

Permitting Decisions – Variation

Document recording our decision-making process following the requirement for waste and wastewater sewerage treatment activities permitted as an installation subject to Chapter II of the Industrial Emissions Directive under the Environmental Permitting (England & Wales) Regulations 2016 (as amended)

We have decided to grant the permit for Trowbridge Bioresources Centre operated by Wessex Water Enterprises Limited.

The permit number is EPR/HB3602TR/V003.

Purpose of this document

On 2 April 2019, the Environment Agency confirmed to the Water and Sewerage Companies (WaSCs) operating in England that their sewage sludge anaerobic digestion (AD) facilities needed to comply with the Industrial Emissions Directive (IED).

The IED entered into force on 6 January 2011 and was transposed into UK law on 20 February 2013. The IED recast the Directive on integrated pollution prevention and control (IPPC) and introduced a revised schedule of industrial activities falling within the scope of its permitting requirements. The schedule of waste management activities includes the recovery of non-hazardous waste with a capacity exceeding 75 tonnes per day involving biological treatment, but excludes activities covered by the Urban Waste Water Treatment Regulations (UWWTR).

In July 2014 we deferred the need for the WaSCs to submit permit applications for these facilities to allow for further consideration of whether they were already covered under the UWWTR. All the UK environmental regulators subsequently concluded this was not the case, and therefore they come within the scope of the IED.

The IED seeks to achieve a high level of protection for the environment, taken as a whole, from the harmful effects of industrial activities. It does so by requiring each of the industrial installations to be operated under a permit with conditions based around the use of best available techniques (BAT).

The IED set a deadline of 7 January 2014 for existing installations to obtain an environmental permit. Therefore, the implementation of this aspect of the IED

had been delayed for over five years at the point of our confirmation to the WaSCs on 2 April 2019.

The BAT Conclusions for Waste Treatment was published on 17 August 2018 following a European Union wide review of BAT, implementing decision (EU) 2018/1147 of 10 August 2018. BAT applies to new waste sewage sludge treatment not covered by the UWWTR. The operations at Trowbridge Bioresources Centre are existing but will now be permitted as an installation and will be required to operate using BAT.

Given the delay in implementing the IED in England, we subsequently have sought to ensure that all sewage sludge AD facilities obtain and operate under an environmental permit in as short a timescale as can reasonably be achieved. We asked the WaSCs to provide a definitive list of all facilities used to carry out biological treatment of sewage sludge. A submission schedule was provided to the WaSCs, allowing applications for these facilities to be submitted to us in stages between 1 April 2021 and 1 October 2022. This application is part of this programme of work.

This permit is for a listed activity which is part of a multi-operator installation. The other part of the installation is operated by Wessex Water Services Limited under permit EPR/BB3934AG which forms the stationary technical unit to this permit.

The application is a variation to add the combined heat and power (CHP) engine, boilers, flares, gas to grid unit, biogas holder and associated waste water management activities previously operated under a bespoke permit that are now directly associated activities (DAAs) of the Section 5.4 Part A (1)(b)(i) activity carried out on the Trowbridge Bioresources Centre permit EPR/BB3934AG.

We consider in reaching this decision that 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.

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

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

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

This permitting decision should be read in conjunction with the environmental permit.

Key issues of the decision

Best Available Techniques (BAT)

Article 3(12) of the IED defines BAT conclusions as:

a document containing the parts of a BAT reference document [BREF] laying down the conclusions on best available techniques, their description, information to assess their applicability, the emission levels associated with the best available techniques, associated monitoring, associated consumption levels and, where appropriate, relevant site remediation measures.

The *emission levels associated with the best available techniques* (BAT-AELs) in IED BAT conclusions are mandatory emission levels. These are generally numerical limits on point source emissions to water and air.

For the DAA activities Wessex Water Enterprises Limited (referred to in this document as the ‘operator’) provided supporting information with their application to demonstrate that their methods of operating are in accordance with the relevant BAT conclusions. We have assessed these documents alongside those of permit application EPR/BB3934AG/V002.

Where this document does not discuss a BAT conclusion in detail, we have accepted the operator’s supporting information and justifications that they are compliant with the respective BAT conclusion.

Emissions to air – Combustion

Biogas generated through the AD of waste contains a high quantity of methane and is often used to provide energy to onsite operations. Biogas is commonly combusted within on-site combined heat and power engines (CHP) or boilers. CHP engines produce heat and electricity. Heat is used to provide energy in the form of steam or hot water and is directed to the anaerobic digestion plant processes, while electricity can be utilised to power other plant on site.

Combustion of biogas or other fuels such as natural gas produces waste gas emissions which are discharged to the atmosphere via a stack. The combustion of biogas releases the following products of combustion; oxides of nitrogen (expressed as NO₂), sulphur dioxide (SO₂), carbon monoxide (CO) and volatile organic compounds (VOC).

While the WaSC anaerobic digestion activity has not until now been regulated under the Environmental Permitting (England and Wales) Regulations 2016 (EPR) as an installation, across the sector, the combustion plant may have been permitted. Some combustion plant in this sector will already have permits as standalone medium combustion plant. If emissions have previously been

assessed, our approach is not to undertake any additional assessment unless there is a site-specific reason to do so. If emissions had not been previously assessed, or there had been subsequent changes, we would require a WaSC to undertake a new quantitative air risk assessment during determination.

Trowbridge Bioresources Centre is authorised to combust biogas in one 4.5MWth CHP engine fuelled on biogas and two 0.75MWth auxiliary boilers fuelled on biogas and gas oil (operated under this permit), in addition to the operation of one emergency standby generator (operated by Wessex Water Services Limited under permit EPR/BB3934AG).

The emissions from the combustion plant were not previously assessed as they were permitted as a standard rules permit (SR 2008 No.9), before the permit was varied into a bespoke permit to include the gas to grid unit in 2019. The operator provided a quantitative risk assessment to determine the predicted impacts on human receptors (for example dwellings, work places and parks) and ecological sites.

A methodology for risk assessment of point source emissions to air is set out in our guidance, [Air emissions risk assessment for your environmental permit](#). The operator provided an assessment of the impact of emissions to air with the application which is detailed in document 'Air Emissions Risk Assessment' (issue 3/version 5 – Sept 2024)

We have reviewed the assessment and are satisfied that it has taken into account all relevant ecological and human health receptors, that the model and its inputs are appropriate and that the assessment has been carried out in accordance with our guidance.

We carried out an audit of the air quality impacts associated with the proposed permit for this site. We agree with the operator's conclusions and results presented in their air dispersion modelling report that it is unlikely to be any exceedances of the environmental standards (ES) as a result of the site operations.

- The long-term PCs at human receptors are greater than 1% of the EQS, however the PEC are less than 70% of the long-term air quality objective so is not significant.
- The short-term PCs at human receptors are greater than 10% of the relevant short-term EQS however the PEC is less than 70% of the short-term air quality objective so are not significant.

- The annual mean PCs are less than 100% of the relevant long-term environmental standard so are not significant.
- Short-term mean concentrations (i.e. the 24-hour mean critical level for NO_x), the respective PCs are less than 100% of the short-term environmental standard so are not significant.

We agree with the operator's conclusions that the impact of the emissions at human receptors are not significant.

Bath & Bradford on Avon Bats (SAC) and Salisbury Plain (SPA/SAC)

We agree with the operator's conclusions that there will be no adverse effect alone or in combination.

As the combustion activities have been in operation under an existing bespoke permit, we do not expect any increase in risk. We have considered the site distance from the habitat and can conclude no effect on the protected features.

The combustion process at the installation is not considered 'relevant' for assessment under the Agency's procedures which cover the Conservation of Habitats and Species Regulations 2017 (Habitats Regulations) and/or the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act (CRoW) 2000). This was determined by referring to the Agency's guidance 'AQTAG014: Guidance on identifying 'relevance' for assessment under the Habitats Regulations for installations with combustion processes.' Thus, no detailed assessment of the effect of the releases from the installation's combustion processes on SACs, SPAs and Ramsar sites is required.

We have ensured that individual combustion plant is subject to the required emission limit value (ELV) as stated in the permit. This includes those required by the Medium Combustion Plant Directive (MCPD) which are currently in effect, or which have a future effective date. See Table S3.1 in the permit.

We have included improvement condition IC12 in the permit which requires the Operator to assess methane slip resulting from the combustion of biogas via the CHP engine. Following an assessment of the data, the Environment Agency shall consider whether emission limits for volatile organic compounds are applicable for this installation.

Indirect emissions of waste water

Wessex Water Services Limited have accepted drainage responsibility for the surface water runoff, biogas condensate, boiler blowdown and gas to grid unit liquors produced from the gas combustion asset and the gas to grid unit areas of site operated by Wessex Water Enterprises Limited as these indirect emissions

will be discharged into the wider installation area operated by Wessex Water Services Limited under permit EPR/BB3934AG. The accepted responsibility has been outlined in the document 'Transfer of indirect discharges to water risk assessment' (version 1 – Nov 2024), which are detailed in the operating techniques (table S2.1) of both permits.

Odour management

The Waste Treatment BREF outlines techniques for minimising the impact from odour pollution from operations which are likely to cause odour. Anaerobic digestion and the handling/storage of various waste sludges and organic wastes can be highly odorous. The Waste Treatment BREF includes general BAT conclusions which operators must implement (BAT 10 and 12 where odour nuisance at sensitive receptors is expected and/or has been substantiated).

These include:

- BAT 10 – Monitoring of odour emissions
- BAT 12 – Odour management plan
- BAT 13 – Techniques to reduce odour emissions
- BAT 14 – Reduce diffuse emissions to air

Odour and BAT

BAT requires that processing and treatment of odorous wastes be carried out in a sealed system. This means that tanks/vessel or areas must be connected to an odour abatement system. Odorous gas streams are to be directed to the abatement plant to be treated prior to release to the atmosphere via emission stacks. The stacks are point source emissions to air. BAT-associated emission levels (BAT-AELs) for the 'biological treatment of waste' require that odour concentrations are limited to less than 1,000 ouE/Nm³ at the point of release or, in the case of an ammonia release, no more than 20 mg/Nm³. The upper BAT-AEL limit for ammonia is specified in the permit. The permit also specifies limits for 'the treatment of water-based liquid waste' of hydrogen chloride (HCl) at not more than 5 mg/m³, and Total volatile organic compounds (TVOC) at no more than 20 mg/m³; however the monitoring of HCl and TVOC only apply where the substance is identified as relevant in the gas stream. As the operator provided no evidence to demonstrate that they were not present the limits were applied.

The odour abatement technology at Trowbridge is for an enclosed one staged abatement system (odour control unit - OCU) comprising of one carbon filter (air emission point A16) serving the gas to grid unit exhaust port.

The odour control technology meets the requirement of BAT 34 and 53 which identifies relevant appropriate techniques for the reduction of odour as carbon filters.

Odour management plan

The site is required to have an odour management plan in place that details the measures and procedures to prevent or otherwise minimise, odour releases from the site. The plan forms part of the permit.

Air/odour abatement systems

To verify the effectiveness of the odour management systems in place at Trowbridge Bioresources Centre, we have requested that the operator carry out a review of the abatement plant on site, to determine whether the measures have been effective and adequate to prevent and where not possible minimise emissions released to air including; but not limited to odour, NH₃, TVOC and HCl. The required review is included in the permit in the form of an improvement condition (IC13) which is part of the improvement programme detailed in table S1.3.

Odour conclusions

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.

Improvement conditions

Biogas upgrade plant

The operator 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 not significant, in that process contributions were >1% of the long-term environmental standard (ES) and >10% of the short-term ES, however the PEC was less than 70% of both the long-term and short-term air quality objectives so are deemed not significant. We conclude that emissions of hydrogen sulphide and VOCs are unlikely to have a significant impact on human health.

The emissions data (H₂S 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 IC10 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 (IC11) 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 emission limits are appropriate at emission point A16. We have

used this approach for biowaste treatment facilities proposing to install biogas upgrading plants across England.

Methane slip.

We have included improvement condition (IC12) in the permit which requires the operator to assess methane slip resulting from the combustion of biogas via the CHP engines. Following an assessment of the data, the Environment Agency shall consider whether emission limits for volatile organic compounds are applicable for this installation.

Effectiveness of abatement systems

The installation includes industrial processes which produce waste gas and odour emissions that are discharged to air via vents or stacks. BAT conclusion 14 of the Waste Treatment BREF states that emissions from diffuse sources should use techniques like, *collecting and directing the emissions to an appropriate abatement system via an air extraction system and/or air suction systems close to the emission sources*. This installation includes the storage and treatment of wastes in tanks and vessels. To prevent diffuse emissions of pollutants such as odour, ammonia and VOCs, emissions are extracted and treated by an air abatement system. The abatement technology used at Trowbridge Bioresources Centre is a carbon filter. The treated air stream is then discharged to atmosphere via a stack.

As part of the determination, we reviewed the operator's abatement plant and its suitability in providing effective abatement to diffuse air emissions and can confirm the existing air abatement systems represent techniques as identified in BAT conclusion 34 and BAT conclusion 53.

Additionally, to verify whether existing measures have been effective and adequate to prevent and/or minimise emissions released to air, we have set an improvement condition (IC13). The improvement condition requires the operator to demonstrate via determining the composition of waste gas emissions, monitoring and additional risk assessment that the existing abatement system effectively treats the emissions to air. Where further improvements are identified, the operator is required to implement these measures. It should be noted that a review of the existing system could determine that the existing systems are not suitable for the waste gas emissions. Should a review identify that a new abatement system is required, the improvement condition indicates that a variation application is needed.

Any new abatement plant should be designed to reduce odours and where required ammonia. For new abatement plant, an operator will need to ensure that new abatement systems achieve the BAT AEL for odour or limits defined by the

plant design, whichever is less. The BAT AEL for odour concentration is 1,000 ou_E/m³. Should the operator seek to install an abatement system which cannot meet this requirement, it is unlikely that the abatement plant will be BAT.

Pressure release valves

All vessels and storage tanks (including plant storing biogas) must have pressure relief and vacuum relief valves (PVRV) where there is a risk of over or under pressurisation. The PVRVs are an emergency feature and should not be routinely used to discharge gases which cannot be used or stored.

We have reviewed recent compliance reports provided by our regulatory teams relating to the existing operations (specifically gas infrastructure management) which indicates biogas and other waste gases are potentially emitted from the PVRVs during non-emergency scenarios. This is not BAT, and therefore is considered an uncontrolled emission to the environment indicating that the PVRVs may not be appropriate for the vessels which they serve.

We have therefore set an improvement condition, IC14, which requires the operator to perform a review of the existing PVRVs and assess their suitability in line with section 8.11 (Pressure and vacuum relief control – AD and TAD plants) of Environment Agency guidance, *Biological waste treatment: appropriate measures for permitted facilities*. The review will identify any deficiencies of the existing PVRV configuration and make recommendations to make refurbishments or to replace the relevant PVRVs.

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:

consulted the following organisations:

- Local Authority – Wiltshire County Council – No response was received.
- UK Health Security Agency (Previously Public Health England) and the relevant Director of Public Health – See consultation responses section.
- Health and safety executive – HSE – No response was received.

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

Operator

We are satisfied that the operator is the person who will have control over the operation of part of the facility after the grant of the permit. The decision was taken in accordance with our guidance on legal operator for environmental permits.

The regulated facility

We considered the extent and nature of the facilities at the site in accordance with RGN2 'Understanding the meaning of regulated facility', Appendix 2 of

RGN2 'Defining the scope of the installation', Appendix 1 of RGN 2 'Interpretation of Schedule 1', guidance on waste recovery plans and permits.

The extent of the facilities is defined in the site plan and in the permit. The activities are defined in table S1.1 of the permit.

This permit applies to only one part of the installation – the directly associated activities including the biogas combustion assets and the gas to grid unit. The names and permit numbers of the operators of other parts of the installation are detailed in the permit's introductory note.

The site

The operator has provided plans which we consider to be satisfactory.

The plans show the location of the part of the installation to which this permit applies on that site.

These plans are included in the permit.

Site condition report

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 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.

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.

Improvements set out in table S1.3 must be completed by the times stipulated in that table or the backstop conditions identified in the permit.

We have reviewed the techniques against the Best Available Techniques (BAT) Reference Document for Waste Treatment (BAT conclusions), Biological waste treatment: appropriate measures for permitted facilities - 1. When appropriate measures apply - Guidance - GOV.UK (www.gov.uk) and Non-hazardous and inert waste: appropriate measures for permitted facilities.

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

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 operator 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 operator 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'.

While we consider that the plan is satisfactory, we have included an improvement condition (IC13) to review the effectiveness of the abatement system. The improvement condition is included 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 these measures in accordance with Environment Agency approval.

The plan has been incorporated into the operating techniques S1.2.

Improvement programme

Based on the information on the application, we consider that we need to include an improvement programme. See the Key issues section for more details on the bespoke permit conditions we have set in this permit

Emission Limits

Emission Limit Values (ELVs) and equivalent parameters or technical measures based on Best Available Techniques (BAT) have been added for emissions to air and indirect discharges of waste water to surface waters.

Emission limit values are derived from:

- Waste Treatment BREF for BAT associated emission limits.
- Schedule 25A of the Environmental Permitting (England and Wales) (Amendment) Regulations 2018.

Emissions to air

Odour abatement system

There is a point source emission to air from one odour control unit (a carbon filter). The odour control unit discharges emissions to air via a stack (emission point A16). BAT requires that BAT-AELs of 20 mg/Nm³ for Ammonia (NH₃) be applied when biological treatment of waste is carried out. Anaerobic digestion is a biological process - therefore the limit is included in the permit.

The Waste Treatment BREF provides examples of wastes that would be considered as water-based liquid wastes. These include wastes under the category '19 08 wastes from waste water treatment plants not otherwise specified'. As there will be channelled emissions of odorous air from the

treatment of these wastes, we have included BAT-AELs of 5 mg/Nm³ Hydrogen Chloride (HCL) and 20 mg/Nm³ of Total Volatile Organic Compounds (TVOC). It should be noted that the limits for HCL and TVOC only apply when the substances of concern are identified in the waste gas streams characterised in BAT conclusion 3. Improvement condition IC13 requires full investigation and characterisation of waste gas streams within 6 months of issue of the permit. A full characterisation of waste gas streams was not available at the time of submission of the application.

Combustion appliances

Biogas is produced as a result of the AD process operated under permit EPR/BB3934AG. Combustion of the produced biogas takes place in a CHP engine and two boilers. The engine produces heat and electricity that may be used to power on site processes while boilers provide additional heat to the AD processes. Combustion of biogas discharges pollutants to the air via stacks and exhausts. We have therefore applied emission limits to the following substances;

- Nitrogen oxides
- Sulphur dioxide
- Carbon monoxide

For further detail of emission limits, refer to table S3.1 of the permit

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.

We made these decisions in accordance with waste treatment Best available techniques 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.

Reporting

We have specified reporting in the permit.

We made these decisions in accordance with waste treatment Best available techniques BAT conclusions.

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.

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 ESA/EU skills scheme.

We are satisfied that the operator is technically competent.

Previous performance

We have assessed operator competence. There is no known reason to consider the operator will not comply with the permit conditions.

We have checked our systems to ensure that all relevant convictions have been declared.

Relevant convictions were found and declared in the application. We considered relevant convictions as part of the determination process.

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.

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 UK Health Security Agency (UKHSA)

Brief summary of issues raised:

The main potential concerns related to nitrogen oxides (NO_x), sulphur dioxide (SO₂), Volatile Organic Compounds and fugitive releases of bioaerosols and odorous emissions.

The emissions produced from the flare stacks should be confirmed as insignificant.

Summary of actions taken:

We have placed emission limits and monitoring requirements in permit in line with BAT. We have assessed the operators air modelling and agree with their conclusion that the impact to both human and ecological receptors is likely to be not significant.

We have placed emission limits and monitoring requirements within the permit for the use of flare stacks on permit EPR/HB3602TR held by Wessex Water Enterprises Limited. It should be noted that whilst flare stacks are classed as combustion assets, they are considered an intermittent source and as such do not form part of the modelling and assessment of assets that combust gases continuously. The operator has specified that they will be in operation in emergencies only and for less than 10% of the year in line with relevant guidance.

The operator is required to have an Odour Management Plan which we have approved and incorporated into the operating techniques of the permit (Table S1.2). Furthermore, we have inserted an Improvement Condition in the permit which requires the operator to review the effectiveness of the abatement system. The improvement condition is included in order to determine whether existing measures have been effective and adequate to prevent and/or minimise emissions released to air.

There are no relevant sensitive receptors for bioaerosols within 250m of any potential source of bioaerosols from the site, therefore we are satisfied that the underpinning guidance has been fully satisfied and there is no requirement for ongoing bioaerosols monitoring.

We are satisfied that sufficient steps have been taken regarding the approach to both the inclusion of ongoing monitoring requirements and the implementation of improvements conditions drafted into the permit in accordance with the relevant guidance. We have set emission limits within the permit in line with BAT.