found. The operator satisfies the criteria in RGN 5 on Operator Competence.</p>	✓