

BAT Assessment

This assessment provides a review of the relevant BAT for recovery and treatment of hazardous waste at Land at Croft Quarry, Marion's Way, Coventry Road, Leicester, LE9 3GP. It refers to EU Decision 2018/1147 of 10 August 2018 establishing Best Available Techniques (BAT) Conclusions for Waste Treatment

BAT Conclusion	Assessment
1.1 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 following: I. commitment of the management, including senior management; II. definition, by the management, of an environmental policy that includes the continuous improvement of the environmental performance of the installation; III. planning and establishing the necessary procedures, objectives and targets, in conjunction with financial planning and investment; IV. implementation of procedures paying particular attention to: (a) structure and responsibility, (b) recruitment, training, awareness and competence, (c) communication, (d) employee involvement, (e) documentation, (f) effective process control, (g) maintenance programmes, (h) emergency preparedness and response, (i) safeguarding compliance with environmental legislation; V. checking performance and taking corrective action, paying particular attention to: (a) monitoring and measurement (b) corrective and preventive action, recruitment, training, awareness and competence, (c) maintenance of records, (d) independent (where practicable) internal or external auditing in order to determine	The company has an Environmental Policy which sets out the company's commitment to ensure continuous improvement. The company has achieved ISO14001 and 9001 accreditation. They also have the following: • The Contractors Health and Safety Assessment Scheme (CHAS) • Construction Plant Compliance Scheme (CPSC) • Green Roads Alliance • Construction Products Association (CPA) • National Plant Operators Registration Scheme (NPORS) An EMS is provided for operations at the site. It will be updated to include the revised operational procedures to receive and treat hazardous waste. The EMS includes documented management procedures including: • Roles and responsibilities. • Staffing • Training • Procedures • Exceptions Investigations and Mitigation • Accident Prevention and Management Plan • Checking and Reviewing EMS The EMS refers to documents and procedures that form part of the EMS.

whether or not the EMS conforms to planned arrangements and has been properly implemented and maintained VI. review, by senior management, of the EMS and its continuing suitability, adequacy and effectiveness; VII. following the development of cleaner technologies; VIII. consideration for the environmental impacts from the eventual decommissioning of the plant at the stage of designing a new plant, and throughout its operating life; IX. application of sectoral benchmarking on a regular basis; X. waste stream management (see BAT 2); XI. an inventory of waste water and waste gas streams (see BAT 3); XII. residues management plan (see description in Section 6.5); XIII. accident management plan (see description in Section 6.5); XIV. odour management plan (see BAT 12) XV. noise and vibration management plan (see BAT 17).	
BAT 2 In order to improve the overall environmental performance of the plant, BAT is to use all of the specified techniques as follows: (a) Set up and implement waste characterisation and pre-acceptance procedures; (b) Set up and implement waste acceptance procedures; (c) Set up and implement a waste tracking system and inventory; (d) Set up and implement an output quality management system; (e) Ensure waste segregation; (f) Ensure waste compatibility prior to mixing or blending of waste; (g) Sort incoming solid waste	The EMS includes the following procedures: • Pre-acceptance including waste Characterisation and requirement for pre-booking • On-site checks including verification, confirmation of acceptability. • Waste storage including capacity checks and labelling. • Follow up testing to check outputs. • Tracking system to monitor all waste on site (with hazardous properties, date arrived, and on-going storage accepted) • Specific waste to be received and treated will prevent incompatibility issues. • Waste will be checked at the point of production and on-site to remove any non-compliant materials.
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 streams, as part of the environmental management system (see BAT 1)	The site will only handle AWCCT. The characteristics of this waste are fully understood and will be subject to pre-acceptance checks. The hazardous waste treatment will take place on an impermeable surface with

	separate drainage. The drainage will be a sealed tank to capture any liquids or spills. There are no waste gas streams.
BAT 4 In order to reduce the environmental risk associated with the storage of waste, BAT is to use all of techniques specified: • Optimised Storage location • Adequate storage capacity • Safe storage operation • Separate area for storage and handling of packaged hazardous waste	Specified storage areas are shown on the site plan. There will be a reception area for AWCCT. This has been designed with due consideration of the local environment. There is a buffer zone between the storage area and river. The storage area will be separated from the river with a solid wall surround. The area will be engineered with falls away from the river, to ensure no surface water run off towards the river. The reception area has been positioned close the entrance, allowing deliveries to take place separate from the treatment area. This will provide defined working areas for H&S and transport management. All waste will be pre-booked which allows the capacity to be checked and the delivery approved. Daily update of the storage capacity will be maintained. The layout has been designed to provide a flow of waste through the site, minimizing double handling and the distance that waste is moved. The site will not receive packaged hazardous waste.
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.	Waste handling procedures are set out in the supporting document. The operations are overseen by Technically Competent Managers, and staff with full training. An Accident Management Plan and Risk Assessment have been prepared. These consider the potential risks and provide appropriate measures for mitigation. The operation will be fully auditable with clear documentation from pre-acceptance to product generation.
1.2 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 pre-treatment, at the inlet to the final treatment, at the point where the emission leaves the installation)	There will be no point source emissions to surface water. All surface water from the waste storage and treatment areas will be contained in a sealed system.
BAT 7	No monitoring required.

BAT is to monitor emissions to water with at least the frequency given below, 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	
BAT 8 is to monitor channelled emissions to air with at least the frequency given, 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.	There are no channelled emissions to air.
BAT 9 is to monitor diffuse emissions of organic compounds to air from regeneration of spent solvents	NOT RELEVANT
BAT 10 BAT is to periodically monitor odour emissions	NOT RELEVANT Odour is not associated with the proposed operations. Whilst AWCCT may contain PAH, it only releases odour if heated.
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	This is set out in the supporting documentation.
1.3 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 is not associated with the proposed operations. An Odour Management Plan is not required.
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 specified techniques	NOT RELEVANT
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	Dust management will form part of the EMS procedures. Site has been designed to minimize double handling. All waste will be stored and treated on an impermeable surface with sealed drainage. The nature of the waste means that it is not possible to enclose or cover. However, waste has a lower likelihood of dust generation. This is due to the fact that it seals under its own weight. In addition, crushing will only take place on a campaign basis, which is likely to be 1-2 times per month. The crusher will not be permanently

	based at the site. This allows the operator to fully prepare for crushing, in terms of dust management and optimum weather conditions. Site has dust suppression system to keep material damp whilst in storage. Use of bowser to keep working areas clean. Treatment process for encapsulation is fully enclosed. Risk Assessment demonstrates low risk of odour. Operator has ISO14001 accreditation and will implement Operational Procedures which include training, maintenance, contingency, amenity management and record keeping.
BAT15 relates to flaring	NOT RELEVANT
BAT16 relates to flaring	NOT RELEVANT
1.4 Noise and Vibrations	
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), that includes all of the following elements I. a protocol containing appropriate actions and timelines; II. a protocol for conducting noise and vibration monitoring; III. a protocol for response to identified noise and vibration events, e.g. complaints; IV. a noise and vibration reduction programme designed to identify the source(s), to measure/estimate noise and vibration exposure, to characterise the contributions of the sources and to implement prevention and/or reduction measures.	The site is remote from sensitive receptors. The area is dominated by heavy industry including other waste operators and mineral processing. An Environmental Risk Assessment has been completed. The operator replaces old plant with new machinery. All subject to planned preventative maintenance. All staff trained to use machinery. Any defects will be reported, and corrective action taken. No noise monitoring proposed. Complaint procedure in the EMS. Crushing only takes place on a campaign basis (1-2 times per month).
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 below.	As above.
1.5 Emissions to Water	
BAT 19 In order to optimise water consumption, to reduce the volume of waste water	The entire site is concreted with drainage. There will be no discharges to ground water or soil.

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 below.	
BAT 20 In order to reduce emissions to water, BAT is to treat waste water using an appropriate combination of the techniques given below	Waste will be stored and treated on an impermeable surface with sealed drainage. There are two separate drainage areas. One surface will drain into a 20,000 litre underground storage tank, and the smaller area will drain into a 4,500 litre underground storage tank. Both tanks are fitted with alarms, which when activated will either trigger the dust suppression system, and/or alert the site manager to arrange for tanks to be emptied.
1.6 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 below, as part of the accident management plan (see BAT 1).	An Accident Management Plan forms part of the ERA for the site.
1.7 Material Efficiency	
BAT 22 In order to use materials efficiently, BAT is to substitute materials with waste	NOT RELEVANT
1.8 Energy Efficiency	
BAT 23 In order to use energy efficiently, BAT is to use both of the techniques given below	Energy use will be recorded. Following 4 years of data, the energy plan will be reviewed. As part of the Environmental Policy, options for continuous improvement are considered.
1.9 Reuse of Packaging	
BAT24 BAT is to maximize the reuse of packaging	NOT RELEVANT
2.1 General BAT Conclusions for the mechanical treatment of waste	
BAT25 In order to reduce emissions to air of dust and of particulate bound metals, BAT is to use one or combination of techniques	Linked to BAT 14d. No particulate bound metals associated with use.
2.2 BAT Conclusions for the mechanical treatment in shredders of metal waste	NOT RELEVANT
BAT26	NOT RELEVANT
BAT27	NOT RELEVANT
BAT28	NOT RELEVANT
2.3 BAT Conclusions for the treatment of WEEE containing VFCs	NOT RELEVANT
BAT29	NOT RELEVANT
BAT30	NOT RELEVANT

2.4 BAT Conclusions for the mechanical treatment of waste with calorific value	NOT RELEVANT
BAT31	NOT RELEVANT
2.5 BAT Conclusions for the treatment of WEEE containing mercury	NOT RELEVANT
BAT32	NOT RELEVANT
3.1 BAT conclusions for the biological treatment of waste	NOT RELEVANT
BAT 33	NOT RELEVANT
BAT 34	NOT RELEVANT
BAT35	NOT RELEVANT
3.2 BAT Conclusions for the aerobic treatment of waste	NOT RELEVANT
BAT36	NOT RELEVANT
BAT37	NOT RELEVANT
3.3 BAT conclusions for the anaerobic treatment of waste	NOT RELEVANT
BAT38	NOT RELEVANT
3.4 BAT conclusions for the mechanical biological treatment of waste	NOT RELEVANT
BAT39	NOT RELEVANT
4.1 BAT conclusions for the physico-chemical treatment of solid and/or pasty waste	
BAT40	See BAT 2, Waste acceptance Procedures. Treatment is enclosed and the AWCCT is encapsulated .
BAT41	
4.2 BAT conclusions for the re-refining of waste oil	NOT RELEVANT
BAT42	NOT RELEVANT
BAT43	NOT RELEVANT
BAT44	NOT RELEVANT
4.3 BAT conclusions for the physico-chemical treatment of waste with calorific value	NOT RELEVANT
BAT45	NOT RELEVANT
4.4 BAT conclusions for the regeneration of spent solvents	NOT RELEVANT
BAT46	NOT RELEVANT
BAT47	
4.5 BAT for emissions of organic compounds to air from re-refining of waste oil	NOT RELEVANT
4.6 BAT conclusions for the thermal treatment of spent activated carbon	NOT RELEVANT
BAT48	NOT RELEVANT
BAT49	NOT RELEVANT
4.7 BAT conclusions for the water washing of excavated contaminated soil	NOT RELEVANT
BAT50	NOT RELEVANT

4.8 BAT conclusions for the decontamination of equipment containing PCBs	NOT RELEVANT
BAT51	NOT RELEVANT
5.1 Overall Environmental Performance (treatment of water-based liquid waste)	NOT RELEVANT
BAT52	NOT RELEVANT
BAT53	NOT RELEVANT
6.1 Channelled Emissions to Air	NOT RELEVANT