

Permitting Decisions- Bespoke Permit

We have decided to grant the permit for Areera Ltd operated by Areera Ltd

Purpose of this document

The application is for the operation of a Waste Electrical and Electronic Equipment (WEEE) Authorised Treatment Facility (ATF). The WEEE accepted at the site will consist of; Televisions, PC monitors, notebook/portable computers, LCD, LED and plasma display units, as well as CRT (cathode ray tube) monitors. The facility uses a combination of manual processes and precision automation systems to separate and return recyclable components into the circular economy.

The site will also accept various types of waste plastics including plastics containing Brominated Flame Retardants (BFRs). These can include Persistent Organic Pollutants (POPs). The plastics will undergo sorting, shredding and separation into different fractions which will then be transferred to an appropriate recycling/disposal facility.

Products that contain mercury will be processed in an enclosed environment with a filtration system that will capture any mercury vapour released. Any particulates released from the shredding process will be contained within the enclosed filtration system. All treatment will be carried out inside with no external emission points to atmosphere.

Read the permitting decisions in conjunction with the environmental permit.

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.

Key issues of the decision

The two key issues identified during the determination were regarding the containment of emissions mercury emissions and emissions of dust particulates, though this being from within an enclosed environment. There are no external emissions to atmosphere.

The second key issue was the efficiency of the process used for the separation of waste plastics containing Brominated Flame Retardants (BFRs). These can include Persistent Organic Pollutants (POPs).

Particulate Matter (PM) Emissions

The automated processing equipment using robotics in an enclosed area ensures any dust or other emissions from the process are captured in the attached activated carbon systems for mercury capture or the particle HEPA filter systems. The shredder is also attached to a filter system to ensure any emissions are captured from processing plastics. Where dust or particles are within the warehouse environment e.g. floors or residue in containers, the site has a portable industrial vacuum system which has its own integrated HEPA filter systems. See process monitoring table S3.1.

Mercury Emissions

Products that contain mercury will be processed in an enclosed environment within the filtration system that will capture any mercury vapour released. The filtration system is composed of fans that create negative pressure that draws airborne particles through a two stage abatement process. The HEPA filter (sulphur impregnated activated carbon) removes dust particulates and has an efficiency rating of 99.95%. The activated carbon removes mercury vapour. In line with the BAT32 requirement, sampling at the post-carbon filter sampling port will be carried out by a third-party UKAS/MCERTS accredited company.

The operator will implement an analysis of air quality to be carried out every 4 hours using a hand held Jerome Analyser calibrated to a sensitivity of $1 \mu\text{g}/\text{m}^3$, to ensure that there is no breakout of mercury and that the air quality remains well within the workplace exposure levels set by HSE. Any failure in this would lead to an immediate cessation of activities and vacation of the building(s) until the scenario was rectified. The shredded for processing plastics is also attached to a filter system to ensure any emissions are captured from processing plastics. Where dust or particles are within the warehouse environment e.g. floors or residue in containers, the site has a portable industrial vacuum system which has its own integrated HEPA filter systems.

Though there are no external emissions to atmosphere, it was considered necessary to implement mercury and particulate monitoring from the filtration system that is contained within the building to ensure compliance with the BAT-AELs. Table S3.1 below.

Table S3.1– Process monitoring requirements						
Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
Filtration system located in units 13 and 14	Total suspended particulates	Exhaust silencer exit	5 mg/m ³	Average value of 3 consecutive measurements of at least 30 minutes each	6 months	BS EN 13284-1
	Mercury		7 µg/m ³	Average value of 3 consecutive measurements of at least 30 minutes each	Monthly for first 3 months then quarterly	BS EN 13211

Mercury: We have taken the limit in accordance with BAT 32. Table 6.6 BAT-associated emission level (BAT-AEL) for channelled mercury emissions to air from the mechanical treatment of WEEE containing mercury: Parameter Unit BAT-AEL (Average over the sampling period) 7 µg/Nm³.

Total particulates -Emission Limit Values (ELVs) equivalent parameters or technical measures are based on Best Available Techniques (BAT 25, Table 6.3 BAT-associated emission level (BAT-AEL) for channelled dust emissions to air from the mechanical treatment of waste): Parameter Unit BAT-AEL (Average over the sampling period) 5 mg/Nm³.

To ensure the effectiveness of this system we have included the following improvement condition;

IC2. The operator shall submit to the Environment Agency for approval proposals for the monitoring of mercury in the output fractions from the FPD Pro system. Process monitoring shall be undertaken in accordance with the approved proposals.

Plastics containing Brominated Flame Retardants (BFRs)

Some of the rigid plastic casings are known to contain Brominated Flame Retardants (BFRs). These can include Persistent Organic Pollutants (POPs). In order to separate the shredded plastics, the operator will deploy a machine using x-ray technology to sort waste according to its atomic density. This will separate plastics into bromine containing and non-bromine fractions. The fractions will be transferred to an appropriate recycling/disposal facility.

In order to measure the efficiency of this process, the permit will contain the Improvement condition below:

IC1 Table S1.5

The operator shall submit to the Environment Agency for approval, proposals to demonstrate on an ongoing basis the effectiveness of the process in separating plastic containing brominated flame retardants from that which does not. Process monitoring shall be undertaken in accordance with the approved proposals. This will commence 6 months from the start of operations, or as otherwise agreed by the Environment Agency.

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: Public Health England, Environmental Health Department, Environmental health and the local authority.

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 site

The operator has provided a plan 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.

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.

Fire Prevention Plan

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 Table S1.2.

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 Sector Guidance Note IPPC S5.06: Guidance for the recovery and disposal of hazardous and non-hazardous waste.

Improvement programme

Based on the information on the application, we consider that we need to include an improvement programme. We have included an improvement programme that has two improvement conditions. *See key issues.

The operator will have six months from start of operations, or as otherwise agreed by the Environment Agency to submit the information.

Emission limits

Emission Limit Values (ELVs) based on Best Available Techniques (BAT) AEL's have been added for the following substances:

- Mercury
- Total particulates

*See key issues.

Monitoring

Sampling and reporting will be carried out in accordance with the conditions of the Environmental Permit. *See key issues.

- Mercury – every 3 months
- Total particulates – every 6 months

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 ensure mercury emissions are BAT compliant. We made these decisions in accordance with Waste Treatment BREF.

Reporting

We have specified reporting in the permit.

We made these decisions in accordance with reference to BAT.

Management System

We only review a summary of the management system during determination. The applicant submitted their full management system. We have therefore only reviewed the summary points.

A full review of the management system is undertaken during compliance checks.

Technical Competence

The operator is a member of the ESA/EU skills scheme.

The operator is relying on the grace period to provide technical competence.

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

Responses from organisations listed in the consultation section:

Response received from Public Health England

Brief summary of issues raised: No issues raised

Summary of actions taken: None required