

Permitting Decisions - Variation

We have decided to grant the variation for High Hedley Biogas Plant operated by WJ Drennan Limited.

The variation number is EPR/LB3536AZ/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.

Purpose of this document

This decision document provides a record of the decision-making process. It

- highlights [key issues](#) in the determination
- summarises the decision making process in the [decision considerations](#) section to show how the main relevant factors have been taken into account
- shows how we have considered the [consultation responses](#)

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

Read the permitting decisions in conjunction with the environmental permit and the variation notice.

Changes introduced by this variation notice

The facility is currently operated under standard rules and consists, a weighbridge, site office, reception hall, two primary digesters, one pasteurisation tank, negative aeration system, biogas cleaning system, one combined heat and power (CHP) unit and a gas to grid entry system. This variation transitions the facility from a standard rules facility to an installation.

This variation has been issued to update some of the conditions following a statutory review of the permits in the industry sector for biowaste treatment. The opportunity has also been taken to consolidate the original permit and subsequent variations.

Key issues of the decision

Improvement conditions

Based on the information in the application and our own records of the capability and performance of the installation at this site, we consider that we need to set improvement conditions so that the outcome of the techniques detailed in the Waste Treatment BREF /BAT Conclusions are achieved by the operator.

We have set improvement conditions as part of the ongoing biowaste treatment permit review for existing sites to give operators a reasonable timescale for completion, given the significant investments required. We have employed the use of improvement conditions in this determination to achieve the same result as in the ongoing biowaste permit review.

Improvement condition 1 – primary containment infrastructure design (tanks /vessels used for storage and/or treatment activities)

We have set improvement condition 1 in the permit to ensure that all tanks used for storage and/or treatment are fit for purpose.

Improvement condition 2 and 3 – secondary containment & lagoon design

We have set improvement conditions in the permit to address the deficiencies in the existing site secondary containment (IC2) and lagoon storage infrastructure (IC3).

Improvement condition 4 – review of effectiveness of abatement plant

The operator provided information to support compliance with BATc 34. A carbon filter is installed at the facility for the cleaning of biogas prior to injection into the grid. A biofilter has also been installed to abate odour emissions from the reception building. As part of the Environment Agency approach to reduce emissions in the biowaste treatment sector, we have set improvement condition 4. The improvement condition requires the operator to review all abatement plant on site, in order to determine whether existing measures have been effective and adequate to prevent and /or minimise emissions released to air. Where further improvements are identified, the operator is required to implement further measures.

Improvement condition 5 – assessment of methane slip from point sources

We have temporarily removed the need to monitor emissions of volatile organic compounds (VOCs) from the combustion of biogas in gas engines. We have included improvement condition 5 in the permit which requires the operator to assess methane slip resulting from point source emissions, such as from the combustion of biogas via the CHP engine. Following an assessment of the data, the Environment Agency shall consider whether or not emission limits for volatile organic compounds are applicable for this installation.

Improvement condition 6 – assessment of methane slip from diffuse sources

We have included improvement condition 6 in the permit to address methane leaks from diffuse sources on site. The improvement condition requires the operator to identify the leaks and mitigate the release of volatile organic compounds, including methane.

Decision considerations

Confidential information

A claim for commercial or industrial confidentiality has not been made. The decision was taken in accordance with our guidance on confidentiality.

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 confidentiality.

Consultation

The consultation requirements were identified in accordance with the Environmental Permitting (England and Wales) Regulations (2016) and our public participation statement.

The application was publicised on the GOV.UK website. We consulted the following organisations:

- Local Authority – Environmental Health
- Local Planning Authority
- Director of Public Health
- UK Health Security Agency
- Local Fire & Rescue
- Food Standards Agency
- Health & Safety Executive
- National Grid

The comments and our responses are summarised in the [consultation responses](#) section.

The site

The operator has provided a plan which we consider to be satisfactory. The plan is included in the permit.

Site condition report

The operator has provided a description of the condition of the site in the original permit application, which we consider is satisfactory. The operator has chosen to adopt a “zero contamination” for the site and consequently, has not provided a site and groundwater baseline reference data. This means that unless the

operator can quantify the level of pre-existing contamination and can demonstrate that they have not added to it, we will not accept a surrender application. The decision was taken in accordance with our guidance on site condition reports and baseline reporting under the Industrial Emissions Directive.

Nature conservation, landscape, heritage and protected species and habitat designations

We have checked the location of the application to assess if it is within the screening distances we consider relevant for impacts on nature conservation, landscape, heritage and protected species and habitat designations. The application is not within our screening distances for these designations.

We have assessed the application and its potential to affect sites of nature conservation, landscape, heritage and protected species and habitat designations identified in the nature conservation screening report as part of the permitting process. We consider that the application will not affect any site of nature conservation, landscape and heritage, and/or protected species or habitats identified.

We have not consulted Natural England. The decision was taken in accordance with our guidance.

Environmental risk

We have reviewed the operator's assessment of the environmental risk from the facility. The operator's risk assessment is satisfactory. The operator's risk assessment is unsatisfactory and required additional Environment Agency assessment.

The assessment shows that, applying the conservative criteria in our guidance on environmental risk assessment, all emissions may be screened out as environmentally not significant.

General operating techniques

We have reviewed the techniques used by the operator and compared these with the relevant guidance notes and we consider them to represent appropriate techniques for the facility. The operating techniques that the applicant must use are specified in table S1.2 in the environmental permit.

Operating techniques for emissions that do not screen out as insignificant

Emissions of nitrogen oxides and volatile organic compounds (benzene) cannot be screened out as insignificant. We have assessed whether the proposed techniques are Best Available Techniques (BAT).

The proposed techniques/ emission levels for emissions that do not screen out as insignificant are in line with the techniques and benchmark levels contained in the technical guidance and we consider them to represent appropriate techniques for the facility. The permit conditions enable compliance with relevant BAT reference documents (BREFs) [and BAT Conclusions, and Emission Limit Values (ELVs deliver compliance with BAT- Associated Emission Levels (AELs)].

Operating techniques for emissions that screen out as insignificant

Emissions of sulphur dioxide and carbon monoxide have been screened out as insignificant, and so we agree that the applicant's proposed techniques are Best Available Techniques (BAT) for the installation. We consider that the emission limits included in the installation permit reflect the BAT for the sector.

National Air Pollution Control Programme

We have considered the National Air Pollution Control Programme as required by the National Emissions Ceilings Regulations 2018. By setting emission limit values in line with technical guidance we are minimising emissions to air. This will aid the delivery of national air quality targets. We do not consider that we need to include any additional conditions in this permit.

Odour management

We have reviewed the odour management plan in accordance with our guidance on odour management. We consider that the odour management plan is satisfactory and we approve this plan.

We have approved the odour management plan as we consider it to be appropriate measures based on information available to us at the current time. The applicant should not take our approval of this plan to mean that the measures in the plan are considered to cover every circumstance throughout the life of the permit.

The applicant should keep the plan under constant review and revise them annually or if necessary sooner if there have been complaints arising from operations on site or if circumstances change. This is in accordance with our

guidance 'Control and monitor emissions for your environmental permit'. The plan has been incorporated into the operating techniques S1.2.

Fire prevention plan

We have not requested a Fire Prevention Plan at this time, but we will request one in the future if we consider the site poses a risk of fire.

Updating permit conditions during consolidation

We have updated permit conditions to those in the current generic permit template as part of permit consolidation. The conditions will provide the same level of protection as those in the previous permit.

Raw materials

We have specified limits and controls on the use of raw materials and fuels.

Waste types

We have specified the permitted waste types, descriptions and quantities, which can be accepted at the regulated facility. We are satisfied that the operator can accept these wastes for the following reasons:

- they are suitable for the proposed activities
- the proposed infrastructure is appropriate; and
- the environmental risk assessment is acceptable.

We made these decisions with respect to waste types in accordance with our guidance, *Biological waste treatment: appropriate measures for permitted facilities – Version published 21 September 2022*.

Improvement programme

Based on the information on the application, we consider that we need to include an improvement programme. Please see Key Issues section.

Emission Limits

We have decided that emission limits are required in the permit. Emission Limit Values (ELVs) and technical measures based on Best Available Techniques (BAT) have been added for the following substances:

Emission points to air

- Nitrogen oxides

- Sulphur dioxide
- Carbon monoxide
- Total volatile organic compounds
- Ammonia

Please refer to Table S3.1 of the permit for further details. We made these decisions in accordance with our guidance, *Biological waste treatment: appropriate measures for permitted facilities – Version published 21 September 2022*.

Monitoring

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. These monitoring requirements have been included in order to comply with the Waste Treatment BAT Conclusions. We made these decisions in accordance with Waste Treatment BAT Conclusions.

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. Please refer to Table S3.1 of the permit for further details.

Reporting

We have specified reporting in the permit. We made these decisions in accordance with Waste Treatment BAT Conclusions. Please refer to Table S4.1 of the permit for further details.

Management system

We are not aware of any reason to consider that the operator will not have the management system to enable it to comply with the permit conditions.

The decision was taken in accordance with the guidance on operator competence and how to develop a management system for environmental permits. We only review a summary of the management system during determination. The applicant submitted their full management system. We have therefore only reviewed the summary points. A full review of the management system is undertaken during compliance checks.

Technical competence

Technical competence is required for activities permitted. The operator is a member of the CIWM/WAMITAB scheme. We are satisfied that the operator is technically competent.

Financial competence

There is no known reason to consider that the operator will not be financially able to comply with the permit conditions.

Growth duty

We have considered our duty to have regard to the desirability of promoting economic growth set out in section 108(1) of the Deregulation Act 2015 and the guidance issued under section 110 of that Act in deciding whether to grant this permit variation.

Paragraph 1.3 of the guidance says:

“The primary role of regulators, in delivering regulation, is to achieve the regulatory outcomes for which they are responsible. For a number of regulators, these regulatory outcomes include an explicit reference to development or growth. The growth duty establishes economic growth as a factor that all specified regulators should have regard to, alongside the delivery of the protections set out in the relevant legislation.”

We have addressed the legislative requirements and environmental standards to be set for this operation in the body of the decision document above. The guidance is clear at paragraph 1.5 that the growth duty does not legitimise non-compliance and its purpose is not to achieve or pursue economic growth at the expense of necessary protections.

We consider the requirements and standards we have set in this permit are reasonable and necessary to avoid a risk of an unacceptable level of pollution. This also promotes growth amongst legitimate operators because the standards applied to the operator are consistent across businesses in this sector and have been set to achieve the required legislative standards.

Consultation Responses

The following summarises the responses to consultation with other organisations, and our notice on GOV.UK for the public, and the way in which we have considered these in the determination process.

Responses from organisations listed in the consultation section

Response received from **UK Health Security Agency**.

Brief summary of issues raised:

The main emissions of potential concern are fugitive releases of particulates, bio-aerosols, and odorous gases. However, UKHSA is satisfied that the control measures proposed by the applicant should be sufficient to ensure that there are no significant impacts on public health.

The Environment Agency should satisfy itself that the accident management plan is appropriate as this document could not be accessed by UKHSA for review.

The Environment Agency may also wish to consider the applicant's short term Environment Assessment Level for benzene. The Environment Agency should be satisfied that the applicant has adequately assessed all emissions to air using the most up to date environmental assessment levels.

Based on the information contained in the application supplied to us, UKHSA has no significant concerns regarding the risk to the health of the local population from the installation. This consultation response is based on the assumption that the permit holder shall take all appropriate measures to prevent or control pollution, in accordance with the relevant sector guidance and industry best practice.

Summary of actions taken:

Emergency procedures based on realistic scenarios is specified in the accident management plan which was submitted during the determination and will form part of the site EMS. The operator has used the release of benzene as a worst-case scenario from the combustion and upgrading of biogas from the site in the quantitative assessment of emissions to air. It is unlikely that emissions of benzene are released from biogas resulting from the treatment of source-segregated biodegradable wastes. We confirm that permit conditions and monitoring requirements have been set based on industry best practice and Best Available Techniques (BAT).

Response received from **Environment Protection Team, Durham County Council**.

Brief summary of issues raised:

Although there have been few severe issues recently due to the activities of the site, we have previously had a number of complaints regarding the storage and use of the digestate that the plant produces. These issues include alleged over application on land belonging to High Hedleyhope Farm, resulting in odour complaints from East Hedleyhope. In addition, there has been a pollution incident in the immediate vicinity. In addition, there were odour issues relating to a defective cover on the digestate lagoon which were affecting local residences. These issues have been resolved without enforcement action by Durham County Council, however, they leave concerns that with a 50% increase in throughput and therefore production of digestate, the pressures of storing and disposing of the digestate, especially in winter months when spreading is against the Environment Agency guidelines, will intensify the impact that this operation has on neighbouring properties.

Summary of actions taken:

We have reviewed the odour management plan submitted with the application to ensure it is fit for purpose and in accordance with our technical guidance notes. We have also included an improvement condition 3 for the review of the digestate storage lagoon design including cover to address emissions of odour.

The operator provided a digestate storage contingency plan during the determination. The operator currently utilises the digestate storage lagoon should there be a catastrophic failure of one of the tanks. This has an operational capacity of 13,000 m³. In the event of a scenario where digestate could not be discharged from site such as during an extreme weather event, a site closure, a disease outbreak or a scenario that means the primary offtake land bank is not available, the operator has an agreement with third-party service providers who operate a number of pre-land bank storage infrastructure lagoons and permastores that have an available capacity of 16,600 m³ available capacity. If further storage capacity is required beyond the aforementioned pre-land bank storage facilities, the operator will establish temporary digestate offtake contracts other AD facilities in the region. Finally, if all the above contingency options were unavailable, the operator shall utilise the onsite storage lagoon to full freeboard capacity and halt all waste acceptance and processing activities onsite to accommodate for the event or until a pre-landbank storage contract can be confirmed. The waste that cannot be accepted on site shall be re-directed to one of the permitted AD sites in the region.

Response received from **National Grid**.

Brief summary of issues raised:

No objection to the application.

Summary of actions taken:

No further action

Response received from **County Durham and Darlington Fire & Rescue Service**.

Brief summary of issues raised:

The plant is remote and does not affect any surrounding private dwelling properties in immediate vicinity. However a gas release may affect walkers near to the plant and pose a risk to other areas depending on wind direction. County Durham and Darlington fire and rescue will need to undertake a full site Fire Safety inspection. Cause and findings of gas release and explosion or malfunctioning of the plant should be published to the enforcing authority of County Durham and Darlington Fire and Rescue. This can also be used for understanding and training of firefighters attending biomass incidents. Does the plant currently have or require lightening protection due to the increase in product and gases being proposed on site? Will the current bunded area containing the Anaerobic Digestion tanks of the site contain the increase capacity of the waste product in the event of a catastrophic event occurring? Site management requires to be improved with 24-hour contactable site specialist advice, this was not the case on previous incident. County Durham and Darlington Fire and Rescue Service have no objections towards this variation application.

Summary of actions taken:

Lightening protection is addressed under the environmental management system (EMS) for the site and is not related to the increase in waste throughput. Permit condition 1.1 addresses the site management system. Emergency procedures based on realistic scenarios is specified in the accident management plan which will form part of the site EMS. We have included improvement condition 5 and 6 to address leaks of gas including methane from point and diffuse sources.

The operator confirms that site bunding will be used to prevent fire waters causing pollution, unless damaged by explosion. If damaged, the operator will use temporary bunding to plug the escape of water if possible. Fire water collected shall be treated at an appropriate water treatment works. No further processing of waste will be undertaken until agreed by the Environment Agency.

No representations were received from the other organisations consulted and from members of the public.

The application was publicised on the Environment Agency's website between 17/11/2023 and 15/12/2023.