Permitting Decisions - Bespoke Permit

We have decided to grant the permit for Stanton Energy AD Facility operated by Stanton Energy Ltd.

The permit number is EPR/FP3600SV.

The application is for a new anaerobic digestion facility at Crompton Road Industrial complex. It will operate under a S5.4 A(1)(b)(i) – Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 100 tonnes per day involving a biological treatment activity. The site will process up to 83,000 tonnes annually, this will consist of food waste, grease, green waste, manure, grass and maize silage, brewery waste, filtrate from press process, suitable contraband materials like tobacco, vegetables, dairy and bakery waste.

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:

- 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 applicant's proposals.

Read the permitting decisions in conjunction with the environmental permit.

Key issues of the decision

Noise

In line with our procedures on sites with the potential to create noise pollution, the applicant was obliged to carry out a noise impact assessment of their proposed operations. The noise impact assessment was based on simple calculations of noise sources and their impact on the sensitive receptors at their respective background noise levels. It concluded that the risk of negative impact on the sensitive receptors was low.

The site has a noise management plan tied into the operational techniques of the permit. This noise management plan has been based on the impact assessment and employs the following management techniques:

- Daily monitoring of noise.
- Anti-idling policy for site mobile plant.
- Maximum 5mph speed limit for vehicles on site.
- Drop heights kept to a minimum when depositing solid feedstock.
- Roller shutter doors kept closed on solids feeding system during physical treatment of solid waste as it is incorporated into the AD process.
- Notification of neighbours in the instance that potentially noisy repair work is to be carried out.
- Preventative maintenance procedures for site plant and infrastructure.
- Employee noise and vibration monitoring and complaint reporting training regime.
- Procedure to reduce and ultimately cease noisy activities in the circumstance of a significant noise emission.
- A noise complaints procedure.

Our assessment

We have carried an audit of the noise impact assessment using CadnaA modelling software. This sensitivity check found that the specific noise generated by the site is likely lower than the conclusions of the noise impact assessment and it was therefore conservative. We therefore agree that the proposals are low risk and the management procedures are adequate to control noise on the site particularly given the industrial context of the wider area in which the site is situated.

Odour

Anaerobic digesters and other similar biowaste sites are required to provide an odour management plan in line with our guidance. The closest sensitive receptors are businesses adjacent to the facility. The site is mostly made up of enclosed processes sealed specifically to extract biogas and with it odorous compounds. There are however, areas and circumstances where odour can be released.

Potential sources of odour:

- Deliveries of waste, food waste, grease, green waste, manure, silage and other odorous feedstock materials;
- Storage of silage in silage clamps;
- Unloading and loading of digestate;
- Spills;
- Digestate storage;
- Biogas storage;
- Gas upgrade unit;
- Gas odorant and propane storage; and
- Storage of non-conforming waste.

Measures to manage odour:

- Pre-acceptance and acceptance techniques including sampling and visual inspection upon arrival should ensure no non-compliant wastes are accepted.
- Many of the waste streams accepted by the facility are inherently odorous, these are the food wastes, greases and other liquid wastes however these types will be transported in sealed containers/tankers and will be incorporated into the AD process via a sealed transfer system immediately upon arrival.
- Solid feedstocks with high risk of producing odours are also incorporated directly into the process upon arrival and will not be stored on site.
- The only feedstock permitted for storage one the site is silage which has a low odour potential and should only be stored for a maximum of 7 days.
- All digestate is held in a sealed system until it is tested and confirmed as PAS110 and therefore no longer a waste. Digestate meeting these standards generally has a lower odour potential.
- All operational areas of the site are cleaned once a day.
- Daily olfactory monitoring is carried out down wind of the site.
- Spill procedures are in place to contain spills of potentially odorous liquids.

- Procedures are in place to cover stockpiles, remove waste from site, and /or suspend waste deliveries in abnormal operational conditions that are leading to odour.
- A flare can be used in abnormal instances of biogas overpressure which burns the excess biogas whilst destroying odorous compounds, preventing their release to atmosphere.
- In terms of the gas upgrading plant, the biogas is cooled and then scrubbed using a carbon filter and ferric chloride chemical desulphurisation treatment. This process removes the odorous compounds and should result in a gas with low odour potential. Potential volatile organic compounds and hydrogen sulphide emissions from the gas upgrade plant were screened and found to be insignificant.

As no real-time operational emission monitoring data is available for the gas upgrading plant at the site, we consider it appropriate to set an Improvement Condition (IC1). Improvement Condition 1 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 from the plant itself.

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.

Our assessment

Overall, we consider that the applicant has proposed appropriate odour management measures to minimise any impact on nearby sensitive receptors. In the event that odour emissions are causing pollution, the permit conditions require the operator to comply with the measures specified in the OMP. The daily olfactory monitoring being carried out as part of the OMP and process monitoring within the permit should ensure that emissions of odour are detected and can thereafter be appropriately managed.

We have reviewed and approved the OMP in its current format with the additional information submitted during the determination. We consider that the OMP complies with the requirements of our H4 odour guidance. We agree with the scope and suitability of key measures but this should not be taken as confirmation that the details of equipment specification design, operation and maintenance are suitable and sufficient. That remains the responsibility of the operator.

Secondary containment and drainage

In line with the Waste Treatment BREF/BAT Conclusions 2018 and Draft Technical Guidance for Anaerobic Digestion (Reference LIT 8737, November 2013) anaerobic digestion installations are required to have a sealed drainage system with suitable secondary containment equivalent to 110% capacity of the largest tank or 25% of the overall tankage on site (whichever is the larger). The drainage system and bunding must be constructed to the relevant standard (CIRIA 736).

Site drainage infrastructure and procedural proposals:

- Impermeable concrete surfacing built to CIRIA 736 standard across the whole site with suitable maintenance procedures to regularly detect (daily inspection) and repair damage to the surface. The impermeable surface is underlain with an impermeable HDPE (high density polyethylene) membrane.
- A concrete bund built to CIRIA 736 standard will surround the site on all sides. The bund will have two inward opening water-tight gates, a main gate that opens for waste delivery and seals automatically afterwards and a second gate which will be for emergency access only.
- The impermeable surface slopes away from the site entrance to a point 600 mm below the bottom of the gate, this gives the site a 1,000 m^3 containment capacity (approx.) before the spill would reach the gate. As a result, all spills except those representing a major breach in the reinforced concrete digester tanks could be dealt with without taking the main gates out of action.
- Outside the main entrance, a bunded ramp is proposed to act as a fail safe if digestate escapes the sealed gates in a sudden surge. This ramp raises 400 mm over 6 metres.
- The digester tanks are built with reinforced concrete and therefore have a lower likelihood of catastrophic failure in comparison to riveted or plastic tanks. The tanks at risk of jetting also benefit from cladding which prevents jets of polluting liquids escaping by capturing it and forcing it to run down the internal face of the cladding.
- In the case of a catastrophic failure of the digester tanks, which may substantially fill the bund, removal of the digestate can be carried out over the gates and moved towards the centre of the sloping site.
- There are two remotely operated penstock valves serving the drain in the centre of the site. One penstock valve is always kept closed until the following criteria are met for surface water run-off discharge to sewer:
    - *No leakage from the tanks or spillage of digestate is occurring*
    - *No leakage from the tanks or spillage of digestate which has not been properly contained and removed has occurred*

    - *No anomalies in the volumes stored within the tanks as reported by the SCADA system are apparent*
    - *No unresolved leak alarms reported by the SCADA system have occurred*
    - *No loading or unloading of input materials or digestate is taking place.*
- Discharge to sewer will only take place during manned hours. As the penstock valve is connected to the SCADA system during the discharge procedure it would shut automatically if a drop in pressure in any of the tanks was detected, effectively ceasing the discharge and ensuring the spill is contained. The SCADA system also triggers an alarm if a leak is detected.
- All below ground pipes are underlain with a concrete trench, HDPE membrane and are fitted with leak detection.

The proposals meet the containment capacity requirements and requirement for a sealed drainage system. The bund is to be constructed to CIRIA 736 standard which is BAT. However, there is one aspect of the proposals which is not BAT in that the containment is tertiary rather than secondary, consisting of a bund around the whole site rather than the individual tanks. The applicant has argued that their proposals are the equivalent of BAT due to the redundancies and procedures built into the site.

Our assessment

We accept the applicant justification that the measures proposed for secondary containment on site represent the equivalent of BAT. The bunding covers the whole site and has adequate capacity to contain any possible spill. This combined with the redundancies and procedures in place that have been outlined above should result in no circumstance were pollution could escape containment.

In terms of the sealed drainage system, we also accept the measures proposed are the equivalent of BAT, however as it is not clear whether the drain in the middle of the site holds enough capacity to contain surface run off in abnormal conditions such as heavy rain without backing up into the operational area, we have inserted an improvement condition (IC5) to assess this during normal and abnormal operational circumstances.

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 consider this application to be of high public interest and so we advertised in two local newspapers and sent correspondence to individual local councillors and MPs directing them to the EA consultation hub. The only responses to the consultation exercise were from the service delivery teams of public bodies and one response from the parish council. The application does not appear to have generated local interest significantly beyond what would be expected for a normal permit application. Considering this in the context of the wider area, we have decided to retain the HPI status until permit determination but will not consult on the ‘minded to’ stage. We do not intend to engage ‘stakeholders’ further unless there is significant change in the situation. We intend to communicate the permitting decision through the separately established Hallam Fields newsletter.

The application was advertised in Derbyshire Times and the Nottingham Evening Post

We consulted the following organisations:

- Erewash Borough Council Environmental Health
- Derbyshire Fire and Rescue Service
- Severn Trent
- Canals and River Trust
- Animal and Plant Health Agency
- National Grid
- Director of Public Health
- Public Health England

- Health and Safety Executive

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

Operator

We are satisfied that the applicant (now the operator) is the person who will have control over the operation 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 facility 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’

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

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

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 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 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.

Climate change adaptation

We have assessed the climate change adaptation risk assessment.

We consider the climate change adaptation risk assessment is satisfactory.

We have decided to include a condition in the permit requiring the operator to review and update their climate change risk assessment over the life of the permit.

General operating techniques

We have reviewed the techniques used by the operator and compared these with the Waste Treatment BREF/BAT Conclusions 2018 and 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 screen out as insignificant

Emissions of nitrogen oxides, carbon monoxide, total volatile organic compounds and particulate matter 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 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’.

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

Noise and vibration management

We have reviewed the noise and vibration management plan in accordance with our guidance on noise assessment and control.

We consider that the noise and vibration management plan is satisfactory and we approve this plan.

We have approved the noise and vibration 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 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’.

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

Raw materials

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

- Vegetable matter (energy crops) – Substantially free of non-vegetable matter; and
- Maize silage – Substantially free of non-vegetable matter.

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 have excluded the following wastes for the following reasons

02 02 99, 02 03 99, 02 04 99, 02 07 99 and 19 05 99 were originally requested in the permit application however as other equivalents are available for these waste codes in RPS 241 they were not required for the waste types the applicant wanted to accept and were therefore not included in the permit.

03 03 10, 04 01 01, 15 01 04, 19 05 01, 19 05 02, 19 05 03, 19 08 12 and 20 01 38 were originally requested in the permit application. However in order to be permitted to accept these waste types in an anaerobic digestion facility, the applicant is required to provide risk assessments for each code in line with the Framework for assessing suitability of wastes going to anaerobic digestion, composting and biological treatment. Framework guidance note dated July 2013. These risk assessments were not provided and therefore the waste codes were not inserted into the permit.

We made these decisions with respect to waste types in accordance with our guidance on anaerobic digestion facilities.

Improvement programme

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

The emissions data 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 3 (IC3) was inserted into the permit to ensure the surrender of the permitted area of land from the permit referenced EAWML 43665 (Stanton Recycling Centre) which overlaps with the operational area of this site. In the long term, this could cause issues with contradictory permit conditions, but as the operator for both permits is the same, they remain solely responsible for any pollution taking place on the permitted area, we have therefore given the operator 3 months from permit issue to demonstrate that they have begun the process to partially surrender that permitted area from EAWML 43665 (Stanton Recycling Centre).

Improvement condition 4 (IC4) requires the operator to develop a standalone energy efficiency plan, the applicant has supplied the relevant energy efficiency information as part of their application however no stand-alone plan was provided. We have allowed the applicant to develop this within 3 months of permit issue.

Improvement condition 5 (IC5) requires the operator to submit a report demonstrating that the site surface water run off drainage system is working as planned and provide any recommendations to further minimise the risk of pollution from potentially contaminated site drainage waters.

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:

Emergency Flare:

Oxides of nitrogen – 150 mg/m^3

Sulphur dioxide – 50 mg/m^3

Total VOCs – 10 mg/m^3

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 demonstrate compliance with the relevant permit conditions and ensure emissions to air and sewer do not have a significant impact.

We made these decisions in accordance with Waste Treatment BREF/BAT Conclusions 2018 and LFTGN 05: Guidance for monitoring enclosed landfill gas flares and our Monitoring discharges to water guidance.

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. As the monitoring of point source emissions to air for this permit is only required annually, reporting is also required annually. Reporting forms have been prepared to facilitate reporting of data in a consistent format. These reporting requirements are deemed sufficient and proportional for the Installation. We made these decisions in accordance with the Draft Technical Guidance for Anaerobic Digestion (Reference LIT 8737, November 2013).

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.

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.

Previous performance

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

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

No relevant convictions were found. The operator satisfies the criteria in our guidance on operator competence.

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, newspaper advertising and the way in which we have considered these in the determination process.

Responses from organisations listed in the consultation section:

Response received from Health and Safety Executive

Brief summary of issues raised: No comments.

Summary of actions taken: None required.

Response received from Environmental Protection Team, Erewash Borough Council (Environmental Health).

Brief summary of issues raised: Environmental Protection team requested to see details of a baseline survey for ground contamination due to historical land use.

Summary of actions taken: We contacted the Environmental protection team and explained that whereas we recommend that applicants collect baseline data on the state of the ground that it is not necessarily a requirement. If they choose not to collect site baseline reference data at this stage, then any contamination found in future surveys or at permit surrender would be their responsibility to remediate. The Environmental Health team accepted this and had no further comment.

Indeed in this case the majority of the land is already permitted under a separate permission by the same operator meaning any contamination found on site which was not attributed beforehand would already be their responsibility to remediate.

Response received from Derbyshire Fire and Rescue Service (FRS)

Brief summary of issues raised: With regards to the Fire Prevention Plan, the FRS asked for more detail relating to the monitoring and control of temperature in combustible waste piles. They also recommended a gated perimeter access to the canal direct from this site.

Summary of actions taken: The proposed installation constitutes a wet anaerobic digestion (AD) process. These processes involve an inherent high moisture content and therefore have a low risk of combustion. Though an FPP was provided in the first instance, we do not require Fire Prevention Plans (and associated monitoring or temperature control) for AD sites as a routine. This is compounded by the removal of proposals to store any waste with combustion potential on the site. With no waste piles to monitor or control we consider this point resolved.

The applicant was asked about access to the Erewash for firefighting, they replied, indicating that it could be accessed over the eastern bund wall or via the southern boundary gate and cycle path. This is not direct access via a gate however as the fire risk at the site has been reduced during determination and installing another gate access in the eastern bund wall would potentially undermine efforts to keep pollution from entering the water course we contacted the FRS to confirm the final proposals of the operator were acceptable. They confirmed this was acceptable and had no further comment.

Response received from Public Health England (Now named 'UK Health Security Agency')

Brief summary of issues raised: Public Health England (PHE) raised some issues with the air quality modelling report, queries the EA's involvement in the RHI emissions limits and raised some issues with the odour management plan.

Summary of actions taken: The comments submitted by Public Health England regarding air quality and our responses are discussed below.

Regarding the annual NO_2 background concentration of 57.89 µg/m^3, PHE stated that additions to this high background should be minimised.
After audit of the applicant's air emissions assessment, we agreed with their conclusion that emissions of oxides of nitrogen should not cause any significant adverse impact, this is supported by the following:

- The diffusion tube location where this concentration was recorded in 2015 is an urban background location (EBC1-kerbside of M1 motorway and within AQMA No1). It is approximately 3.2km south of the facility.
- The maximum predicted annual and 1-hour NO_2 process contributions (PCs) at a discrete receptor location, approximately 740m to the east of the site, are up to 0.73% and 2.54% of the respective long term and short environmental standards (table 5.2 and 5.3 of the applicant's report).
- As these PCs are insignificant, there is no requirement to do any further assessment of the substance.
- Also, the background of 57.89 µg/m^3 is unlikely to be representative at locations of exposure near the facility within suburban, industrial settings where NO_2 background concentration is likely to be just above 30 µg/m^3.

Regarding NOx to NO_2 conversation rates, PHE stipulated that a conversion rate of 50% should be used for short term release and the assessment should assume all oxides of nitrogen turn to nitrogen dioxide for long term.
The short-term (ST) and long-term (LT) conversion rates of 50% and 100% are only applicable at the screening stage of any assessment. At detailed modelling stage, conversion rates of 35% for short term and 70% for long term are a reasonable worst case in accordance with our Environmental permitting: air dispersion modelling reports guidance. We therefore agree with the applicant's assumed worst case conversion ratios to nitrogen dioxide.

Regarding the Renewable Heat Incentive (RHI), PHE asked whether we could clarify whether the applicant would be obligated to meet the emissions limits of the RHI which were used in the air emissions assessment.
The Environment Agency has no remit to request information on the operators plan to gain benefits from the RHI, however it is an offence to provide false information during permit application and as such the applicant is obliged not to breach any self-imposed limitations set in their assessment.

Regarding Erewash Valley Cycle Trail, PHE suggest this sensitive receptor should be taken into account in the air quality assessment.
With reference to Local Air Quality Management Technical Guidance (DEFRA Local Air Quality Management Technical Guidance (TG16) April 2021), we agree that using this receptor location for impact assessment is appropriate for screening purposes assuming the cycle trail is a receptor if members of the public might reasonably be exposed for a period of time in the ES e.g. 1-hour for NO_2, CO and Benzene. However, in practice and for detailed assessment, it is not likely that public presence at the cycle trail would coincide with peak predicted impacts at those locations especially when the standard relates to annual exposure to the hourly concentration.

Regarding the time period referenced between 2005-2009, PHE stated that this needed updating.
These years are associated with the meteorological data recorded at East Midlands Airport and used by the consultant to complete detailed air dispersion modelling. We have checked sensitivity to our own meteorological data observed at Nottingham Watnall and East Midlands meteorological stations and considered up to date monitored background concentrations for our audit which found the modelling to be conservative.

Regarding the referenced 20% and 70% screening thresholds, PHE noted that the maximum point of impact warranted detailed modelling.
These are only applicable at the 2nd stage of the screening stage, and used in the Environment Agency risk assessment tool in accordance with our Air emissions risk assessment for your environmental permit guidance. As a result of this, the consultant completed detailed modelling of emissions. The report completed by Oak Environmental Ltd (the consultant) and titled Emissions Modelling Assessment – Stanton Energy Anaerobic Digester, Stanton Energy Ltd, version 1.1 dated 12/03/2021 is a detailed air dispersion modelling report. This assessment was included in the consultation.

The comments submitted by Public Health England regarding odour are discussed here:

Regarding hydrogen sulphide emissions, PHE suggest emissions of hydrogen sulphide at 200 ppm from the gas upgrading plant would be significant and asked for further clarification.
Hydrogen sulphide is reported in the odour management plan as 0-200 ppm in the biogas post gas upgrade treatment, the majority of the biogas is either sent to grid or in abnormal circumstances sent to be burned in the flare, so 200ppm is

not a reported release rate in the emissions from gas upgrading plant but rather the concentration in the gas exported from the site. The emissions from the upgrading plant were missed however in the original modelling report so we have requested a H1 emissions screening for this plant during determination. Hydrogen sulphide emissions from this plant screened out as insignificant.

In order to corroborate this screening we have inserted improvement conditions IC1 and IC2 (see improvement conditions section above) which require the operator to provide two separate 6 month emission monitoring campaigns specifically for the gas upgrading plant, the Operator must supply a final report within 13 months of permit issue. This will indicate what is being released from the plant in reality and if any improvements or additional abatement need to be installed to ensure no significant pollution is leaving the site. It is an approach we have taken across the sector in England.

Regarding sensitivity of olfactory monitoring personnel, PHE asked for further clarification on how the personnel undertaking the olfactory monitoring will not be subject to 'odour blindness' as they may be working on the site beforehand. Additional information was requested during determination for the odour management plan. The personnel undertaking the olfactory tests will vacate the site for a minimum of 30 minutes before the test, the assessor will also not apply scented toiletries, smoke or consume strongly flavoured food or drink for at least 30 minutes before the assessment. To further ensure odour blindness does not occur, an additional employee who is not exposed to the site's odours throughout the day will periodically undertake an additional monitoring assessment as quality assurance. We find this acceptable for ensuring the olfactory monitoring is effective.

Representations from community and other organisations

Response received from Trowell Parish Council.

Brief summary of issues raised: Trowell Parish Council confirmed they have no objection to the permit application but asked that we ensure green waste is not stored on site for long periods.

Summary of actions taken: During the course of the determination storage of green waste on this site was removed from the proposed activities. No further action required.