Waste Treatment BREF Review

N&P Hartlepool MRF Ltd

30th May 2025

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Appropriate Meassures Assessment

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1. APPROPRIATE MEASURES ASSESSMENT

This document has been prepared by Sol Environment on behalf of N&P Hartlepool MRF Ltd (hereafter referred to as 'the client' or 'N&P') to provide a BAT Review against the Waste Treatment BREF BAT Conclusions document.

The table below outlines the key requirements of the guidance document and demonstrates how the site will meet these requirements.

Table 1.1: Guidance Review – BREF Waste Treatment

BAT Reference	BAT Conclusion	Justification
GENERAL BAT CONCLUSIONS		
Overall Environmental Performance		
BAT 1	In order to improve the overall environmental performance, BAT is to implement and adhere to an environmental management system (EMS) that incorporates the features provided within the BREF document.	N&P have an Environmental Management System in place, certified to ISO 14001:2015, that incorporates the relevant features outlined within the BREF document.
BAT 2	In order to improve the overall environmental performance of the plant, BAT is to use all of the techniques provided within the BREF document.	N&P implements the following on site: • Waste Pre-Acceptance, Acceptance and Assessment Procedures; • A waste tracking system and inventory; • An output quality management system to ensure the pulverised SRF meets customer specification; • Waste segregation in accordance with the sites Fire Prevention Plan; • Ensures waste compatibility during waste inspections; and • The sorting of incoming waste by visual inspection.
BAT 3	In order to facilitate the reduction of emissions to water and air, BAT is to establish and to maintain an inventory of waste water and waste gas	There are no waste water streams from the process.

	streams, as part of the environmental management system (see BAT 1), that incorporates all of the features provided within the BREF document.	The site will maintain an inventory of all emissions however there are no point source emissions to air as the Hammer Mill abatement system releases into the building.
BAT 4	In order to reduce the environmental risk associated with the storage of waste, BAT is to use all of the techniques provided within the BREF document.	The following is carried out on site to reduce the environmental risk associated with the storage of waste: • Optimised storage locations; • Adequate storage capacity; and • Safe storage operation. No hazardous waste is accepted on site.
BAT 5	In order to reduce the environmental risk associated with the handling and transfer of waste, BAT is to set up and implement handling and transfer procedures.	All handling and transfer of waste is carried out by competent staff and documented via the sites acceptance procedures and environmental management system. Any spillages on site will be detected via the sites site walkover procedure and managed via the sites spill response procedure.
Monitoring		
BAT 6	For relevant emissions to water as identified by the inventory of waste water streams (see BAT 3), BAT is to monitor key process parameters (e.g. waste water flow, pH, temperature, conductivity, BOD) at key locations (e.g. at the inlet and/or outlet of the pretreatment, at the inlet to the final treatment, at the point where the emission leaves the installation).	N/A – there are no waste water streams from the process. The only permitted water emission from site is clean surface water drainage only via emission point is S1.
BAT 7	BAT is to monitor emissions to water with at least the frequency given in the guidance, and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.	N/A – there are no process emissions to controlled waters or sewer.

BAT 8	BAT is to monitor channelled emissions to air with at least the frequency given in the guidance, and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.	Dust monitoring from the Hammer Mill abatement system will take place on a 6 monthly basis in accordance with BAT. In addition visual inspections as per the sites Dust Management Plan will be undertaken on a daily basis.
BAT 9	BAT is to monitor diffuse emissions of organic compounds to air from the regeneration of spent solvents, the decontamination of equipment containing POPs with solvents, and the physico-chemical treatment of solvents for the recovery of their calorific value, at least once per year using one or a combination of the techniques given in the BREF guidance note.	N/A – no solvents are processed on site.
BAT 10	BAT is to periodically monitor odour emissions.	Odour will be managed in accordance with the sites Odour Management Plan. It is not anticipated that the site will be a cause of odour nuisance at nearby sensitive receptors.
BAT 11	BAT is to monitor the annual consumption of water, energy and raw materials as well as the annual generation of residues and waste water, with a frequency of at least once per year.	The facility will implement an annual review of the energy consumption of the plant including electricity and mains gas.
Emissions to Air		
BAT 12	In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to set up, implement and regularly review an odour management plan, as part of the environmental management system (see BAT 1).	Odour will be managed in accordance with the sites Odour Management Plan. It is not anticipated that the site will be a cause of odour nuisance at nearby sensitive receptors.
BAT 13	In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to use one or a combination of the techniques given below:	Odour emissions are reduced on site by minimising the residence time of waste on site.

	• minimising residence times; • using chemical treatment; • optimising aerobic treatment.	All waste will be managed in accordance with the sites Odour Management Plan.
BAT 14	In order to prevent or, where that is not practicable, to reduce diffuse emissions to air, in particular of dust, organic compounds and odour, BAT is to use an appropriate combination of the techniques given below: • Minimising the number of potential diffuse emission sources; • Selection and use of high integrity equipment; • Corrosion prevention; • Containment, collection and treatment of diffuse emissions; • Dampening; • Maintenance; • Cleaning of waste treatment and storage area; • Leak detection and repair programme.	Dust and odour reduction is achieved on site using the following measures: • Minimising the number of potential diffuse emission sources by limiting the drop height of material and limiting the traffic speed on site; • Use of high integrity equipment; • Containment of potential diffuse emissions by undertaking all loose waste storage and processing within an enclosed building; • Collection and treatment of diffuse emissions from the Hammer Mill via the cyclone abatement system; • External storage is limited to baled storage only which has a low potential for dust and odour; • Regular planned preventative maintenance of all equipment and infrastructure including roller shutter doors; and • Regular cleaning of waste storage and treatment areas.
BAT 15	BAT is to use flaring only for safety reasons or for non-routine operating conditions (e.g. start-ups, shutdowns) by using both of the techniques given in the BREF Guidance.	N/A – there is no flaring on site.
BAT 16	In order to reduce emissions to air from flares when flaring is unavoidable, BAT is to use both of the techniques given in the BREF Guidance.	N/A – there is no flaring on site.

Noise and Vibration		
BAT 17	In order to prevent or, where that is not practicable, to reduce noise and vibration emissions, BAT is to set up, implement and regularly review a noise and vibration management plan, as part of the environmental management system (see BAT 1).	The site is not anticipated to cause a nuisance at nearby receptors regarding noise or vibration. The introduction of the new Hammer Mill will introduce a new process to the sites operation. However, as the permitted MRF is no longer operational and the Hammer Mill will only be operated within an enclosed building within a heavily industrialised area, there will be no increase in noise emissions from site as a result of the permit variation. In the unlikely event of any noise complaints they will be managed in accordance with the sites complaints procedure. This is considered BAT for site.
BAT 18	In order to prevent or, where that is not practicable, to reduce noise and vibration emissions, BAT is to use one or a combination of the techniques given in the BREF Guidance.	Noise and vibration emissions are reduced on site via the following measures: • Appropriate location of equipment within a building; • Operational measures that include inspection and maintenance of all equipment, the closure of roller shutter doors when not in use, equipment only operated by experienced staff and deliveries only taking place during daytime hours; and • The use of low-noise equipment.
Emissions to Water		
BAT 19	In order to optimise water consumption, to reduce the volume of waste water generated and to prevent or, where that is not practicable, to reduce emissions to soil and water, BAT is to use an appropriate combination of the techniques given in the BREF Guidance.	There are no waste water streams from the process. The following measures are in place to reduce emission to soil and water: • Impermeable Surfaces – all storage and treatment areas are constructed on impermeable concrete hard standing; and

		• Roofing of waste storage and treatment areas – all Hammer Mill activities take place within a building. There are no tanks containing hazardous substances on site.
BAT 20	In order to reduce emissions to water, BAT is to treat waste water using an appropriate combination of the techniques given in the BREF Guidance.	N/A – there are no waste water streams from the process.
Emissions from Accidents and Incidents		
BAT 21	In order to prevent or limit the environmental consequences of accidents and incidents, BAT is to use all of the techniques given in the guidance, as part of the accident management plan (see BAT 1).	The site operates in accordance with an Accident Management Plan. N&P uses the following techniques to prevent or limit environmental consequences of accidents and incidents: • Protection measures; • Management of accidental emissions i.e spillage procedures and containment of fire water; and • Incident / accident system – all incidents will be recorded on the company's incident management system.
Material Efficiency		
BAT 22	In order to use materials efficiently, BAT is to substitute materials with waste.	The main site process is the processing of SRF pellets in order to produce a pulverised product for use within cement kilns. Raw materials on site are limited to diesel which is used within mobile plant. At present, it is not economically viable to substitute these materials with waste alternatives, however N&P will undertake annual reviews of the process and endeavour to utilise wastes where feasible.
Energy Efficiency		

BAT 23	In order to use energy efficiently, BAT is to use both of the techniques given below: • Energy efficiency plan; and • Energy balance record..	N&P will maintain both an energy efficiency plan and balance record.
Reuse of Packaging		
BAT 24	In order to reduce the quantity of waste sent for disposal, BAT is to maximise the reuse of packaging, as part of the residues management plan (see BAT 1).	N/A – waste is received on site baled or pellets therefore no packaging is used.
BAT CONCLUSIONS FOR THE MECHANICAL TREATMENT OF WASTE		
Emissions to Air		
BAT 25	In order to reduce emissions to air of dust, and of particulate-bound metals, PCDD/F and dioxin-like PCBs, BAT is to apply BAT 14d and to use one or a combination of the techniques given below: • Cyclone • Fabric filter • Wet scrubbing • Water injection into the shredder BAT associated emission levels for channelled dust emissions to air from mechanical treatment of waste is 2-5 mg/Nm^3 (average over the sampling period).	The Hammer Mill activity has a dedicated cyclone abatement system to mitigate dust emissions. The system has been designed to meet the BAT-AEL of 5 mg/m^3.
BAT 26 - 28	BAT conclusions for the mechanical treatment in shredders of metal waste	N/A – no mechanical treatment in shredders of metal waste on site

BAT 29 - 30	BAT conclusions for the treatment of WEEE containing VFCs and /or VHCs	N/A – no treatment of WEEE on site
BAT Conclusions For The Mechanical Treatment Of Waste With Calorific Value		
Emissions to Air		
BAT 31	In order to reduce emissions to air of organic compounds, BAT is to apply BAT 14d and to use one or a combination of the techniques given below: • Adsorption • Biofilter • Thermal oxidation • Wet scrubbing BAT associated emission levels for channelled TVOC emissions to air from mechanical treatment of waste with calorific value is 10 - 30 mg/Nm^3 (average over the sampling period). Note: this only applies when organic compounds are identified as relevant in the waste gas stream.	Due to the nature of the incoming waste, namely pre-processed and devoid of food or organic fines, there is a very low potential for odour generation through the processing of the waste itself. Organic compounds are not identified to be relevant in the waste stream and therefore the BAT – AEL does not apply.
BAT 32	BAT conclusions for the treatment of WEEE containing mercury	N/A – no treatment of WEEE on site
BAT 33 - 39	BAT conclusions for the biological treatment of waste	N/A – no biological treatment of waste on site
BAT 40 – 41	BAT conclusions for the physico-chemical treatment of waste	N/A – no physio-chemical treatment of waste on site
BAT 42 – 44	BAT conclusions for the re-refining of waste oil	N/A – no re-refining of waste oil on site
BAT 45	BAT conclusions for the physico-chemical treatment of waste with calorific value	N/A – no physio-chemical treatment of waste on site
BAT 46 – 47	BAT conclusions for the regeneration of spent solvents	N/A – no regeneration of spent solvents on site

BAT 48 – 49	BAT conclusions for the thermal treatment of spent activated carbon, waste catalysts and excavated contaminated soil	N/A – no thermal treatment on site
BAT 50	BAT conclusions for the water washing of excavated contaminated soil	N/A – no water washing on site
BAT 51	BAT conclusions for the decontamination of equipment containing PCBs	N/A – no decontamination of equipment containing PCBs on site
BAT 52 –53	BAT conclusions for the treatment of water-based liquid waste	N/A – no treatment of water-based liquid waste on site