Permitting Decisions- Variation

We have decided to grant the variation for Re-Gas Herriard AD Plant operated by for Herriard Bio Power Limited.

The variation number is EPR/AB3807KW/V003.

The permit was issued on 19/03/2025.

The variation involves changes, that fall outside the current Waste permit and will therefore vary the permit to an Installations permit. Key changes include:

- An increase to the annual throughput of the listed activity processed at the installation, from 36,500 tonnes to a maximum of 52,500 tonnes per annum.
- Significant improvements to site infrastructure, which include a biogas upgrading plant (BUP) for the production of biomethane for use on site and transported offsite via virtual pipeline to be injected to the National Gas Grid.
- Addition of a new point source emissions to air from the BUP, carbon filter odour abatement plant, a second CHP and second emergency flare.

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.

Key issues of the decision

Digestate separator and fibre storage bay

The digestate separators and digestate fibre storage bay are not currently in a building with collection and treatment of diffuse emissions. The separation of digestate is an odorous releasing process and we would expect to see measures in accordance with BAT and the sector guidance, or appropriate alternative measures with sound justification to be proposed in order to prevent or, where that is not practicable, to reduce diffuse emissions to air, in particular of dust, organic compounds and odour.

Improvement works to cover the separators and the fibre storage bay to prevent or mitigate emissions have been proposed by the operator. The digestate separation and fibre storage bay is constructed of blockwork walls 1.85m high with an internal footprint of 4.5m by 5.3m. The fibre digestate from the two screw press separators falls into a bunker. The bunker will include a 4m high Zappshelter/McGregor cover structure to abate emissions, open on one side to allow easy access for vehicles to remove fibre digestate which will be removed from the site to farm destination field heaps, in accordance with the digestate handling procedure.

The facility has no history of odour complaints, and a comprehensive odour management plan has been submitted supporting the permit application**.** The operator submitted odour dispersion modelling with the application, which showed a reduction of ammonia (NH_3) and odour from the separator, due to containment effect by the structure. We do not accept this type of modelling as a replacement for a good management plan, only in support of it. This is because there are high uncertainties inherent in odour modelling assessments (especially when it comes to fugitive sources), and the likelihood of substantial odour nuisance will be dependent largely on effective mitigation and containment.

The covering of the digestate separator and fibre storage bay is an ‘alternative measure’ to provide an equivalent level of protection to BAT. To demonstrate the design, and abatement methodology proposals are appropriate and in line with our guidance, an improvement condition has been included in the permit (See Table 1.3 IC4) to ensure that the alternative approach proposed demonstrates that potential NH_3 and odour emissions are sufficiently abated by this technique with regards to both environmental and human receptors.

We are satisfied that the operator has committed to a programme of works to prevent or, where that is not practicable, to reduce diffuse emissions to air**.** We took this decision in line with our sector guidance.

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 comments and our responses are summarised in the consultation responses section.

The application was publicised on the GOV.UK website.

We consulted the following organisations:

- Local Authority – Environmental Protection Department
- Director of PH/UKHSA
- Health and Safety Executive

The comments and our responses are summarised in the consultation responses section.

The regulated facility

We considered the extent and nature of the facility at the site in accordance with RGN2 ‘Understanding the meaning of regulated facility’, Appendix 2 of RGN2 ‘Defining the scope of the installation’

The site

The operator has provided a plan which we consider to be satisfactory.

These show the extent of the site of the facility.

The plan is included in the permit.

Site condition report

A site condition report has been developed for this permit variation application, as under the previous waste permit it was not a requirement.

The operator has provided a description of the condition of the site, which we consider is satisfactory.

The decision was taken in accordance with our guidance on site condition reports.

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.

Environmental risk

We have reviewed the operator's assessment of the environmental risk from the facility. The operator's risk assessment is satisfactory.

The Air quality Impact assessment (AQIA) submitted predicts that the maximum 15-minute SO_2 and 24-hour benzene and NO_2 process contributions (PCs) will be 'not insignificant' at human health receptors. All other pollutants are predicted to be insignificant. No predicted environmental concentrations (PECs) will exceed the environmental standards (ES).

The assessment shows, applying the conservative criteria in our guidance on environmental risk assessment**,** all emissions may be screened out as environmentally insignificant with the exception of sulphur dioxide and benzene (not significant for human health). But the predicted PECs are within the ES for both, with all pollutant predictions insignificant for nature sites (oxides of nitrogen, ammonia, sulphur dioxide, nitrogen deposition and acid deposition).

Our assessment concludes that although we do not fully agree with the consultant's numerical values, we agree with the consultants' conclusions regarding human health and ecological sites and therefore agree that contributions from the proposed plant are not likely to lead to an exceedance of the ES at any location of exposure for human health, nor the critical loads and levels at any ecological designation of relevance.

A Site Specific Bioaerosols Risk Assessment (SSBRA) was also submitted with the application. This assessment determines if monitoring is required for bespoke

permit applications, where the operational area is within 250 meters of a sensitive receptors. The SSBRA, described the sensitive receptors as being over 745 meters to the south east of the facility, with prevailing winds from the south-west. The probability from sources were screened out as `Very Low or Low`, with control measures that include carbon abatement appropriate to the risk.

An open windrows composting facility lies adjacent to the facility with associated bioaerosols monitoring requirements. The facility was not included as a sensitive receptor, due to the nature of the operations which are likely to result in a higher potential of exposure for staff to bioaerosols emissions.

In conclusion, we are satisfied and agree with the applicant's probability of exposure form sources, and the magnitude of risk being `Very Low or Low and as such agree the results of the assessment for the potential impacts as a result of bioaerosols emissions from the facility to be 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.

- Biological waste treatment: appropriate measures for permitted facilities, 21 September 2022, GOV.UK

- Best available techniques (BAT) for Waste Treatment as detailed in document reference 2010/75/EU

- Best Available Techniques (BAT) Conclusions for Waste Treatment as detailed in document reference C (2018) 5070

- Medium Combustion Plant Directive (MCPD)

The operating techniques that the applicant must use are specified in table S1.2 in the environmental permit.

Operating techniques for emissions that screen out as insignificant

Emissions of annual mean nitrogen dioxide, benzene, ammonia, hydrogen sulphide. 1-hourly nitrogen dioxide, 1-hourly sulphur dioxide, 24-hour sulphur dioxide, 8-hourly rolling carbon monoxide, 1-hourly ammonia, 24-hour hydrogen sulphide 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.

Operating techniques for emissions that do not screen out as insignificant

Emissions of 15-minute sulphur dioxide and 24-hour 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)

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. The odour management plan is comprehensive, but as new abatement plant is to be installed at the facility, we have included an improvement condition in the permit (see Table S1.3 - IC4) to verify the efficacy of the odour controls measures.

We consider that the odour management plan is satisfactory, and we approve this 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 plans 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’.

Fire prevention plan

We haven't 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.

The facility has been designed according to a Hazard and Operability Study (HAZOP), and subject to a full Dangerous Substances and Explosive Atmospheres Risk Assessment (DSEAR) in order to inform suitable infrastructure and management of operational activities at the installation. Permitted waste types are non-hazardous, and process material is in the form of liquid animal slurries, energy crops and solid farm feedstock, and we consider they do not pose a high fire risk.

A Fire Risk Assessment has been undertaken and is reviewed on a regular scheduled basis. The sites Environmental Management System (EMS) includes both an Accident Management Plan and a Fire & Explosion Response Procedure, which considers the potential for fires and includes preventative aspects to manage the ongoing health and safety.

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.

The operator has requested to include the following wastes for biological treatment:

Waste code	Description
03 03 11	sludges from on-site effluent treatment other than those mentioned in 03 03 10
04 02 21	wastes from unprocessed textile fibres - Waste types in this section allowed if biodegradable material only
16 10 02	untreated wash waters from cleaning fruit and vegetables on farm only
16 10 02	milk and dairy waste milk from agricultural premises only
16 10 02	liquor/leachate from a composting process that accepts waste input types listed in this table only and in compliance with Animal By-Products Regulations

Note - EWC (03 03 11) is not listed in our biowaste treatment permit template.

Note - EWC (16 10 02) is listed in our biowaste treatment permit template.

Note - EWC (04 02 21) is not listed in our biowaste treatment permit template.

We have included these wastes in the permit provided the operator undertakes a detailed characterisation of the wastes prior to acceptance for treatment at the site in accordance with BATc 2a (Set up and implement waste characterisation and pre-acceptance procedures).

We made this decision with respect to waste types in accordance with the Framework Guidance Note – Framework for assessing suitability of wastes going to anaerobic digestion, composting and biological treatment (July 2013).

We have excluded the following waste streams ending with “99” code(s) because more suitable waste codes are already in the European Waste Catalogue (EWC) that accommodate the waste described:

Waste code	Description
02 02 99	sludges from gelatine production, animal gut contents
02 03 99	sludge from production of edible fats and oils to include seasoning residues, molasses residues, residues from production of potato, corn or rice starch
02 04 99	other wastes
02 07 99	wastes not otherwise specified (malt husks, malt sprouts, yeast and yeast-like residues only)
19 05 99	composting liquors

Our technical guidance on waste classification WM3 specifically sets out clear instructions for the use of the European Waste Catalogue (EWC), particularly with regard to “99” codes. The guidance specifies that the Operator must:

- Identify the source generating the waste in chapters 01 to 12 or 17 to 20 and identify the appropriate six-digit code of the waste (excluding codes ending with 99 of these chapters).
- If no appropriate waste code can be found in chapters 01 to 12 or 17 to 20, the chapters 13, 14 and 15 must be examined to identify the waste.
- If none of these waste codes apply, the waste must be identified according to chapter 16.
- If the waste is not in chapter 16, the 99 code (wastes not otherwise specified) must be used in the section of the list corresponding to the activity identified in step one as a last resort.

We made this decision with respect to “99” codes in accordance with the Technical Guidance WM3: Waste Classification – Guidance on the classification and assessment of waste [1st Edition v1.1, May 2018].

Improvement programme

Based on the information on the application, we consider that we need to include an improvement programme.

Improvement condition IC1and IC2 – assessing biogas upgrading plant emissions.

We have set condition IC1 and IC2 in the permit to address emissions from the biogas upgrading plant. The applicant submitted an assessment to consider the impact of air emissions from the biogas upgrading plant. The emissions of hydrogen sulphide and volatile organic compounds (VOCs) were screened out as insignificant, in that process contributions were <1% of the long-term ES and <10% of the short-term ES. We conclude that emissions of hydrogen sulphide and VOCs are unlikely to have a significant impact on human health.

The emissions data (H_2S and VOCs) from the biogas upgrading plant were obtained from the manufacturer and not based on real-time operational monitoring data. We consider it appropriate to set an Improvement condition (IC1) which requires the operator to undertake a monitoring survey following the commencement of operations at the biogas upgrading plant to obtain actual (real-time) operational monitoring data.

Improvement Condition 2 (IC2) requires the operator to undertake an air emissions impact assessment (H1 software tool) using the results of the monitoring survey and compare the long- and short-term impacts of pollutants in accordance with the

Environment Agency Guidance – *Air emissions risk assessment for your environmental permit*. Following the review of results from the monitoring survey and impact assessment, the Environment Agency shall consider whether or not emission limits are appropriate at emission point A4. We have used this approach for biowaste treatment facilities proposing to install biogas upgrading plants across England.

Improvement condition IC3 – assessment of methane slip.

We have set condition (IC3) in the permit which requires the operator to review all sources of methane leaks from the site and compare these to the manufacture's specifications and benchmarks. We have therefore set an improvement condition for the operator to submit a written plan to detect and mitigate the potential for methane slip with corrective actions where emissions of methane above the manufacturer's specifications are identified.

Improvement condition IC4 – review of the effectiveness of abatement plant

We have set condition (IC4) in the permit to address the effectiveness of the odour abatement plant. The applicant reports that the technique is listed as appropriate in BATc 34 of the Waste Treatment BAT Conclusions and consider it BAT for this installation. We are in agreement with the justification of BAT at this installation. As part of the Environment Agency approach to reduce emissions in the biowaste treatment sector, we have set improvement condition IC4. The improvement condition requires the operator to review abatement plant on site, in order to determine whether the abatement plant is effective and adequate to prevent and /or minimise emissions released to air. Where further improvements are identified, the operator is required to implement these measures.

Improvement condition IC5 – review of the effectiveness of the digestate separation cover/enclosure

We have set condition (IC5) in the permit to address the effectiveness of the proposed digestate separation cover/enclosure.

Improvement condition IC6 – assessment of digestate storage lagoon cover and internal inspection

We have set condition (IC6) in the permit to address evidence of work to cover the lagoons and an internal integrity inspection and maintenance programme.

Improvement condition IC7 – review of the drainage network

We have set condition (IC7) in the permit to address evidence of a drainage network survey to establish the integrity, address improvements necessary and update the drainage plans accordingly.

Improvement condition IC8 - site containment improvements

We have set condition (IC8) in the permit to address evidence of site containment improvements, in line with our technical standards for site design and pollution prevention.

Improvement condition IC9 – Gas capture technology for the storage lagoons

We have set condition (IC9) in the permit to address evidence that the installation of this technology is carried out by suitable qualified engineers, and in accordance with industry standards.

Emission limits

Emission Limit Values (ELVs) and equivalent parameters or technical measures based on Best Available Techniques (BAT) have been added for the following substances:

Emission points to air

- Ammonia - 20 mg/m^3
- Odour concentration - 1,000 ou_E/m^3
- Oxides of Nitrogen (NO and NO_2 expressed as NO_2) - 500 mg/m^3/ 150 mg/m^3/
- Carbon monoxide - 50 mg/m^3
- Total VOCs - 10 mg/m^3

The amendments reflect the addition of:

- Carbon filter abatement system for the waste reception building – Emission point EP.1
- New CHP engine stack - Emission point EP.3
- Two new emergency flares - Emission points EP.4 and EP.5

It is considered that the ELVs described are appropriate for the process and that significant pollution of the environment is prevented, with a high level of protection for the environment secured.

Monitoring

We have decided that monitoring should be added for the following parameters, using the methods detailed and to the frequencies specified:

- Ammonia
- Odour concentration

And amended for the following parameters using the methods detailed and to the frequencies specified:

- Oxides of Nitrogen (NO and NO_2 expressed as NO_2)
- Sulphur dioxide
- Carbon monoxide
- Total volatile organic compounds

These monitoring requirements have been included in order to ensure the abatement is working efficiently to prevent adverse effects to the environment, and that monitoring is in accordance with:

- BAT Conclusions for waste treatment, August 2018 under Directive 2010/75/EU
- Medium Combustion Plant Directive (MCPD)

Please refer to Table 3.1 of the permit for further details.

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.

Reporting

We have added reporting in the permit for the following parameters:

- Odour
- Ammonia
- Oxides of Nitrogen (NO and NO_2 expressed as NO_2)
- Carbon monoxide
- Total volatile organic compounds

We made these decisions in accordance with:

- BAT Conclusions for waste treatment, August 2018 under Directive 2010/75/EU

Please refer to S4.1 of the permit for further details.

Technical competence

Technical competence is required for activities permitted.

The operator is a member of the CIWM/WAMITAB scheme

The operator will ensure that a technically competent manager (TCM) attends site for the requisite hours in accordance with the Environment Agency guidance ‘Legal operator and competence requirements: environmental permits.

We are satisfied that the operator is technically competent.

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, 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: Director of PH/UKHSA

Brief summary of issues raised: UKHSA recommendations include a timeline for the odour abatement covers for the digestate liquor lagoon, and evidence that the referenced Accident Management Plan and Fire Risk Assessment not enclosed with the application, demonstrate sufficient consideration for the fire risks on site.

Summary of actions taken

Since the application was submitted, the abatement method for the storage lagoons has changed from floating covers with carbon filters to engineered covers with gas capture technology. This will provide a more efficient and improved environmental outcome, as gas from the digestate lagoons will now be diverted via pipework to the roof space of the primary digester, as opposed to being vented via carbon filters to atmosphere. This will be installed within 4 months of permit issue or otherwise agreed with the Environment Agency as stated in the improvement programme in the permit.

The operator has updated the Dangerous Substances and Explosive Atmospheres Regulations (DSEAR), risk assessment to identify explosive zones and to implement the correct control measures in line with the expansion of the facility. Additionally, an updated hazard and operability study (HAZOP) and Accident Management Plan has been undertaken to support the application, which includes appropriate Fire & Explosion Response Procedures and Fire Risk Assessment. To ensure the Fire risk is monitored at local level, this consideration has been addressed and raised in the handover to the Area officer.

No further responses were received.