European Metal Recycling (EMR) Ltd

BAT Assessment

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0.1	30/06/2021	Initial draft
0.2	30/06/2021	WRM review
0.3	01/06/2021	Cupral review
0.4	02/07/2021	WRM review
1.0	05/07/2021	First Issue
1.1	10/06/2022	Update to drainage system details
1.2	22/01/2024	Update following infrastructure upgrades
1.3	02/05/2024	Update with EMR business name after acquisition

CONTENTS

1.0 INTRODUCTION

European Metal Recycling Limited (hereon referred to as EMR) have undertaken a Best Available Techniques Assessment (BAT) of the waste cable and metal treatment facility at their site in Middlesbrough, Teesside. Both the new BAT standards contained within the Best Available Techniques (BAT) Reference Document for Waste Treatment 2018 (BREF) document, as well as the Commission Implementing Decision (EU) 2018/1147, have been consulted.

1.1 Legislative Background

The latest Best Available Techniques (BAT) Reference Document for Waste Treatment 2018 (BREF) previously underwent a review across the European Union before being published in 2018. All new and existing waste installations are required to meet these standards.

The Environmental Permitting (England and Wales) Regulations 2016 (as amended) require that activities identified under Schedule 1 are subjected to an assessment to demonstrate that the technology/technique proposed is considered to be the 'Best Available' at the time the permit application is being made.

In order to undertake this BAT Assessment, the following documents have been consulted to ensure the site meets the required standards of compliance:

- *Best Available Techniques (BAT) Reference Document for Waste Treatment 2018 (BREF).*
- *Commissioning Implementing Decision (EU) 2018/1147 establishing best available techniques (BAT) conclusions for waste treatment, under Directive 2010/75/EU of the European Parliament and of the Council.*

1.2 Definition of Best Available Technique

The IED (Directive 2010/75/EU) define BAT as:

"the most effective and advanced stage in the development of activities and their methods of operation which indicates the practical suitability of particular techniques for providing in principle the basis for emission limit values designed to prevent and where that is not practicable, generally reduce emission and the impact on the environment as a whole".

Article 2 of the Integrated Pollution Prevention and Control Directive 2008 (as amended) and Article 3 of the IED further defines the component parts of BAT as:

- "Best" – means the most effective techniques for achieving a high level of protection of the environment as a whole.
- "Available" – means techniques developed on a scale which allows them to be used in the relevant industrial sector, under economically and technically viable conditions, taking into account the costs and advantages.
- "Techniques" – includes both the technology and the way the installation is designed, built, maintained, operated and decommissioned.

BAT may be demonstrated by either:

- Compliance with the sector-level, indicative BAT performance described in the Sector Guidance Notes (SGNs) produced by the Environment Agency and in the European Commission 'Reference Documents on BAT' (BREFs); or
- By conducting an installation-specific appraisal of techniques in use.

2.0 BAT REVIEW

The following sections review BAT guidance criteria produced by the EA for each phase of waste processing relevant to EMR. This document has been produced to analyse the information related to the site applicable processes. Although all non-site-specific information contained within the guidance has been scrutinized, it may not be mentioned within this document.

Each table below compares information from BAT guidance with information from the relevant section of the management system or other site documents. The relevant section of the management system or other site documents is referenced in the right-hand column.

The following applicable phases have been assessed:

- Pre-acceptance of waste
- Acceptance of waste
- Waste Storage
- Noise
- Fugitive Emissions
- Management
- Monitoring

The Environmental Management System (EMS - CUP-B01) as well as other key documents forming the permit application have been consulted in order to undertake this BAT Assessment.

3.0 BAT ASSESSMENT

EMR assessed site activities and the associated permit management system against general BAT conclusions. Following this, section 4.1.2 contains the assessment against BAT conclusions for the mechanical treatment of waste. The following tables have been produced from the Annex contained within the Commission Implementing Decision (EU) 2018/1147. Please note, as stated within the Commission Implementing Decision (EU) 2018/1147, the scope (e.g. level of detail) and nature of the BAT conclusions is related to the nature, scale and complexity of the installation, and the potential environmental impacts it may have (determined also by the type and amount of wastes processed).

3.1.1 General BAT Conclusions

Overall Environmental Performance		
BAT Conclusion No	BAT Guidance (Adapted from Annex I of Directive 2010/75/EU) / Information that needs to be provided by European Metal Recycling Limited	European Metal Recycling Limited Permit Documents
01	In order to maintain a high level of environmental performance, BAT is to implement and adhere to an Environmental Management System (EMS) incorporating all of the following features (where applicable): 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;	I. EMR Management are committed to the implementation and use of BAT techniques over all aspects of the business with particular focus on the Environment. This is instilled on all EMR employee inductions. Management strive to continually improve by developing current systems, introducing new systems, innovate within the plant and improving work techniques, taking care of the land by continually monitoring and reducing emissions. The Environmental Management System is in place and applies to everyone across the company with a review of the management system taking place every year. II: EMR believe that by practicing good environmental techniques, employing best available systems & technology, wherever practicable and operating in a sustainable manner, we can minimise our environmental impact and continually improve our environmental performance. This is an integral and fundamental part of our business strategy and operating methods. We encourage our stakeholders to do the same by entering into and complying with our supplier, customer and staff engagement policy. III. 1: The day to day objectives and activities of the business and its subsidiaries consider effects on the environmental. 2: Commitment to environmental protection flows throughout the organisation.

		3. Systems and procedures are in place to ensure that employees fully understand and abide by EMR's Environmental Policy and their designated responsibilities. 4. Budgets for finance and resources are made available as appropriate for environmental protection and improvements. 5. Environmental targets are defined for the business. 6. EMR takes into account their employee's capabilities, qualities and other responsibilities when delegating tasks and activities. 7. EMR promote a positive environmental protection culture. 8. Any environment review findings are provided to the Managing Director every year, so that well informed decisions can be made and resources can be made available.
	IV. Implementation of procedures, including a. Structure and responsibility. b. Recruitment, training, awareness and competence. c. Communication. d. Employee Involvement. e. Documentation f. Effective Process Control	IV a) EMR has a robust management structure which ensures a constant focus on the companies environmental responsibilities. b) EMR ensure that the recruitment, competency and training for environmental protection for all staff is up to date and reviewed periodically. c) All staff undergo in depth awareness training from induction and initial training through to regular training sessions which include any site improvements identified. d) EMR hold monthly environment meetings and distribute any information needed by regular tool box talks. There is also a suggestion box on-site for employees to submit improvement suggestions on any subject. e) The environmental policy is published on all notice boards along with the latest Health, Safety and Environment meeting minutes. f) Processes are controlled through Risk Assessments and Standard Operating Procedures (SOPs) which are reviewed annually or whenever there is a major change / incident. g) Maintenance is essential to the efficient running of the Plant. An

	g. Maintenance Programs. 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 (see also the JRC Reference Report on Monitoring of emissions to air and water from IED installations – ROM), b. corrective and preventive action, 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;	efficient plant reduces all emissions to the environment. EMR monitor, maintain and repair all equipment as soon as practicable, ensuring that any environmental impacts are considered. h) EMR personnel are trained in all emergency response procedures, including fire, spills and accidents. Risk assessments are utilized to ensure that the site is prepared for any foreseeable emergencies. Regular fire drills are also completed and documented. i) EMR have a dedicated Facilities and Compliance Manager who takes the lead when ensuring our compliance with legislation. EMR already have 1x MOROC1 qualified manager. Further training is underway to enhance this to MROC2. Another manager is also being trained to MROC2, The intention is that all 4 managers will atain this level of WAMITAB qualification. V. EMR pro-actively monitor performance and conduct investigations to establish root cause. a) Emissions to air systems are monitored for serviceability daily. They are tested annually. Emissions to water (run off) are tested regularly through sampling and laboratory analysis. All results are recorded. b) When equipment fails or an incident occurs, EMR investigate the situation to find the root cause. By addressing the root cause, EMR have the best chance of preventing reoccurrence. c) All activities are recorded. Most records are kept electronically on our server. d) EMR Compliance and Facilities Manager regularly audits the site to ensure that it is operating correctly. An external audit is carried out by DP Consultancy Ltd. VI. EMRs COO regularly inspects the site operations for compliance.

	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).	VII. EMR are always looking to improve their processes. VIII. All installation, commissioning and groundwork at the EMR site has been conducted with the intent that it can be put back to it's original condition or that it can be left safe and usable for other businesses. IX. The condition and performance of the site is compared to previous records to identify any potential problems. X. All waste streams are monitored, measured and recorded in accordance with EA directives. XI. The site does not generate waste water from the process. The only gas usage is for the internal office heating via a domestic boiler. XII. The process does not generate any residues. XIII. See Accident Management Plan. XIV. The process does not create significant odours. XV. See Noise and Vibration Management plan.

BAT Conclusion No	BAT Guidance (Adapted from Annex I of Directive 2010/75/EU) / Information that needs to be provided by European Metal Recycling Limited	European Metal Recycling Limited Permit Documents
02	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) b) Set up and implement waste acceptance procedures – c) Set up and implement a waste tracking system and inventory – d) Set up and implement a waste tracking system and inventory – e) Set up and implement an output quality management system	a) Feedstock is only accepted from agreed suppliers with clear specification of material that can be accepted. Only feedstock complying with the agreed EWC codes are accepted at EMR. Contracts with all terms and conditions are in place prior to any waste acceptance on site. Prior to any feedstock arrival, suppliers are set up by EMR management to ensure that they are legitimate and that they understand the conditions under which waste can be accepted onto site. b) CUP-OP02 – Waste Acceptance Procedure contains further details. c) EMR operate a batch system, whereas every waste load is processed as an individual batch with an individual identification number. d) EMR run an electronic waste management system, FRED (Fast Remote Entry of Data), which tracks and records Suppliers, Delivery details, Feedstock type, EWC codes, Waste transfer / Carrier information, weights (in and out) and more. EMRs logistics Manager tracks the progress of waste through the process. e) All input and output quality is measured, managed and recorded by the Quality Auditor. All stock for dispatch to customers is checked for quality prior to loading

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	f) Ensure waste segregation –	f) All waste is processed by batch, with each load designated an individual identification number and allocated a bay before being brought forward for processing. All outgoing waste is also identified by batch number and stored appropriately until dispatched.
	g) Ensure waste compatibility prior to mixing or blending of waste –	g) Waste is not normally mixed. If mixing is required, the waste is of the same type and designation, with the same properties. This is recorded on the FRED system.
	h) Sort incoming solid waste -	h) EMR processes include visual examination at the acceptance stage, before processing and after the first shredder to remove any non-conforming material such as paper, plastic, other metals, etc. Overband magnets are employed to remove ferrous metal as a art fo the automated process. Once the material has been granulated, EMR use air fed density separation tables to separate the Copper from the plastics.

Overall Environmental Performance		
BAT Conclusion No	BAT Guidance (Adapted from Annex I of Directive 2010/75/EU) / Information that needs to be provided by European Metal Recycling Limited	European Metal Recycling Limited Permit Documents
03	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), that incorporates all of the following features: (i) Information about the characteristics of the waste to be treated and the waste treatment processes, including: (ii) Information about the characteristics of the waste water streams, such as: (iii) Information about the characteristics of the waste gas streams, such as:	The only emissions to water are uncontaminated surface water drainage from building roofs and run-off water from the Yard. Water from areas that do not contain waste are discharged directly to the storm sewer. Yard runoff water (which does come into contact with waste) also discharges into the storm sewer via a penstock valve, but is monitored through sampling and lab analysis, with results recorded so that any problems can be identified and addressed at the earliest opportunity. No problems have been highlighted so far. The fueling and weighbridge areas are protected by an interceptor which then discharges into the foul sewer. The only emissions to air from waste processing activities are from the dust extraction system. This system employs cyclones and a large bag filter system before being released to the atmosphere via a stack on the North West side of the building. Emissions monitoring is carried out annually and there are alarm systems on the plant to warn the operators should their be a problem with the bag filters.

Overall Environmental Performance		
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04	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 (Generally applicable to new plants) - This includes techniques such as: — the storage is located as far as technically and economically possible from sensitive receptors, watercourses, etc.; — the storage is located in such a way so as to eliminate or minimise the unnecessary handling of wastes within the plant (e.g. the same wastes are handled twice or more or the transport distances on site are unnecessarily long). b) Adequate storage capacity (Generally applicable) - Measures are taken to avoid accumulation of waste, such as: — the maximum waste storage capacity is clearly established and not exceeded taking into account the characteristics of the wastes (e.g. regarding the risk of fire) and the treatment capacity; — the quantity of waste stored is regularly monitored against the maximum allowed storage capacity; — the maximum residence time of waste is clearly established. c) Safe storage operation (Generally applicable) - This includes measures such as: — equipment used for loading, unloading and storing waste is clearly documented and labelled; — wastes known to be sensitive to heat, light, air, water, etc.	a) Although the site is located adjacent to the river Tees, it is over 500m away from any residential receptors. To mitigate any risk to the river, all feedstock waste is stored within 3 sided, 0.8m thick, concrete walled bays. Waste is processed as batches and only moved when it is moving to the next stage of the process. Loose processed waste is stored in sealed containers to prevent dispersion. These containers are kept inside the building whenever possible. b) Site has 16 batch storage bays. Material movements are planned to ensure that the site remains within limits. The Logistics team monitor and manage all waste quantities daily. Deliveries and dispatches are planned to ensure waste does not remain on site for longer than 10 days; far less in most cases. c) Feedstock is identified and tracked by the batch identification number. - Skips and containers are in designated locations for the waste type. Sealed containers are stored in designated locations for the waste type. - Separated wastes are stored in sealed containers to protect them

	are protected from such ambient conditions; — containers and drums are fit for purpose and stored securely.	from ambient conditions. - Waste containers are inspected for serviceability whenever used. There is a procedure for reporting problems.

Overall Environmental Performance		
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	d) Separate area for storage and handling of packaged hazardous waste (Generally applicable) - When relevant, a dedicated area is used for storage and handling of packaged hazardous waste.	d) Hazardous waste is identified at the earliest possible opportunity. - - - There is a designated area with sealed drums for minor amounts of (expected) hazardous waste such as oily rags and used spill equipment. - There are two designated quarantine bays for any larger problems.

05	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: — 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.	All EMR staff are subject to a full site induction which includes environment, H&S and process training. New employees then go through a period of (documented) competency training to ensure that they are competent on all relevant operational processes, including waste handling and transfer. Waste handling equipment is regularly assessed for suitability to the relevant waste handling tasks and has resulted in equipment changes since the company started. - All operators of manual handling equipment are properly trained and assessed with opportunity given to them to maintain their competency. - Waste processing progress is tracked and documented by the logistics team and validated by the quality auditor. - Regular site inspections are in place to identify and address any material spills. - All mixed material from housekeeping has a defined point to re-enter the process. All processes on site are subject to review following an incident.

Monitoring		
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06	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).	EMR processes do not utilise water as a matter of course. The process does not produce any emissions to water.
07	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. See section 1.2 of *Commission Implementing Decision (EU) 2018/1147* for full BAT conclusion 7 table containing frequency and standards and the waste treatment processes they are to be monitored against.	EMR processes do not utilise water as a matter of course. The process does not produce any emissions to water.

Monitoring		
BAT Conclusion No	BAT Guidance (Adapted from Annex I of Directive 2010/75/EU) / Information that needs to be provided by European Metal Recycling Limited	European Metal Recycling Limited Permit Documents

08	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. Section 1.2 of *Commission Implementing Decision (EU) 2018/1147* has the full BAT table containing frequency and standards and the waste treatment processes they are to be monitored against. For Dust and Metals relevant BATs are as follows: 1.2 Monitoring BAT 8 – Monitoring of emissions to air. Dust – EN 13284 1 – Mechanical Treatment of Waste – 6 monthly BAT 25, 34, 41, 49 and 50. Metals and metalloids (Cu) - EN 14385 – Mechanical treatment in shredders of metal waste – Once every year – BAT 25	All recoverable dust is extracted via ducting to the bag filter house, which filters out the dust and drops it from the bottom of the housing into bags for sealing and disposal. Clean air from after the filters is ducted to atmosphere via an external stack system on the North West side of the building. Dust sampling has been undertaken annually by an external MCERTS accredited company who specialise in this area. Results have been analysed and recorded. Results have so far proven to be stable and well under EA limits. Monitoring will continue on an annual basis.

Monitoring		
BAT Conclusion No	BAT Guidance (Adapted from Annex I of Directive 2010/75/EU) / Information that needs to be provided by European Metal Recycling Limited	European Metal Recycling Limited Permit Documents

<table>
<tr>
<td>09</td>
<td>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 below.
<table>
<tr><th colspan="2">Technique</th><th>Description</th></tr>
<tr><td>a</td><td>Measurement</td><td>Sniffing methods, optical gas imaging, solar occultation flux or differential absorption. See descriptions in Section 6.2 of Commission Implementing Decision (EU) 2018/1147.</td></tr>
<tr><td>b</td><td>Emissions factors</td><td>Calculation of emissions based on emissions factors, periodically validated (e.g. once every two years) by measurements.</td></tr>
<tr><td>c</td><td>Mass balance</td><td>Calculation of diffuse emissions using a mass balance considering the solvent input, channelled emissions to air, emissions to water, the solvent in the process output, and process (e.g. distillation) residues.</td></tr>
</table>
</td>
<td>These BAT techniques are not considered relevant as EMR do not process any solvents or waste containing solvents.</td>
</tr>
</table>

Monitoring		
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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.	Due to the type feedstock accepted onto site (ie metals and cable plastics only), no odour was expected or has been experienced in feedstock or waste processing. It has been deemed that no odour monitoring is currently necessary. This situation will be reassessed if / when required.
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.	Electricity and gas (both metered) usage on site are all monitored and assessed for efficiency and cost. Whilst using the diesel generator, diesel usage is also monitored against electricity generated so that the true cost can be calculated and used for comparison purposes. Water usage is not ordinarily used as part of the process.

<table>
<tr><th colspan="5">Emissions to Air</th></tr>
<tr><th>BAT Conclusion No</th><th colspan="3">BAT Guidance (Adapted from Annex I of Directive 2010/75/EU) / Information that needs to be provided by European Metal Recycling Limited</th><th>European Metal Recycling Limited Permit Documents</th></tr>
<tr><td>12</td><td colspan="3">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.</td><td>Due to the type of feedstock accepted onto site (metal and cable plastic) and the lack of odour associated with this type of waste, an Odour Management Plan is not deemed to be necessary.</td></tr>
<tr><td>13</td><td colspan="3">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.
<table><tr><th colspan="2">Technique</th><th>Description</th><th>Applicability</th></tr><tr><td>a.</td><td>Minimising residence times</td><td>Minimising the residence time of (potentially) odorous waste in storage or in handling systems (e.g. pipes, tanks, containers), in particular under anaerobic conditions. When relevant, adequate provisions are made for the acceptance of seasonal peak volumes of waste.</td><td>Only applicable to open systems.</td></tr></table></td><td>The feedstock type is metal and cable plastics only. No organics or liquids will be present in the feedstock and the waste is not expected to be odorous. Any odorous waste received is rejected.</td></tr>
</table>

Emissions to Air		
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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. a) Minimising the number of diffuse emission sources. b) Selection and use of high-integrity equipment. c) Corrosion prevention. d) Containment, collection and treatment of diffuse emissions. e) Dampening.	The waste accepted onto site is metal and plastic cable only, with large particle sizes. All waste is stored, prior to treatment, in 3 sided bays. a) Material transport pipes are fully enclosed with all exhausts routed through the bag filter house to remove dust, etc. Drop heights are kept to a minimum with extraction fitted wherever practicable. Waste bays enclose material awaiting processing and processed material is stored in sealed containers where appropriate. b) Equipment is constantly assessed for integrity and EMR are always seeking to improve reliability. High wear items are being assessed to see if there are higher integrity items that will wear out more slowly. c) The majority of the equipment is inside the main building, limiting the risk of corrosion. Where corrosion is a risk, EMR seek to use corrosion resistant materials or coverings. d) Aswell as the use of an effective abatement system (dust extraction system), EMR have enclosed the majority of the process within the main building. Treated waste is stored in sealed containers where appropriate. e) Not deemed necessary.

	f) Maintenance. g) Cleaning of waste treatment and storage areas. h) Leak detection and repair	f) EMR follow a robust maintenance program to maintain the efficiency and reliability of the process. g) Waste storage bays are cleaned out whenever a batch is moved to the process. The yard, main building and processing area (and equipment) are subject to regular housekeeping and inspections. h) Although organic compounds are not considered a concern, the process is contained within the main building and constantly assessed for leaks, which directly effect process efficiency and the work environment.
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 below.	EMR do not use flaring as part of the process.
16	In order to reduce emissions to air from flares when flaring is unavoidable, BAT is to use both of the techniques given below.	EMR do not use flaring as part of the process.

Noise and Vibration		
BAT Conclusion No	BAT Guidance (Adapted from Annex I of Directive 2010/75/EU) / Information that needs to be provided by European Metal Recycling Limited	European Metal Recycling Limited Permit Documents
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.	EMR operate in line with their Noise and Vibration Management Plan. The majority of noise producing processes are contained within the main building. EMR commissioned a noise and vibration survey through a suitably certified third party which did not highlight any concerns.
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. a) Appropriate location of equipment and buildings. b) Operational measures. c) Low-noise equipment. d) Noise and vibration control equipment.	a) The majority of the waste processing equipment is within the main building. The external processing equipment only emits low levels of noise. b) All staff are trained and competent to use the equipment on site. All vehicles are turned off when not in use. c) Low noise equipment is employed wherever possible or viable. d) Larger equipment employs rubber mounts and mountings to reduce the risk of noise and vibration.

	e) Noise attenuation	e) The majority of the waste processing equipment is within the main building. The Yard has a significant amount of noise blocking obstacles, including storage bays with 0.8m thick concrete walls, which help to prevent noise travel.

Emissions to Water		
BAT Conclusion No	BAT Guidance (Adapted from Annex I of Directive 2010/75/EU) / Information that needs to be provided by European Metal Recycling Limited	European Metal Recycling Limited Permit Documents
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.	a) Water is only used for essential functions such as ablutions and hygiene. b) Water is not normally used in the waste treatment process. c) The entire site is covered with an impermeable concrete surface which effectively prevents emissions to soil. d) The site has a diesel tank with a capacity of 5,000 litres. This is double skinned and bunded to accommodate a loss of primary containment. The tank is protected by Armco barriers to mitigate any potential damage by vehicles and all runoff water from the area is directed through an interceptor. e) Only waste feedstock storage and the super chopper are located outside. All other waste is processed inside the main building. f) The site has three separate water streams. 1. Water from the roof and area with no waste storage. 2. Water from the waste storage and processing area (Main Yard). 3. Water from the Fuel tank area. g) There main building does not have a drainage facility. The external impermeable areas, where waste is stored has a drainage system controlled by a penstock valve. Tanks are available should the site need to store water.

	h) Design and maintenance provisions to allow detection and repair of leaks. i) Appropriate buffer storage capacity.	h) Site drainage is inspected by operating personnel daily and by a third party annually. i) Water storage capacity is available and adequate in case of a fire. For further information, see CUP-C04 Drainage Management Plan
20	In order to reduce emissions to water, BAT is to treat waste water using an appropriate combination of the techniques given below.	Water treatment is not currently necessary due to the results of the current water testing results.

Emissions from accidents and incidents		
BAT Conclusion No	BAT Guidance (Adapted from Annex I of Directive 2010/75/EU) / Information that needs to be provided by European Metal Recycling Limited	European Metal Recycling Limited Permit Documents
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 site operates with an Accident Management Plan (CUP-C01) a) EMR retains a 24hr, 7 day physical presence on site, using a private security company when the site is not active. The entire site is also covered by monitored CCTV. The main building is protected by a fire detection system, personnel are trained in the fire procedure and fire fighting equipment is provided throughout the facility. Spill kits are available in relevant locations throughout the facility. Any emissions from accidents / spillages etc are cleared using EMR trained staff, using spill kits which are available throughout the site. b) Incidents and accidents are reported through the relevant reporting system and investigated by the management team. c) Results are discussed at the monthly meeting and any necessary improvements to procedures or equipment are agreed and implemented. Minutes are published and changes are made and communicated to the workforce.

Material efficiency		
BAT Conclusion No	BAT Guidance (Adapted from Annex I of Directive 2010/75/EU) / Information that needs to be provided by European Metal Recycling Limited	European Metal Recycling Limited Permit Documents
22	In order to use materials efficiently, BAT is to substitute materials with waste.	When running problematic waste with low plastic content, EMR reuse processed material to improve process efficiency.

Energy efficiency		
BAT Conclusion No	BAT Guidance (Adapted from Annex I of Directive 2010/75/EU) / Information that needs to be provided by European Metal Recycling Limited	European Metal Recycling Limited Permit Documents
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.	a) EMR monitor energy efficiency in terms of KWh/Tonne and cost per Tonne. Results from this monitoring have driven the change to mains supply electricity. b) EMR maintain an energy record of generated energy and mains supplied electricity, although these are on separate circuits. EMR do not currently export any energy.

Reuse of Packaging		
BAT Conclusion No	BAT Guidance (Adapted from Annex I of Directive 2010/75/EU) / Information that needs to be provided by European Metal Recycling Limited	European Metal Recycling Limited Permit Documents
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).	EMR ensure that packaging and pallets are reused whenever practicable. Granulated plastic waste is recycled into injection moulded plastic products. Copper granules are recycled into electrical equipment and cables.

3.1.2 General BAT Conclusions for the Mechanical Treatment of Waste

Emissions to Air		
BAT Conclusion No	BAT Guidance (Adapted from Annex I of Directive 2010/75/EU) / Information that needs to be provided by European Metal Recycling Limited	European Metal Recycling Limited Permit Documents
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. *(The BAT-associated emission level (BAT-AEL) for channelled dust emissions to air from the mechanical treatment of waste is 2-5mg/Nm^3.)*	EMR use a multi-stage filtration system to remove contaminants from the air. Processes with the potential to produce airborne dust particles are connected to an extraction system. The extraction system comprises cyclones and a large capacity filter bag house with fabric filter medias to remove smaller dust particles. The cleaned air is released to atmosphere via an external stack system. Filter medias are monitored by a differential pressure system to ensure that they remain effective. All collected waste from the air filtration system is collected for further processing / disposal. Emissions monitoring from the dust extraction system is carried out annually to ensure the emission concentrations remain below 5mg/Nm^3.

Mechanical Treatment in Shredders of Metal Waste		
BAT Conclusion No	BAT Guidance (Adapted from Annex I of Directive 2010/75/EU) / Information that needs to be provided by European Metal Recycling Limited	European Metal Recycling Limited Permit Documents
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) Baled waste is not a normally accepted waste stream. However, should baled waste be accepted, the bales would be broken up and using the material handler and the Superchopper and inspected at the picking station. b) The site is equipped with a radiation detector before the weighbridge to warn of any radioactive loads. Personnel are trained to spot and extract any dangerous items before they enter the process. If items are hidden in loads, they are extracted at the picking station. All waste is disposed of appropriately. c) Containers are not treated on site.

Deflagrations		
BAT Conclusion No	BAT Guidance (Adapted from Annex I of Directive 2010/75/EU) / Information that needs to be provided by European Metal Recycling Limited	European Metal Recycling Limited Permit Documents
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	a) The Fire Prevention Plan contains all details of how EMR will manage a fire should one occur, including management of fire water. b) The bag house filter is fitted (as standard) with explosion panels which would relieve pressure should there be an explosion in the extraction system. c) EMR employ a low speed pre shredder (the Superchopper) at the start of the process.

Energy Efficiency		
BAT Conclusion No	BAT Guidance (Adapted from Annex I of Directive 2010/75/EU) / Information that needs to be provided by European Metal Recycling Limited	European Metal Recycling Limited Permit Documents
28	In order to use energy efficiently, BAT is to keep the shredder feed stable.	Shredders are started unloaded to minimise startup loads. The Superchopper is fed at a steady rate to avoid load spikes. The Rasper and the Granulators have automated feeds based on the machine loads.

3.1.3 BAT Conclusions for the Physico-Chemical Treatment of Solid and/or Pasty Waste

Overall Environmental Performance		
BAT Conclusion No	BAT Guidance (Adapted from Annex I of Directive 2010/75/EU) / Information that needs to be provided by European Metal Recycling Limited	European Metal Recycling Limited Permit Documents
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).	All received material is inspected upon receipt, before processing, and after the pre shredder to identify any contaminants. Loads may be rejected if they fail the initial inspection. Any foreign material is removed and disposed of appropriately. CUP-OP02 Waste Acceptance Procedure contains further details.

Emissions to Air		
BAT Conclusion No	BAT Guidance (Adapted from Annex I of Directive 2010/75/EU) / Information that needs to be provided by European Metal Recycling Limited	European Metal Recycling Limited Permit Documents
41	In order to reduce emissions of dust, organic compounds and NH_3 to air, BAT is to apply BAT 14d and to use one or a combination of the techniques given below. c. Fabric filter. *The BAT-AEL for dust is 2-5mg/Nm^3*	EMR employ fabric filters as part of the dust extraction system.

4.0 CONCLUSION

EMR will continue to comply with Best Practice, upholding a continuous improvement approach. EMR will regularly review and update their operating systems in accordance with continued best practice.