Permitting Decisions- Variation

We have decided to grant the variation for Iron House Farm operated by Resource Recycling Solutions Limited.

The variation number is EPR/QB3036RB/V005.

The permit was issued on 19.08.2025.

The variation involves changes that include:

- The addition of an enclosed in-vessel composting (IVC) operation activity
- Incorporate formally registered waste exemptions activities, (aggregate and soil manufacturing and wood and plant matter recycling)
- Include non-hazardous food or comingled food and green waste types associated with the IVC, and waste types associated with the waste operations
- An extension to the permit site boundary to accommodate IVC processing and storage of 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

- 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

Management of odour emissions

The addition of an in-vessel composing (IVC) and associated leachate storage tank at the installation, are considered inherently odorous due to the nature of the material and processes. Effective operation and management of such facilities is therefore required to minimise the odour emissions from routine operations and, minimise the risk of abnormal operational conditions resulting in the increased risk of odour generation at the site.

The applicant submitted an Odour Management Plan (OMP) with the application to address the management of odour at the facility. During the determination, we requested more information on key measures from the applicant with respect to the management of odour emissions from the IVC building and IVC leachate tank.

IVC building and abatement plant

The IVC tunnel system is a fully enclosed system incorporating the waste reception, preparation and enclosed tunnel composting process. The building incorporates an aeration system for the forced aeration of process tunnels and extraction of treatment air from the tunnels and IVC building for biofiltration to abate odour generated during the most active stage of the composting process, prior to release.

Air injection fans supply air at the base of each tunnel (4no. in total for all tunnels), which then flows up through the composting mass. Air extraction will take place via extraction fans at the upper portion of each tunnel (4no. in total for all tunnels). Additionally, important parameters to the composting process (temperature, humidity and oxygen concentration), are controlled by circulating the process air.

The IVC building extractor fan system has sufficient airflow capacity to meet the required air changes per hour in achieving negative pressure in the building. The air extracted from the building has the ability to either direct through IVC tunnels as required and then on to the biofilter or directly to the biofilter, depending on the number of tunnels in use.

Pressure and flowrate monitoring is implemented across the air extraction system to prevent leaks or unintended emission release, with an appropriate inspection and cleaning regime for the air handling system to uphold performance and integrity.

Additionally, to minimise the potential for odours during waste delivery to the IVC building, fast-acting roller shutter doors operate and are immediately closed once the delivery vehicle has finished tipping in the reception hall.

The biofilter will be subject to a programme of regular inspection, monitoring and maintenance to ensure optimal performance. The biofilter will contain suitable biofiltration media (e.g. untreated woodchip), built with a spigot floor, for an optimal air distribution and sized accordingly to be able to treat the air extracted from the IVC building and tunnels. Once the media has been identified as requiring replacement, fresh wood chip material is brought in and the spent biofilter media composted.

We are satisfied the IVC building is fitted with an appropriately engineered extraction and ventilation system, with the air extracted and directed to a suitable abatement system.

IVC Leachate storage tank

An additional overground leachate storage tank has been installed to collect leachate from within the IVC tunnels and reception hall. The tank is fully covered and constructed in line with CIRIA 736 containment standards to ensure sufficient watertightness and secondary containment around the tank.

Leachate generated within the IVC tunnels will drain via a series of drainage channels and flow to the IVC leachate storage tank. Levels within the tank are automatically monitored to ensure its within 90% of full capacity. Where collected leachate is not re-used, tank emptying shall be undertaken by a contractor within 48 hours of capacity being reached, with the wastewater disposed of, at a fully permitted Wastewater treatment works (WWTWs) (these arrangements apply to all leachate tanks on site).

In addition to the air extracted from the IVC buildings and tunnels, the biofilter also treats air displaced from the IVC leachate tank during filling. Before entering the biofilter via sealed ductwork, the displaced air from the IVC leachate tanks is mixed with the air from the IVC tunnels and IVC building prior to biofiltration and released to atmosphere.

Our assessment

We are satisfied 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 proposed in the OMP. The odour conditions in the permit are sufficient to ensure that odour emissions from the facility do not cause annoyance. Process monitoring conditions including daily olfactory tests at the site boundary, will also ensure that emissions of odour are not causing annoyance.

To ensure we have a representative emissions profile for the site moving forward, we have also included improvement Condition (IC3 see Table S1.3) requiring, the operator to carry out a review of the design and effectiveness of the abatement plant on site.

In summary, 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 Technical Guidance H4 – Odour Management and Biological waste treatment: appropriate measures for permitted facilities Biological waste treatment: appropriate measures for permitted facilities - Guidance - GOV.UK (Updated 25 November 2024).

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
- Local Authority – Planning
- Food Standards Agency

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.

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.

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. The assessment shows

that, applying the conservative criteria in our guidance on environmental risk assessment all emissions may be screened out as environmentally insignificant.

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
- Non-hazardous and inert waste: appropriate measures for permitted facilities, 1 August 2023, 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

The operating techniques that the applicant 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 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.

Fire prevention plan

We have assessed the fire prevention plan and are satisfied that it meets the measures and objectives set out in the Fire Prevention Plan guidance.

We have approved the fire prevention 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 plan has been incorporated into the operating techniques S1.2.

Dust management

We have reviewed the dust and emission management plan in accordance with our guidance on emissions management plans for dust.

We consider that the dust and emission management plan is satisfactory, and we approve this plan.

We have approved the dust and emission 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.

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.

Improvement programme

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

Improvement condition IC3 – review of the effectiveness of abatement plant

We have set improvement condition IC3 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 IC3. 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.

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:

Emissions to air

- Ammonia 20 mg/m^3
- Odour concentration 1,000 ou_E/m^3

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

The added ELVs reflect the addition of:

- New abatement plant (Bio-filter) for the in-vessel composting operation that include the IVC leachate storage tank

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

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

We made these decisions in accordance with Waste Treatment BAT Conclusions.

Based on the information in the application we are satisfied that the operator's techniques, personnel and equipment have either MCERTS certification or MCERTS accreditation as appropriate. Please refer to Table S3.1 of the permit for further details

Reporting

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

- Odour
- Ammonia

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.

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.

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, ensuring procedures are in place that regulate the time line for emptying leachate tanks and disposal of their content, ensuring that the tank volume available to capture fire water is sufficient for a worst-case fire scenario, ensuring the calculation assumptions for waste volume and fire water supply capacity are appropriate and that the Accident Management Plan includes the impact on human health receptors from adverse weather events such as flooding.

Summary of actions taken:

Leachate management- The operator has procedures outlined in the management system which include - the leachate tanks to be inspected on a weekly basis and following rainfall events and shall be emptied when the collected liquids reach 90% of capacity as measured by dip. Tank emptying shall be undertaken by a contractor within 48 hours of capacity being reached, with the wastewater disposed of at a fully permitted wastewater treatment facility.

Tanks are never kept at capacity, as leachate from the tanks is regularly recirculated into the compost – with monitoring records on where leachate has been added.

Fire water containment - The operator has demonstrated sufficient fire water containment in the fire prevention plan. The floor gradients across the facility are designed to ensure all leachate or surface water runs to a sealed drainage system. On site surface and processing water from the open windrow composting pad is fed into one of two leachate storage tanks via falls in the concreate. The storage tanks have a capacity of 522m^3 and 124m^3. The smaller tank acts as an overflow for the larger tank. The larger tank will always operate with a retained volume of 250m^3 inside it. The overall water supply needed is 720m^3 (largest waste pile – IVC waste material 600m^3).

To contain the 720m^3 fire water, the 522m^3 open windrow leachate/ surface water tank will provide a capacity of 272m^3, and once full, the fire water will back up through the drainage channels and flood the impermeable bunded concreate pad with a capacity of 493m^3. Therefore, combined firewater containment capacity using both the tank and impermeable concreate pad will equate to 765m^3. Note the smaller leachate/surface water 124m^3 tank, has not been factored in, and as such acts as a further contingency buffer should the need arise.

Calculation for waste volume and fire water supply – The operator has set out the waste storage volumes in the fire prevention plan in line with maximum waste piles guidance. The largest combustible waste pile has been identified as the IVC

waste material pile – 600m^3. The water required to extinguish this plie equates to 720m^3 (water required per minute 4.0m^3, duration 180minutes = 720m^3). The fire water supply will be provided by a retained volume of 250m^3 from the 522m^3 open windrow leachate/ surface water tank, and by constantly recirculating water from the pad back to the tank - the pump to send the water back to this tank shall be sized accordingly to provide the necessary water flow rate, in line to fire water calculations in the approved Fire Prevention Plan.

Furthermore, the local fire hydrant, and nearby dyke that runs along the southern boundary, can also both be accessed to provide further fire water supply. The calculation assumptions are reflective of onsite operations and appropriate to waste volume and fire water supply, and it is therefore considered that there is sufficient water available to extinguish a fire in the largest waste pile within 4 hours.

Accidents – The operator has updated the Accident Management plan following a schedule 5 notice issued 28/05/2024, to ensure the impacts of adverse weather events such as flooding, have been considered for local human receptors.

No further responses were received.