AC ENVIRONMENTAL CONSULTING

BAT ASSESSMENT

Blancomet Recycling UK Limited

Opal Way, Stone Business Park, Stone, United Kingdom,

ST15 0SS

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Ref: BLA.PT.BAT.2512

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1. INTRODUCTION

1.1. Overview of Site Operations

1.1.1 Blancomet Recycling Uk Limited is seeking to vary their current permit to allow sorting and storage of additional EWC codes relating to batteries of a mix of chemistries at Opal Way, Stone, Staffs. This site is currently operating under standard rules permit SR2015 No15 (permit ref: WE2099AB).

1.1.2 This BAT assessment has been prepared to accompany the permit variation application. The changes proposed as part of the variation include the addition of European Waste Catalogue (EWC) codes, and an increase of allowable storage but with no additional permitted annual tonnage.

1.1.3 This document summarises the best available techniques (BAT) specific to operations undertaken by Blancomet Recycling.

1.1.4 The site principally processes Catalytic Converters and Lead Acid Batteries but also accepts cable for granulation and some other non-hazardous metal wastes. The catalytic converters are subject to inspection and cut open, with the matrix being ground to dust for recovery of the metals elsewhere. The lead acid batteries are cut to recover the acid and lead plates within them. Acid is recovered and stored in external tanks. Cable is granulated on site to produce clean copper and plastic granulate. There is no other shredding, crushing, or thermal treatment on site.

1.1.5 This document presents a demonstration of compliance with the specific BAT requirements of the sector guidance and applicable EU BAT Reference (BREF) Notes / BAT Conclusions.

1.2. BAT GUIDANCE

1.2.1 This BAT assessment has been written to demonstrate compliance with the following document:

1.2.2 Commission Implementing Decision (EU) 2018/1147 of 10 August 2018 establishing best available techniques (BAT) conclusions for waste treatment, under Directive 2010/75/EU of the European Parliament and of the Council.

2. SCOPE OF ACTIVITIES

2.1. Blancomet Recyclin**g** receives and treats cable, lead acid batteries and catalytic converters. It also sorts and bulks up other wastes including batteries of other chemistries and some other non-hazardous waste metals. Storage is predominantly indoors across two main buildings and also within 3

ISO containers on impermeable concrete. Outdoor storage is limited to intact, waterproof or contained materials, also on impermeable concrete (e.g. bagged non-hazardous metals e.g. allow wheels).

2.2. Blancomet Recycling has a number of activities on site;

2.2.1. it receives lead acid batteries and processes these by cutting open/ washing and storing of the lead plates and acid in separate areas of the site;

2.2.2. it receives catalytic converters and processes by cutting open to remove the matrix and grinding of the matrix to powder,

2.2.3. it stores and granulates copper cable to separate the copper form the plastic insulation.

2.2.4. It sorts and repackages batteries of other chemistries for export

2.2.5. it also stores other non-hazardous waste metals such as alloy wheels

2.3. Table 1 presents the details of the BREF Notes and BAT Conclusions that are applicable to the proposed processes.

2.4. Blancomet Recycling complies with all applicable BATs (1 – 23) relevant to its activities. BATs 24 – 43 are in part applicable due to the mechanical treatment processes within the site's operational scope. BATs 44-49 are not applicable due to there being no biological element to site processes. BATs 50 to 53 are in part applicable due to the sorting of hazardous wastes.

Table 1: Applicable BREF Notes and BAT Conclusions

EU BAT Conclusions	Applicability to the Activities	Comments
General BAT (BAT 1 – 23)	Applicable	General BAT for waste treatment (management, acceptance, segregation, monitoring, emissions prevention, accidents, energy, materials).
Mechanical treatment BAT (BAT 25 - 32)	Applicable	These BATs apply to mechanical treatment (shredding, crushing, compacting, cutting, screening, etc.). Blancomet Recycling Ltd undertakes shredding of cable and cutting and milling of catalytic converters. Batteries are subject to only manual sorting, manual removal from external casings and storage.
Biological treatment BAT (BAT 33 – 39)	Not Applicable	These BATs apply to biological treatment processes (composting, anaerobic digestion, fermentation, etc.), which are not undertaken on site.

Physico-chemical treatment (BAT 40 – 53)	Partly Applicable	These BATs apply to physico-chemical treatment (neutralisation, oxidation, precipitation, etc.), which are not relevant to site operations. However, physico-chemical treatment of hazardous waste includes sorting which the site does do.

3. BAT ASSESSMENT

This section provides a structure comparison between Blancomet Recycling's operations and the BAT Conclusions for Waste Treatment under (EU) 2018/1147. Each BAT condition is addressed in Table 2, by listing the relevant BAT requirements and detailing how the proposed site operations meet the criteria.

Table 2	
BAT Condition	**Site BAT Assessment**
1. General BAT Conclusions	
1.1 Overall Environmental Performance	
Environmental Management System (EMS)	
BAT 1. In order to improve the overall environmental performance, BAT is to implement and adhere to an environmental management system (EMS) that incorporates all of the following features: 1. commitment of the management, including senior management; 2. definition, by the management, of an environmental policy that includes the continuous improvement of the environmental performance of the installation; 3. planning and establishing the necessary procedures, objectives and targets, in conjunction with financial planning and investment; 4. implementation of procedures paying particular attention to: (a) structure and responsibility; (b) 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. 5. checking performance and taking corrective action, paying particular attention to: (a) monitoring and measurement (see also the JRC Reference Report on Monitoring of emissions from IED installations — ROM); (b) corrective and preventive action;	The operator implements the requirements of a comprehensive Environmental Management System (EMS) which covers site design, operations, acceptance, inspections, maintenance, contingency, climate change risk and complaints; and includes organisation chart and procedures (SWPs). The EMS (Reference SER.PT.EMS.2508) has been revised for the purpose of this application and the additional activities / changes proposed. The EMS has been prepared in accordance with the following guidance: a) The Environmental Permitting (England and Wales) (Amendment) Regulations 2018. b) The Waste Batteries and Accumulators Regulations 2009. c) Develop a management system: environmental permits. d) Technical Guidance WM3: Waste Classification - Guidance on the classification and

(c) maintenance of records; (d) independent (where practicable) internal or external auditing in order to determine whether or not the EMS conforms to planned arrangements and has been properly implemented and maintained; 6. review of the EMS and its continuing suitability, adequacy and effectiveness by senior management; 7. following the development of cleaner technologies; 8. Consideration for the environmental impacts from the eventual decommissioning of the installation at the stage of designing a new plant, and throughout its operating life; 9. Application of sectoral benchmarking (e.g. EMAS Sectoral Reference Document) on a regular basis. 10. Waste stream management (see BAT 2); 11. An inventory of waste water and waste gas streams (see BAT 3); 12. Residues management plan 13. Accident management plan 14. Odour management plan (see BAT 12); 11. Noise and vibration management plan (see BAT 17). The scope (e.g. level of detail) and nature of the EMS (e.g. standardised or non-standardised) will generally be related to the nature, scale and complexity of the installation, and the range of environmental impacts it may have (determined also by the type and amount of wastes processed).	assessment of waste. e) The Waste duty of care: code of practice – 2018. f) Non-hazardous and inert waste: appropriate measures for permitted facilities published 12/07/2021. g) Chemical waste: appropriate measures for permitted facilities published 18/11/2020. h) Climate change: risk assessment and adaption planning in your management system. Additionally, the EMS integrates the Fire Prevention Plan (FPP SER.PT.FPP.2507), Hot Work PTW, Fire Watch, Site Inspections, and incident/complaints processes. Therefore, in accordance with the above, the implementation of the EMS with operational procedures and emergency planning provides compliance with BAT 1. A copy of the EMS implemented at the site has been submitted with the permit variation application.
Waste Stream Management	

BAT 2. In order to improve the overall environmental performance of the plant, BAT is to use all of the techniques given below. 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 blending of waste g. Sort incoming solid waste	The EMS implemented by the operator contains site specific procedures and measures. Details of the relevant procedures and measures are summarised below: a) Waste Pre acceptance procedures: All incoming waste is subject to a pre-acceptance review prior to arrival. Waste producers complete a waste transfer note detailing EWC Code, waste type, battery chemistry, quantity, packaging and physical condition. Further details of waste pre-acceptance are included in the EMS, section 5d – Pre-acceptance Procedure. b) Waste acceptance procedures: The EMS contains waste acceptance procedures which provide detail of the information including details of the waste transfer note that need to be checked before accepting / depositing a load onto the site. If it is suspected that any incoming wastes are not

	coded correctly the incoming waste will be rejected or be quarantined pending removal from site for treatment at a suitably permitted facility if necessary. As part of the waste acceptance procedure loads are visually inspected, any discrepancies result in waste being quarantined and investigated before further handling. Additional information of waste acceptance can be found in the EMS. c) Waste storage: the EMS contains a waste storage procedure which details the storage locations, types and quantities of waste on site. Each waste type is stored in its own area to ensure segregation and no mixing with other waste. Batteries are sorted, packaged and stored by chemistry. By implementing battery-specific acceptance and storage procedures, the facility fully complies with BAT 2. For specific details of these procedures, please see the full EMS, document reference: SER.PT.EMS.2508

Emissions to Water and Air	
BAT 3. In order to facilitate the reduction of emissions to water and air, BAT is to establish and to maintain an inventory of wastewater and waste gas streams, as part of the environmental management system (see BAT 1).	The only wastewater produced on site is from the battery recycling plant where lead plates removed from the batteries are washed. The dilute acid produced is then collected within an integral bund in the battery plant and automatically pumped into one of two 25,000l tanks in the yard. Each tank is emptied up to once a week during busy periods. The only emissions to air are from the 5 LEV outlets in roof of the main building. These are the second stage of filtration in the system to remove dust from the air, the first stage being localised dust extraction and filtration around the CAT converter recycling points which removes 99% of the dust arising from the processing of CATs. The second stage filtration in the roof also removes a further 99% of dust which means that the combing system removes a total of 99.99% of all dust arisings. By implementing water specific storage procedures, the facility fully complies with BAT 3.
Environmental Risk Associated with Storage of Waste	
BAT 4. In order to reduce the environmental risk associated with the storage of waste, BAT is to use all of the techniques given below. a. Optimised storage location b. Adequate storage capacity c. Safe storage operation	The storage locations of waste on site have been designed and optimised to prevent any unnecessary double handling and transport of wastes around the site. The storage locations and maximum waste storage capacities are clearly established and outlined

d. Separate area for storage and handling of packaged hazardous waste	on the Site Layout Plan and within the operators EMS and other management plans. Waste storage areas are continuously monitored to ensure they are not exceeding capacity. The aim for the operator is to follow a 'first in, first out' principle where incoming waste is sorted and processed as required on arrival to arrange for its export off site as soon as practicably possible, to minimise over-stocking. Batteries will be stored by chemistry in appropriate locations and storage containers to eliminate the risk of cross-contamination. Hazardous wastes will be placed into containers in the dedicated storage areas. The EMS contains a waste storage procedure, including a waste storage table which should be read in conjunction with Drawing No. 241021BS101 which provides an illustration of the waste storage areas including types and capacity of waste to be stored.
Environmental Risk Associated with Handling and Transfer of 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. Handling and transfer procedures aim to ensure that wastes are safely handled and transferred to the respective storage or treatment. They include the following elements:	The EMS & the Summary of storage and handling arrangements for hazardous wastes and batteries contains specific procedures relating to the handling and transfer of wastes. Wastes will only be handled and transferred by members of staff who are suitably

— handling and transfer of waste are carried out by competent staff; — handling and transfer of waste are duly documented, validated prior to execution and verified after execution; — measures are taken to prevent, detect and mitigate spills; — operation and design precautions are taken when mixing or blending wastes (e.g. vacuuming dusty/powdery wastes). Handling and transfer procedures are risk-based considering the likelihood of accidents and incidents and their environmental impact.	trained/qualified. Appropriate training will be provided to all members of staff responsible for handling and transferring of wastes. Training procedures are documented within the EMS. Measures are taken to prevent spills; however, the EMS contains a spill procedure which outlines details of the remediation and what to do in the event of a spill. Any spillages of fuel/oil will be cleared immediately by depositing sand or absorbents on the affected area. The sand or absorbents will be placed in a container to be taken to a suitably permitted site for disposal. All spillages of waste and potential items of windblown litter will be cleared by the end of the working day on which they occur. All site surfaces will be inspected daily when the site is in operation. Debris will be swept as required and placed in a skip for disposal to a suitably permitted site.
1.2 Monitoring	
Emissions to Water	
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).	No process effluent discharge arises from site operations. Roof drainage is segregated from operational areas. Consequently, BAT 6 and BAT 7 are not applicable.
BAT 7. 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.	
Emissions to Air	

BAT 8. BAT is to monitor channelled emissions to air 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.	The only emissions to air are from the 5 LEV outlets in roof of the main building. These are the second stage of filtration in the system to remove dust from the air, the first stage being localised dust extraction and filtration around the CAT converter recycling points which removes 99% of the dust arising from the processing of CATs. The second stage filtration in the roof also removes a further 99% of dust which means that the combing system removes a total of 99.99% of all dust arisings. These are monitored quarterly by an independent third party to ISO standard
Monitor Diffuse Emissions of Organic Compounds to Air	
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.	There are no diffuse emissions of organic compounds from the site operations, and the operator does not propose to undergo physico-chemical treatment of solvents for the recovery of their calorific value and therefore BAT 9 is not considered applicable.
Monitoring Odour Emissions	
BAT 10. BAT is to periodically monitor odour emissions. Odour emissions can be monitored using: - EN standards (e.g. dynamic olfactometry according to EN 13725 in order to determine the odour concentration or EN 16841-1 or -2 in order to determine the odour exposure); - when applying alternative methods for which no EN standards are available (e.g. estimation of odour impact), ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality. The monitoring frequency is determined in the odour management plan (see BAT 12).	Due to the waste types accepted and processed on site odour release and detection off site is not anticipated to be an issue. However, the operator will maintain a complaints procedure as part of the EMS to ensure that should complaints of odour arise, these are fully investigated.
Monitoring Annual Consumption of Water, Energy, Raw Materials and Annual Generation of Residues and Waste Water	

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. Monitoring includes direct measurements, calculation or recording, e.g. using suitable meters or invoices. The monitoring is broken down at the most appropriate level (e.g. at process or plant/installation level) and considers any significant changes in the plant/installation.	The operator will maintain records of water, energy, and raw material consumption, in addition to generation of residues and water as specified on the determined Environmental Permit.
1.3 Emissions to Air	
Odour Management Plan	
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), that includes all of the following elements: — a protocol containing actions and timelines; — a protocol for conducting odour monitoring as set out in BAT 10; — a protocol for response to identified odour incidents, e.g. complaints; — an odour prevention and reduction programme designed to identify the source(s); to characterise the contributions of the sources; and to implement prevention and/or reduction measures.	As outlined under BAT 10, the waste types accepted are not considered malodourous and therefore an Odour Management Plan is not required and consequently BAT 12 is not applicable.
Reducing Odour Emissions	
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.	As above odorous waste is not accepted on site and therefore, BAT 13 is not considered applicable.
Diffuse Emissions to Air	
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. Depending on the risk posed by the waste in terms of diffuse emissions to air, BAT 14d is especially relevant.	Operations are enclosed within warehouses; there are no thermal processes and no solvent wash; consequently, no channelled vents or abatement is required. Dust is minimised by indoor handling, placing of loads, cleaning schedule, localised extraction

	system and a building LEV system which combined produce a 99.99% reduction in dusts. A Dust and Emissions Management Plan has been produced.
Use of Flaring	
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.	No flaring is used on site and therefore BAT 15 and BAT 16 is not considered applicable.
BAT 16. In order to reduce emissions to air from flares when flaring is unavoidable, BAT is to use both of the techniques given	
1.4 Noise and Vibrations	
Noise and Vibration Management Plan	
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.	All operations are carried out indoors. No high-noise plant or equipment is used. There is no shredding of waste nor use of any mechanical processing plant. Noise emissions at the site boundary are negligible and within typical industrial estate background levels. Therefore BAT 17 is not considered applicable.
Noise and Vibration Emissions	
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	The operator has taken noise and vibration emissions into account when planning the appropriate locations of plant and mechanical processing operations. All processing is manual and undertaken within an enclosed building to use the building structure as noise screens.

	All plant and equipment will be appropriately inspected and maintained in accordance with manufacturer recommendations. Plant and equipment are only permitted to be operated by sufficiently experienced and trained personnel. The site does not operate outside of normal operating hours. The site is therefore compliant with BAT 18.
1.5 Emissions to Water	
Water Consumption	
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 below. a. Water management b. Water recirculation c. Impermeable surface d. Techniques to reduce the likelihood and impact of overflows and failures from tanks and vessels e. Roofing of waste storage and treatment areas f. Segregation of water streams g. Adequate drainage infrastructure h. Design and maintenance provisions to allow detection and repair of leaks i. Appropriate buffer storage capacity	Water is used directly as part of operations to wash battery acid from lead acid battery components. In total 25,000l per week is used. This acidic water is stored in two 25,000l double bunded tanks in the external yard. The water is collected by tanker on a weekly basis and sent for recovery of the acid. The site is entirely surfaced with impermeable concrete. Drainage consists of external surface drains only. There is no processing of wastes externally, and any wastes stored externally are within containers, bunded containers, or skips. Hydrosnakes and Water-Gate barriers will be utilised for fire-water containment in the event of a fire or a flood.

	Clay mats will also be used in incidents to seal drains. Additionally, there is a 120mm kerb upstand. In these ways the site is compliant with BAT 19.
Reducing Emissions to Water	
BAT 20. In order to reduce emissions to water, BAT is to treat waste water using an appropriate combination of the techniques given	As described in BAT 19 above, waste water is sent offsite for recovery of the acids and recycling of the water used. The site is therefore compliant with BAT 20.
1.6 Emissions from accidents and incidents	
Preventing or Limiting Environmental Consequences of 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). a. Protection measures b. Management of incidental/accidental emissions c. Incident/accident registration and assessment system	The EMS, Accident Management Plan, Fire Prevention plan and other management plans implemented contain procedures relating to potential accidents that could occur on site and provides mitigation measures and responses through other related procedures. The following examples demonstrate compliance with BAT 21's requirements for accident prevention and response: a) An accident logbook is maintained on-site, as outlined in the EMS, to record all accidents and incidents. b) The EMS details site security measures to prevent unauthorised access and subsequent incidents. c) Procedures within the EMS address the appropriate response to equipment breakdowns and spillages.

	d) The EMS contains an emergency procedures section with procedures accounting for potential events and outlines detailed response actions. e) Following an accident or incident the operator will perform an investigation to interpret the cause of the accident / incident and provide additional training to staff if required. f) Fire watch procedures are implemented daily, including thermal checks of battery stockpiles and quarantine areas, as outlined in the Fire Prevention Plan. g) Hydrosnake and clay drain mats are deployed in the event of fire of flood to contain firewater and prevent environmental release. h) Hot Work Permit-to-Work system is enforced to prevent ignition risks during maintenance or repair activities. i) Emergency drills are conducted annually to test response procedures and staff readiness. j) Clay mats and kerb upstands are used to prevent accidental discharge to surface water systems during incidents. k) Security patrols and CCTV monitoring are active 24/7 to detect and deter unauthorised access or arson risk. The site is therefore compliant with BAT 21.
1.7 Material Efficiency	
Material Efficiency	

BAT 22. In order to use materials efficiently, BAT is to substitute materials with waste. Waste is used instead of other materials for the treatment of wastes (e.g. waste alkalis or waste acids are used for pH adjustment, fly ashes are used as binders).	A list of all the raw materials used on site including their properties will be maintained. The list of raw materials will be reviewed annually, as part of this review it will be considered whether any raw materials can be substituted or changes to alternative materials such as waste or waste-derived products. At present, the operators uses a limited range of raw materials on site which includes talc for processing of cable, electricity for lighting, plant and operating equipment, diesel for the site's mobile plant and delivery vehicles, and waste storage containers and packaging. The site is therefore compliant with BAT 22.
1.8 Energy Efficiency	
Energy Efficiency	
BAT 23. In order to use energy efficiently, BAT is to use both of the techniques given below. a. Energy efficiency plan b. Energy balance record	The main energy used on site is in the form of electricity for lighting, plant and operating equipment, and diesel for the site's mobile plant and delivery vehicles. The site has a solar energy system consisting of 695 x Longi 440W panels, which is a system size of 305.8kW with a predicted PV sol yield of 275,086kWh. The operator records and analyse all energy use and have policies and procedures in place which emphasise the need to avoid unnecessary use and to identify saving efficiencies, meeting the requirements of BAT 23.

1.9 Reuse of Packaging	
Reducing Quantity of Waste Sent for Disposal	
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). Packaging (drums, containers, IBCs, pallets, etc.) is reused for containing waste, when it is in good condition and sufficiently clean, depending on a compatibility check between the substances contained (in consecutive uses). If necessary, packaging is sent for appropriate treatment prior to reuse (e.g. reconditioning, cleaning).	Ensuring there is no contamination or residues left, and containers are in good condition, containers that mixed waste batteries arrive to site in are re-used for sorted / processed waste, so the same containers are used for packaging of input wastes and wastes for despatch from site Any pallets that waste arrives on will also be re-used to store sorted waste on. By reusing packaging as outlined above the site is compliant with BAT 24.
2. BAT Conclusions for the Mechanical Treatment of Waste	
2.1 General BAT Conclusions for the mechanical treatment of waste	
2.1.1 Emissions to Air	
Reduce 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.	The site shreds and granulates cable and also cuts Cats and mills the RCF matrix. Filtration is maintained on all such plant, which has a 99% efficiency. The site also operates to a Dust and Emissions Management Plan. The site undertakes only manual sorting and storage of WEEE/batteries. In this way the site is compliant with BAT 25.
2.2 BAT conclusions for the mechanical treatment in shredders of metal waste	
2.2.1 Overall Environmental Performance	

Overall Environmental Performance of Shredding Metal Waste	
BAT 26. In order to improve the overall environmental performance, and to prevent emissions due to accidents and incidents, BAT is to use BAT 14g and all of the techniques given below: (a) implementation of a detailed inspection procedure for baled waste before shredding; (b) removal of dangerous items from the waste input stream and their safe disposal (e.g. gas cylinders, non-depolluted EoLVs, non-depolluted WEEE, items contaminated with PCBs or mercury, radioactive items); (c) treatment of containers only when accompanied by a declaration of cleanliness.	(a)The site does not shred baled wastes and so this does not apply. (b)The site operates a robust pre-acceptance and acceptance procedures to remove as far as possible any risk of non-conforming waste being accepted onto site. These procedures are detailed within the EMS and are trained to staff on induction and by toolbox talks. (c)The site does not treat any containers. In this way the site is compliant with BAT 26.
2.2.2 Deflagrations	
BAT 27. In order to prevent deflagrations and to reduce emissions when deflagrations occur, BAT is to use technique a. and one or both of the techniques b. and c. given below a. Deflagration Management Plan b. Pressure Relief Dampers c. Pre-Shredding	The cable shredding process takes cable and shreds this via a low speed shredder (pre-shredder). The shredder is connected to a dust extraction system which has pressure relief valves which operate in the event of a deflagration to disperse any explosion upwards and away from any plant or personnel. In this way the site is compliant with BAT 27.
2.2.3 Energy Efficiency	
BAT 28. In order to use energy efficiently, BAT is to keep the shredder feed stable.	The shredder feed is equalised by avoiding disruption or overload of the waste feed which would lead to unwanted shutdowns and start-ups of the shredder. In this way the site is compliant with BAT 28.
2.3. BAT conclusions for the treatment of WEEE Containing VFCs and/or VHCs	
2.3.1 Emissions to Air	
BAT 29. In order to prevent or, where that is not practicable, to reduce emissions of organic compounds to air, BAT is to apply BAT 14d, BAT 14h and to use technique a. and one or both of the techniques b. and c.	BAT 29 does not apply because treatment of the proposed wastes will not lead to the release of VFCs and / or VHCs, therefore the requirement is not

	applicable.
2.3.2 Explosions	
BAT 30. In order to prevent emissions due to explosions when treating WEEE containing VFCs and/or VHCs, BAT is to use either of the techniques given.	BAT 30 does not apply because the treatment of the proposed wastes will not lead to the release of VFCs and / or VHCs, therefore the requirement is not applicable.
2.4 BAT Conclusions for the mechanical treatment of waste with calorific value	
2.4.1 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.	BAT 31 does not apply because the related activity is not performed on site, therefore the requirement is not applicable.
2.5 BAT conclusions for the mechanical treatment of WEEE containing mercury	
2.5.1 Emissions to air	
BAT 32. In order to reduce mercury emissions to air, BAT is to collect mercury emissions at source, to send them to abatement and to carry out adequate monitoring.	BAT 32 does not apply because no mechanical treatment of WEEE containing mercury is performed on site, therefore the requirement is not applicable.
3. BAT CONCLUSIONS FOR THE BIOLOGICAL TREATMENT OF WASTE	
3.1. General BAT conclusions for the biological treatment of waste	
BAT 33 - BAT 35	BAT 33-35 does not apply because no biological treatment of waste is undertaken on site, therefore the requirement is not applicable.
3.2. BAT Conclusions for the aerobic treatment of waste	
BAT 36 – BAT 37	BAT 36-37 does not apply because no aerobic treatment of waste is undertaken on site, therefore the requirement is not applicable.
3.3. BAT Conclusions for the anaerobic treatment of waste	

BAT 38	BAT 38 does not apply because no anaerobic treatment of waste is undertaken on site, therefore the requirement is not applicable.
3.4. BAT Conclusions for the mechanical biological treatment (MBT) of waste	
BAT 39	BAT 39 does not apply because no mechanical biological treatment of waste is undertaken on site, therefore the requirement is not applicable.
4. BAT CONCLUSIONS FOR THE PHYSICO-CHEMICAL TREATMENT OF WASTE	
4.1 BAT conclusions for the physico-chemical treatment of solid and/or pasty waste	
4.1.1 Overall environmental performance	
BAT 40. In order to improve the overall environmental performance, BAT is to monitor the waste input as part of the waste pre-acceptance and acceptance procedures (see BAT 2).	The site has robust pe-acceptance and acceptance procedures to ensure in so far as is possible that no non-confirming waste are received at site. Theses are detailed in the EMS. In this way the site is compliant with BAT 40.
4.1.2 Emissions to air	
BAT 41. In order to reduce emissions of dust, organic compounds and NH3 to air, BAT is to apply BAT 14d and to use one or a combination of the techniques.	The only emissions to air are from the 5 LEV outlets in roof of the main building. These are the second stage of filtration in the system to remove dust from the air, the first stage being localised dust extraction and filtration around the CAT converter recycling points which removes 99% of the dust arising from the processing of CATs. The second stage filtration in the roof also removes a further 99% of dust which means that the combing system removes a total of 99.99% of all dust arisings. In this way the site is compliant with BAT 41.
4.2 BAT conclusions for the re-refining of waste oil	

BAT 42 – BAT 44	BAT 42-44 does not apply because no re-refining of waste oil is undertaken on site, therefore the requirement is not applicable.
4.3 BAT conclusions for the physico-chemical treatment of waste with calorific value	
BAT 45	BAT 45 does not apply because no physico-chemical treatment of waste with calorific value is undertaken on site, therefore the requirement is not applicable.
4.4 BAT conclusions for the regeneration of spent solvents	
BAT 46 – BAT 47	BAT 46 – BAT 47 does not apply because no regeneration of spent solvents undertaken on site, therefore the requirement is not applicable.
4.5 BAT-AEL for emissions of organic compounds to air from the re-refining of waste oil, the physicochemical treatment of waste with calorific value and the regeneration of spent solvents	
BAT-AEL	BAT-AEL is not considered applicable as there is no re-refining of waste oil, physico-chemical treatment of waste with calorific value, or regeneration of spent solvents undertaken on site. Also see note within BAT 29 and BAT 30.
4.6 BAT conclusions for the thermal treatment of spent activated carbon, waste catalysts and excavated contaminated soil	
BAT 48 – BAT 49	BAT 48 – BAT 49 is not considered applicable as there is no thermal treatment of spent activated carbon, waste catalysts or excavated contaminated soil undertaken on site.
4.7 BAT conclusions for the water washing of excavated contaminated soil	
BAT 50	BAT 50 is not considered applicable as there is no water washing of excavated contaminated soil undertaken on site.
4.8 BAT conclusions for the decontamination of equipment containing PCBs	

BAT 51	BAT 51 is not considered applicable as there is no decontamination of equipment containing PCBs undertaken on site.
5. BAT CONCLUSIONS FOR THE TREATMENT OF WATER-BASED LIQUID WASTE	
BAT 52 – BAT 53	BAT 52 – BAT 53 is not considered applicable as there is no treatment of water-based liquid waste undertaken on site.

APPENDIX 1 – SITE LAYOUT DRAWING

AC ENVIRONMENTAL
Environment House
Werrington Road
Stoke-on-Trent
ST2 9AF

JASPER WAY

OPAL WAY

Palisade Fence Perimeter

SHED 1

SHED 2

SHED 3

3

4

5

6

7

8

9

10

11

12

13

14

2

1

Interceptors

Quarantine Area 1

Dust Extraction plant

General Goods Reception/ Storage Area

Staff and Visitor Car Park

Empty skip storage

Gas bottle cage

Quarantine Area 2

Fixed canopy

Interceptors

LOWER YARD

Weighbridge

RAMP

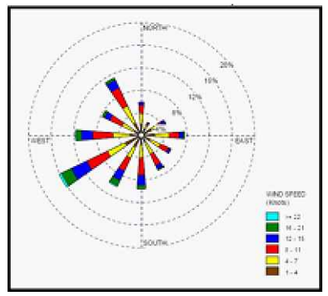
UPPER YARD

Access for Fire Service

5m legio block wall

Tank

Fire Hydrant approx 65m
(see drawing number 241021BS102 for Location)



- Automatic Fire Extinguisher
- Fire Extinguisher
- Leaderstop
- Public Surface Water Gravity Sewer
- Transferred Gravity Sewer
- Water Main
- Spill Kit
- PPE Storage
- Tarmac
- Concrete
- Upper Yard

1. Alloy Wheels - 8 x 3 x 1 = 24m^3
2. Steel Shell CAT's in bags - 8 x 8 x 2 = 32m^3
3. Acid Tanks - 2 x 25,000ltr = 50m^3
4. 40 cyd skip - 6.1 x 2.4 x 2.6 = 30.58m^3 - Waste Plastic
5. Granulated Copper (bagged) 30 x 3 x 1 = 90m^3
6. Batteries in Battery Boxes - 5 x 4 x 3 = 60m^3
7. Batteries in Battery Boxes - 10 x 8 x 2 = 160m^3
8. Granulated Copper (bagged) - 10 x 8 x 2 = 160m^3
9. Granulating Plant
10. Copper Wire = 15 x 8 x 3 = 360m^3
11. Mixed General waste in 12cyd skip - 3.7 x 1.78 x 1.68 = 10.2m^3
12. Alloy Wheels - 4 x 5 x 2 = 40m^3
13. Cable (Bagged) - 2 x 3 x 2 = 12m^3
14. 3x 20' ISO Container- 6.1 x 2.44 x 2.59
    (5 x Battery Boxes - each 1.2 x 1 x 1 = 1.2m^3 total = 6m^3) (x4)
    (9 x ISO Barrels - each 0.935 high x 0.581 diameter = 220ltr total = 1.98m^3)(x4)

Quarantine Area 1 = 58m^2
Quarantine Area 2 = 177m^2
Total = 235m^2

REV	DATE	DETAIL

CLIENT: BLANCOMET RECYCLING UK LTD

SITE: Opal Way
Stone Business Park
Stone
ST15 0SS

PROJECT: PERMIT APPLICATION

TITLE: FIRE PREVENTION PLAN

SCALE @A3	DATE	DRAWN BY	CHECKED BY
1:500	Nov 2025	T Kearns	D Alcock

DRAWING NO: 241021BS101

REVISION: