

Permitting Decisions- Bespoke Permit

We have decided to grant the permit for the Biomass Preparation Facility operated by Brooke Energy Group Limited.

The permit number is EPR/DP3031JJ.

The application is for the storage and treatment of non-hazardous waste wood, to create biofuel for Brooke Energy's own CHP plants.

The Installation principally comprises a materials reception, handling, preparation, and storage yard upon which all materials are received, prepared, and stored. Waste wood will be inspected and sorted into grades of wood. It will then be shredded and then taken to a Brooke Energy CHP site for energy recovery. The main processing line consists of a shredder, trommel, and eddy current separator.

No hazardous materials will be accepted on site. The site will be permitted to have a maximum throughput of 35,000 tonnes annually.

We consider in reaching our 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

An overview of the application proposals/permit

The application is to allow Brooke Energy Group Limited to operate the following installation and directly associated activities (DAA) at the Biomass Preparation site:

- 5.4A(1)(b)(ii) Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day per day; pre-treatment of waste for incineration or co-incineration.
- Temporary storage of non-hazardous waste prior to treatment.
- Storage of waste following treatment.

Dust Emissions Management Plan (DEMP)

The operator submitted several revisions of the DEMP. The approved version of the DEMP (version 6) addresses the key issues identified in the original submissions. The key elements of the revised DEMP include:

1. Drop heights are kept below 1m and remain under supervision from a trained site operative.
2. Processing equipment will remain in a fixed line under a cover. The structure will be a mono pitch design which consists of:
 - Steel uprights of 7m tall will be erected (those on the Southern Boundary are already in place).
 - Legato concrete blocks and steel sheeting on the end of the Eastern boundary to prevent any dust escaping.
 - The Western boundary (by the Untha shredder) will be blocked off by heavy duty plastic curtains.
 - A water misting system will be installed which sprays water from a number of jets that will be positioned on each side of the rectangular loading hopper. The misting system will be connected to the high pressure (14 bar) mains water line in the woodyard and will be switched on whenever wood is being loaded into the Untha shredder.
3. Housekeeping will consist of daily cleaning of the equipment in the processing area ensuring that there is no build-up of dust in the processing area. A mechanical road sweeper will be called onto site and used if the use of hand brooms is not effective.

4. The trigger for enacting further dust control measures has been defined as observations of dust emissions leaving the site boundary. If dust is visually leaving the site, operations will cease and be investigated immediately, and only resumed once remedied.
5. Freeboard space within the bays will be in place. The storage of the material is in strict accordance with the FPP and will not extend beyond the reception bay footprint or exceed 1m below the height of the fire walls.

Fire Prevention Plan (FPP)

The operator has submitted an updated FPP which has addressed the key issues of oversized waste piles and requirements for separation of waste via fire walls.

The site area has been redesigned so that unprocessed material is separated and stored in stockpile sizes of a maximum 1,008m³ (18m x 14m x 4m). This is over the guidance of 750m³. However, waste will be stored in these stockpiles for no longer than 1 week, reducing the concerns of mass self-heating. Height is also one of the main factors in mass self-heating and they are not exceeding guidance on height.

Once wood has been processed it is transferred to one of 5 storage bunkers. The waste piles are separated by concrete Legio blocks supplied by "Concrete Panel Ltd" which are the industry standard and fire resistant, acting as fire walls. Dimensions of the blocks are 1.6m long x 0.8m high x 0.8m wide. Freeboard' space of 1m minimum at the top and sides of the walls will be maintained at all times to prevent potential fire spreading over and around the walls.

Each of the piles within the bunkers will be no more than 18m x 9.6m x 4m (691m³). This is slightly higher than the recommended pile size in the most up to date EA guidance (450m³). On both the oversized woodpiles isothermal calorimetry testing (basket testing) will take place. The test results should indicate the critical ignition temperature.

The processed wood pile will be stored for a maximum storage time of 2 weeks. All material is tracked daily and processed through the site on a 'first in – first out' basis. In addition, temperature monitoring is conducted by a drone with specialist thermal imaging technology. The drone will be programmed to fly a set pattern both first thing in the morning and last thing at night.

If any variations in temperature are shown they will be investigated, and the pile pulled apart so any hot material can be removed.

Noise Impact Assessment (NIA)

The operator submitted a NIA which was amended following the Schedule 5 Notice dated 02/03/2023. The latest revision of the NIA, received on the 23/05/2023 has been assessed by the Air Quality Modelling & Assessment Unit team. The recommendation is that the variation should be allowed on the grounds of their assessment of those noise emissions.

Discharge to Surface Water

The operator submitted a H1 assessment where there was no background data. They consequently had to use 50% of the EQS. Copper did not screen out on this test. The sample has been considered by NPS water quality and considered to be low risk. The concentration is 0.032 and below the BAT AEL. There will be a requirement for the site to monitor runoff from site against the Wate BAT AEL for direct discharge.

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:

- Devon and Cornwall Fire and Rescue
- East Devon District Council Environmental Health
- East Devon District Council Planning
- 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 plans which we consider to be satisfactory.

These show the extent of the site of the facility including the discharge points.

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.

General operating techniques

We have reviewed the techniques used by the operator and compared these with the relevant guidance notes and we consider them to represent appropriate techniques for the facility.

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

The operating techniques are in line with the following guidance: Develop a management system, Control and monitor emissions for your environmental permit, Non-hazardous and Inert Waste Appropriate Measures for Permitted Facilities) and Waste Treatment BAT Conclusions.

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.

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.

The plan sets out alternative measures that we consider meet the objectives of 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.

We made these decisions with respect to waste types in accordance with

- Technical Guidance WM3: Waste Classification - Guidance on the classification and assessment of waste, and
- Non-hazardous and Inert Waste Appropriate Measures for Permitted Facilities.

We have excluded the following wastes for the following reasons.

19 05 03 Off Specification compost has been excluded as the application was focused on wood processing. 19 05 03 relates to composted waste which has not met a final specification,

19 12 10 Combustible waste (refuse derived fuel) is not wood and therefore doesn't fit with the application. Typically, this type of waste is shredded general waste which has environmental risks which differ from that of wood.

Improvement programme

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

We have included the following improvement programmes in the permit:

IC1a requires the operator to undertake a 12-month sampling and monitoring programme for the wastewater that is discharged from the emission point marked S1 in Schedule 7 of the permit and shall submit the results to the Environment Agency for written approval.

The monitoring programme shall fully characterise the wastewaters and shall include, but not be limited to, the parameters listed in Table S3.1.

The sampling and monitoring programme shall be carried out at a frequency of a minimum of two samples a month and must total a minimum of 12 samples overall. The sampling and monitoring programme must be in line with the Environment Agency guidance <https://www.gov.uk/guidance/surface-water-pollution-risk-assessment-for-your-environmental-permit> and at standards outlined in Table S3.1 of the permit.

IC1b Following the completion of IC1a, the operator shall submit a completed H1 risk assessment and/or modelling report (where appropriate) to the Environment Agency for written approval.

Based on the outcome of the H1 assessment and/or modelling, the operator shall provide in the report, an assessment on whether the wastewaters discharged to sewer from the site are likely to have significant or adverse impact on the final receiving waters. The H1 assessment and/or modelling shall take into

consideration relevant environmental standards specified within the following guidance for the substances analysed:

- Specific substances and priority hazardous substances – <https://www.gov.uk/guidance/surface-water-pollution-risk-assessment-for-your-environmental-permit>

Where the results of the H1 assessment and/or modelling indicate that significant/adverse impact is likely, the operator shall cease further discharge of wastewater to surface water. The operator then shall submit a proposal of additional measures to be implemented to prevent or minimise any significant/adverse impact on the receiving waters, along with timescales for implementation to the Environment Agency for written approval.

IC1c The operator shall implement/install any improvements and/or additional measures approved by the Environment Agency under IC1b and shall provide a written confirmation to the Environment Agency that the improvements and/or additional measures have been implemented/installed.

IC2 The operator shall install covering on the processing equipment as proposed in the Dust and Emissions Management Plan V6, stated within the permit Operating techniques.

IC3a The operator shall undertake a monitoring and sampling programme for fugitive particulate/dust emissions to air from site. The monitoring programme shall identify levels of dust emissions produced on site and determine the composition of the deposited dust. Monitoring shall take place between April and October as these are considered to be drier months with an increased risk of dust. Monitoring shall be undertaken to the frequency and standards given in table S3.2.

IC3b Following the completion of IC3a, the operator shall submit a written report to the Environment Agency for approval. The report shall contain a review of the results of the particulate/dust monitoring. The report shall include analysis of the dust collected to determine the contribution to dust samples from the site's operations.

If necessary, the report shall include further measures to be undertaken to reduce particulate emissions at the facility and dates for implementation. The actions and outcomes of the report shall be implemented by the operator from the date of written approval by the Environment Agency.

The operator shall submit a revised Dust Emissions Management Plan (DEMP) to include the agreed changes.

Emission Limits

We have decided that emission limits are required in the permit.

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

- Total Organic Carbon
- Total Suspended Solids
- Hydrocarbon oil index
- Arsenic
- Cadmium
- Chromium
- Copper
- Lead
- Nickel
- Mercury
- Zinc

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.

Point source emissions to water.

- Process and site run off.

Ambient Air Monitoring

- Fugitive dust/particulate matter

These monitoring requirements have been included in order to ensure that there are no significant emissions of dust and that process and site run off is monitored and controlled.

We made these decisions in accordance with the Non-hazardous and Inert Waste Appropriate Measures for Permitted Facilities, Waste Treatment BAT Conclusions, Waste Incineration BAT Conclusions and M17 monitoring of particulate matter in ambient air around waste facilities.

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 the Non-hazardous and Inert Waste Appropriate Measures for Permitted Facilities), Waste Treatment BAT Conclusions, Waste Incineration BAT Conclusions and M17 monitoring of particulate matter in ambient air around waste facilities.

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 relying on the grace period to provide technical competence.

Previous performance

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

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

Responses from organisations listed in the consultation section:

Response received from Devon & Somerset Fire & Rescue Service

Brief summary of issues raised:

Devon and Somerset FRS highlighted that previously there had been two recent fires at Brooke Energy. The first was Friday 17th July 2020 and the second Friday 23rd July 2021. Both fires were caused by contamination of the unprocessed wood pile. One of the fires was caused by a lithium-ion battery entering the shredder and then dropping down into a wood pile.

Generally, it was concluded that the FPP does seem to be comprehensive, but concerns remain about the management’s ability to follow this procedure. Concerns were also raised about individuals turning up randomly in vans and unloading.

Summary of actions taken:

Following the comments received from Devon and Somerset Fire Rescue Service we spoke to the operator about providing adequate pre acceptance,

waste acceptance and rejection procedures. The FPP states that *“All waste is accepted on site in accordance with the sites Waste Acceptance Procedures. This ensures that no incompatible or unstable wastes will be accepted on site”*. The pre acceptance, waste acceptance and rejection procedures were all provided and reviewed along with the FPP.

Compliance with the FPP and acceptance and rejection procedures will be carried out routinely by the local area teams.

Response received from East Devon District Council Environmental Health

Brief summary of issues raised:

East Devon District Council highlighted that since 2017 there have been 9 separate noise complaints. No formal action has been required for any of these complaints, but 5 of these complaints required further action. In 2021 there were 2 dust complaints. Both complaints were investigated by an officer of the council and closed. A fire also occurred in July 2020.

Summary of actions taken:

A noise Impact assessment and Noise management Plan was submitted with the application. Both were required to be amended after assessment by our Acoustics & Air Quality Modelling & Assessment Unit (AQMAU). The resubmissions were reviewed by AQMAU against BS4142. The recommendation is that the variation should be allowed on the grounds of noise emissions being low impact. The outcome matches that of the consultant used by the operator.

After several resubmissions of the DEMP (Dust Emissions Management Plan) we consider that the measures proposed will mitigate the risk of fugitive emissions. However, after implementation of the proposed measures a period of monitoring must be undertaken to test the efficacy of those measures. If these measures do not prevent emissions leaving site, the operator must propose and implement further measures.

No response was received from East Devon District Council Planning Team or the Health and Safety Executive.

