Variation Report

Steel Bright Road Metal Recycling Facility

FOR: DUNN BROS RECYCLING LTD

PROJECT NUMBER: ECCS 117 005

PREPARED BY: EC CONSULTANCY SERVICES LTD

Variation Report

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Variation Report – ECCS 117 005 R 002 B

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For:	Dunn Bros Recycling Ltd
Status:	**Final**
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1 VARIATION APPLICATION

1.1 INTRODUCTION

This report has been prepared in support of an application submitted to the Environment Agency (EA) for a variation application to the existing permitted site (EPR/GB3106HM) located in Smethwick, Birmingham. The site is operated by Dunn Bros Recycling Ltd.

The existing Environmental Permit is a Standard Rules Permit (SR2015No.14 Metal Recycling Site) which permits the site to conduct sorting, separation, grading, shearing, shredding, baling, compacting, crushing, granulating and cutting of ferrous metals or alloys and non-ferrous metals for recovery. The total quantity of waste that can be accepted at a site under these rules must be less than 75,000 tonnes a year.

The Operator is applying to upgrade their existing Standard Rules Permit to a bespoke installation permit, in order to accommodate additional waste types and increase the throughput capacity (which will push the daily treatment capacity above the 75 tonnes per day Industrial Emissions Directive (IED) threshold).

1.2 SITE LOCATION AND ENVIRONMENTAL SETTING

The existing site is situated within the Borough of Sandwell in a heavily industrial area, surrounded by several existing waste management facilities. The warehouse (17,000 square feet in size) is situated on the corner of Steel Bright Road and Rabone Lane, immediately north of the Rugby-Birmingham-Stafford Railway line (which itself is approximately 3 miles northwest of Birmingham New Street Station).

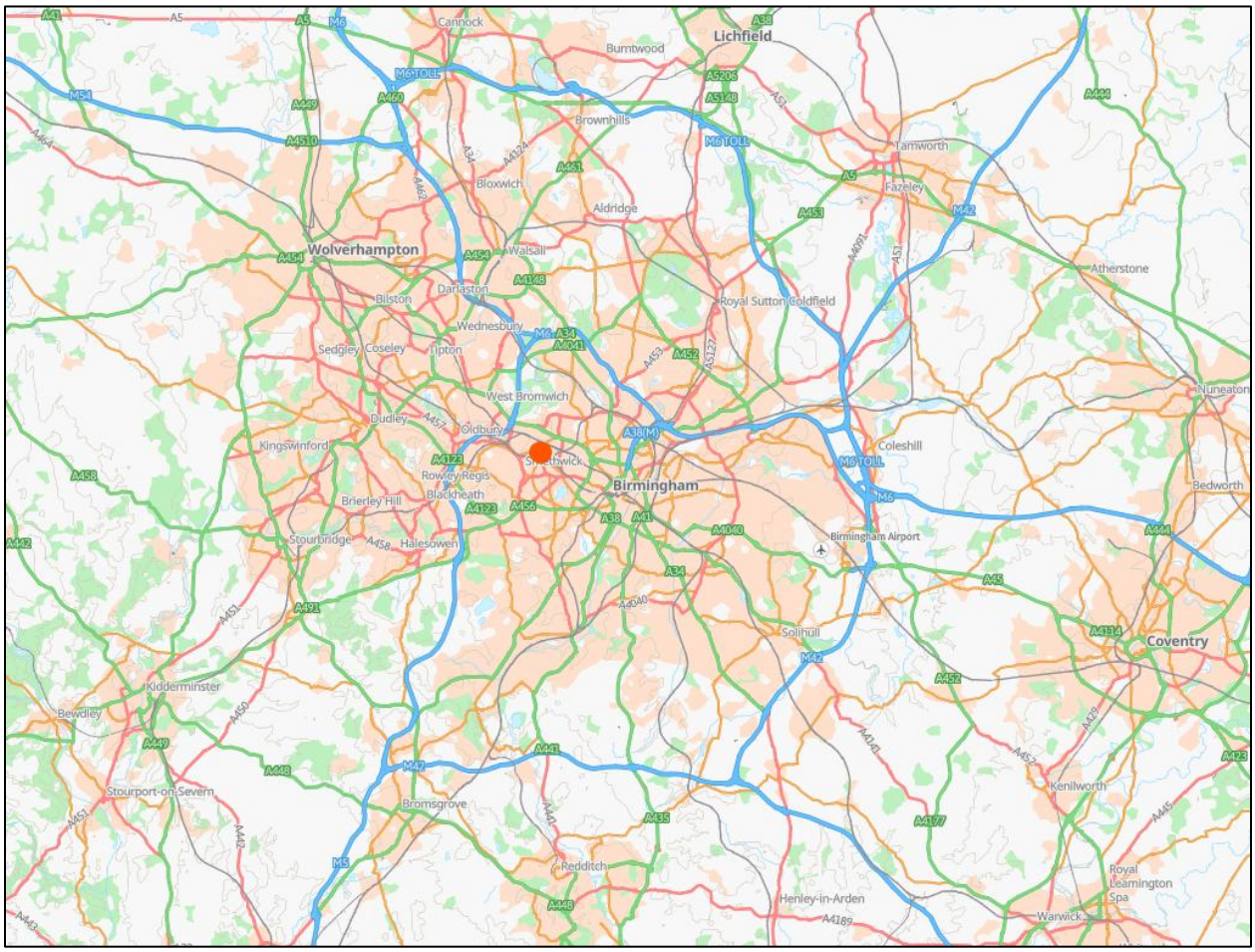
The site is situated above a bedrock aquifer which is designated as a high groundwater vulnerability zone / major aquifer. Superficial deposits are designated as a minor aquifer / secondary aquifer. There are no Source Protection Zones within close proximity to the site.

The nearest human receptor is The Old Corner House Pub, which is situated 55 m directly West of the warehouse, on the corner of SoHo Street (B4136) and Rabone Lane, with residential properties located 100m to the southwest, across a dual carriageway.

The full site address is:

Unit 1
James Watt Industrial Park
Steel Bright Road,
Smethwick,
Birmingham,
B66 2NW
Grid Reference: SP 03127 88744

Figure 1.2.1 Site Location



Source: Google maps © 2025

1.3 EXISTING PERMITTED ACTIVITIES

A Standard Rules Permit and two Exemptions are currently registered at the site. These are summarised below:

- Standard Rules Permit SR2015No.14 Metal Recycling Site (EPR/GB3106HM);
- T9 Exemption for the recovery of scrap metal (Registration WEX419400); and
- S2 Exemption for the storage of waste in a secure place (Registration WEX419400).

1.4 CHANGES PROPOSED TO EXISTING PERMIT

The changes being applied for, as part of this variation application, are as follows:

- Upgrading of the existing Standard Rules Permit to a Bespoke Installation Permit;
- The primary activity at the site will become the following:
    a. S5.4A(1)(b)(iv) Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day (or 100 tonnes per day if the only waste treatment

activity is anaerobic digestion) involving one or more of the following activities, and excluding activities covered by Council Directive 91/271/EEC - treatment in shredders of metal waste, including waste electrical and electronic equipment and end-of-life vehicles and their components;

The primary waste type that will be accepted at the site for treatment will be non-hazardous non-ferrous metals (19-10-02), ferrous metals (19 10 01), and other wastes (19 12 12) which will be primarily sourced from Incinerator Bottom Ash (IBA) processors. Deliveries of these sourced materials will exceed 75 tonnes per day.

- The operator is seeking to add additional waste codes to allow the acceptance of burnt motors which fall under the definition of waste electrical and electronic equipment (WEEE) The burnt motors will primarily be delivered to site under the EWC code of 16 02 15*, which is defined as an absolute hazardous waste code. That said, it should be noted that the motors have gone through an incineration process, and tests have been undertaken to confirm they no longer contain electrical parts, plastics or hazardous materials including POPs;
- The Operator is applying to incorporate a new fire detection and suppression system at the site, which will replace the previous system and provide a more robust fire prevention system. As a result, the Fire Prevention Plan has been updated to reflect the new infrastructure; and
- As a result of site expansion plans, there will be a number of changes to the site layout and outside yard drainage arrangement, along with changes to the proposed emergency fire water containment measures.

All changes proposed will take place within the sites existing permitted site boundary line, thus there will be no need for any additional land to be added as part of this variation. There will also be no new point source emissions from the site, as a result of the changes proposed. There will be no other changes proposed to the permit, as part of this variation application.

1.5 PERMITTED ACTIVITIES

This permit currently allows the operator to carry out the sorting, separation, grading, shearing, shredding, baling, compacting, crushing, granulating and cutting of ferrous metals or alloys and non-ferrous metals for recovery. The total quantity of waste that is permitted to be accepted at the site under the existing standard rules set is less than 75,000 tonnes per annum.

The activities being applied for are further described within Table 1.5.1 below.

Table 1.5.1 Newly Proposed Regulated Activities

Proposed Permitted Activities at Metal Recycling Site			
Activity Reference	**Activity listed in Schedule 1 of the EP Regulations**	**Description of specified activity and WFD Annex I and II operations**	**Limits of specified activity and waste types**
A1	S5.4 A(1) (b) (iv) Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes	Shredding of non-hazardous metal waste. R4: Recycling/reclamation of	From treatment of waste by shredding to storage of treated waste. Treatment consisting only of shredding of waste containing

	per day involving treatment in shredders of metal waste, including waste electrical and electronic equipment	metals and metal compounds	ferrous and non-ferrous metals for recovery.
Waste Activity			
A2	Storage of hazardous waste pending onward transfer	R4: Recycling/reclamation of metals and metals Compounds R13: Storage of waste pending the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	Disposal and/or recovery of hazardous waste will not exceed a capacity of 10 tonnes per day There shall be no treatment of hazardous waste at the site. The maximum quantity of hazardous waste stored at the site shall not exceed 50 tonnes at any one time.
Directly Associated Activities			
A3	Storage of non-hazardous waste pending treatment	R13: Storage of waste pending the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	From receipt of waste to storage of waste prior to treatment by shredding
A4	Physical treatment for the purpose of recycling	Manual and mechanical sorting, separation, grading, shearing, plasma cutting, and gas cutting. R4: Recycling/reclamation of metals and metal compounds	From treatment to shredding to dispatch off site for recovery. Treatment consisting of sorting, separation, grading, shearing, plasma cutting, and gas cutting of ferrous and non-ferrous metals into different components for recovery.
A5	Raw material handling and storage	Handling and storage of raw materials	From the receipt of raw materials to despatch for use within the facility
A6	Site surface and process water collection and recirculation	Collection of site surface water and process water from treatment process	From the collection of sites surface water and process water from treatment process to re-use within the facility or discharge to sewer Only clean surface water run-off will discharge to sewer under normal operations

1.5.1 Operational Hours

Waste materials will be delivered to the site during the following operational hours:

Monday – Friday	07:00 – 18:00;
Saturday	07:00 – 13:00.

The site will be closed on Sunday's and Bank Holidays.

2 ENVIRONMENTAL RISK ASSESSMENT

2.1 SCOPE AND OBJECTIVES OF ENVIRONMENTAL RISK ASSESSMENT

An Environmental Risk Assessment (ERA) has been prepared specifically in answer to Question 6 within Part C2 and Question 2 of Part C3 of the Environment Agency's Application Forms.

The objectives of this ERA are to:

- Identify potential sources of risk and hazards that the new changes proposed may present to the environment;
- Identify nearby sensitive receptors;
- Screen out those risks that are insignificant and don't require detailed assessment;
- Where appropriate identify potentially significant risks and undertake detailed assessment;
- Where appropriate choose the right control measures; and
- Report the findings of the assessment.

This report contains justification for all risk assessments completed and those screened out from requiring further consideration and provides an overall assessment of the acceptability of the changes proposed. The risk assessment does not assess existing permitted activities that remain unchanged, as these have already undergone assessment and are authorised under current permit conditions.

2.2 HAZARDS AND RISKS ASSOCIATED WITH CHANGES PROPOSED

This report follows the Environment Agency's Guidance and begins by identifying potential hazards and risks to the environment from the changes proposed to the permit. Hazards and risks to be considered within this assessment are presented within Table 2.2.1 below.

Table 2.2.1 Identified Hazards and Risks

Changes Proposed to Permitted Activities		
No.	**Hazard / Risk**	**Details**
1.	**Amenity Impacts**	Changes proposed will not introduce new hazards or risks of amenity impacts from site operations. Existing management systems and procedures remain fit for purpose
2.	**Noise**	There is potential for a change to noise sources from new plant and vehicle movements at the site predominately associated with the new fire detection and suppression system under abnormal operation. However the new sources from the new fire system will replace existing sources, thus the changes proposed will not introduce any overall increase in noise hazards or risks of significant increase of noise from site operations. Existing management systems and procedures remain fit for purpose
3.	**Odour**	The risk of malodours from the site is considered negligible given the nature of waste materials accepted and processed at the site. Changes proposed will not introduce new hazards or risks of odour impacts from site operations. Existing management systems and procedures remain fit for purpose.

		Site has not received any Odour Complaints since its start of operations.
4.	**Point Source Emissions to Air**	There will be no new point source emissions to air from site operations as a result of this variation. Dust filters fitted to the existing treatment process line are situated within the main building and have no associated point source discharge to atmosphere out of the building. Existing management systems and procedures remain fit for purpose
5.	**Emissions to Surface Water and/or Sewer**	Changes proposed will not introduce new hazards or risks of emissions to surface water from site operations. Upgrades to the site drainage will not alter the discharge point to sewer other than provide additional resilience and control in the event of an emergency. Existing management systems will incorporate the new drainage system. Emergency procedures including spillage procedures remain fit for purpose. During normal operations only clean surface water run-off will discharge to sewer via a full retention oil interceptor.
6.	**Fugitive Emissions**	There will be no changes to potential fugitive emissions from site operations as a result of this variation. Existing management systems, site procedures and mitigation measures including dust filters fitted onto the process line remain fit for purpose
7.	**Wastes Generated on Site**	Changes proposed will not introduce new hazards or risks of waste generated on site. Existing management systems and procedures remain fit for purpose
8.	**Abnormal Operations or Accidents**	Changes proposed will not introduce new hazards or risks of abnormal operations or accidents, however the operator will incorporate a new fire detection and suppression system, which will replace the previous system and provide a more robust fire prevention system. As a result, the Fire Prevention Plan has been updated to reflect the new infrastructure All other existing management systems and procedures remain fit for purpose
9.	**Global Warming Potential**	Changes proposed will not significantly change direct and indirect emissions produced by the site energy or alter global warming potential

2.3 SENSITIVE RECEPTORS

A search was carried out using the government website 'www.magic.gov.uk' as well as a nature and heritage conservation screen assessment obtained from the Environment Agency. The site is located within a heavily industrialised area. There are several human sensitive receptors within 1km of the site. The nearest receptors are other businesses co-located within the James Watt Industrial Park Estate.

There are no European ecological designated sites within the relevant Environment Agency screening distances. There is however a waterway canal located 86m west of the site and 165 m to the north the industrial warehouse. The closest sensitive receptors are illustrated within Table 2.3.1 and Figure 2.3.2 below.

Table 2.3.1 Human Sensitive Receptors (HSR)

No	Receptor Name	Type	Centroid (x, y m)	Approx. distance from permit boundary (m)	Direction from Site
HSR 1	Carpark	Commercial Premises	403180 288737	Adjacent	E

HSR 2	Railway Line	Commercial Premises	403124 288707	Adjacent	S
HSR 3	Aurubis	Commercial Premises	403118 288821	25 m	W
HSR 4	Birmingham Cas & Carry Warehouse	Commercial Premises	403191 288803	30 m	N
HSR 5	The Old Corner House Pub	Commercial Premises	403046 288738	35 m	W
HSR 6	Energas	Commercial Premises	403134 288646	45 m	S
HSR 7	Ravenace Metals	Commercial Premises	403218 288744	45 m	E
HSR 8	A457 (Soho Way)	Duel Carriageway	403043 288648	65 m	S
HSR 9	Oakfield Close	Residential Properties	403028 288606	100 m	SW
HSR 10	East End Foods	Commercial Premises	403306 288763	114 m	E
HSR 11	St. Phillips Catholic Primary School	School Premises	402973 288548	170 m	SW

Figure 2.3.2 Location of Human Sensitive Receptors

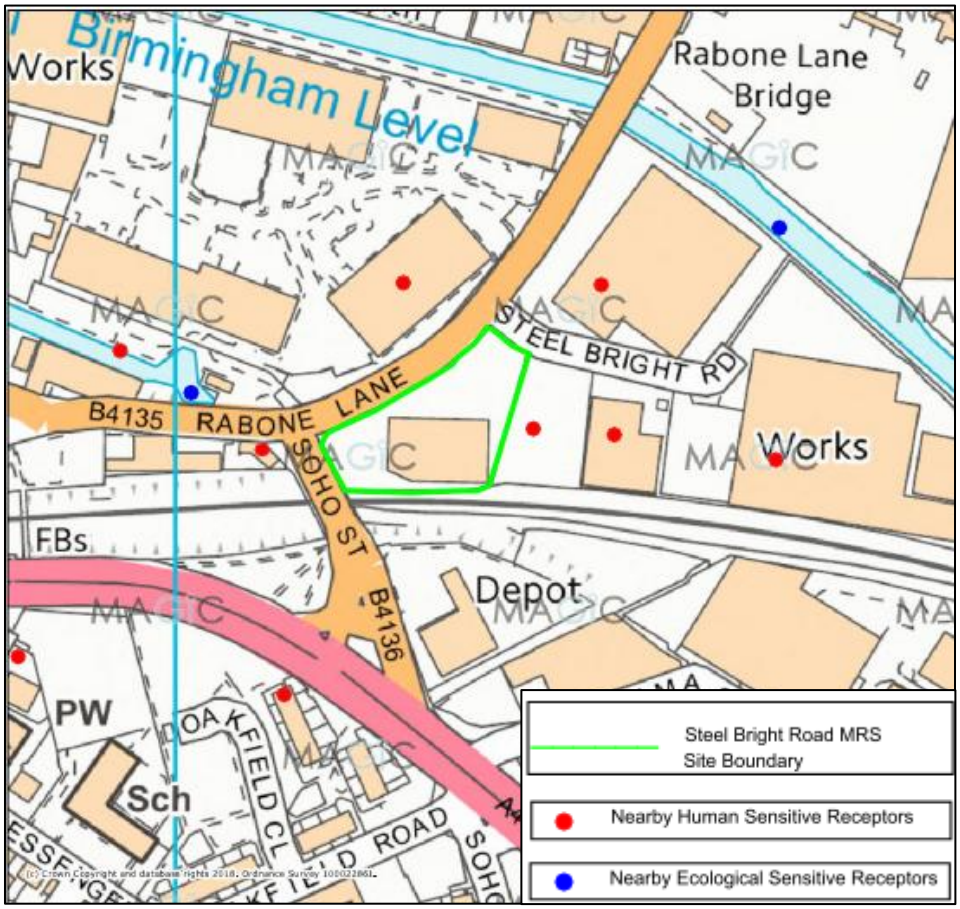


Image source: 2025

2.4 RISK ASSESSMENTS COMPLETED

All hazards identified within Table 2.2.1 above have been considered and either assessed qualitatively or screened out as requiring no further assessment. A qualitative assessment is provided within Appendix C to this report. A summary of the main risks identified as part of the changes proposed are also summarised below.

2.4.1 Drainage

The existing warehouse building is serviced with an impermeable surface and sealed drainage system. It is not anticipated that the storage and processing of wastes within the building under normal operations will generate any effluent run-off. However, within the building there is an internal drainage system that will collect any contaminated run-off water (under normal operations) or any fire water (under abnormal operations should the water cannons be activated), or the FRS douse the fire with additional water. All fire water run-off within the warehouse building will be captured within the internal drainage system, and pumped to one of two 20,000l tanks located at the side of the building. Contaminated run-off or fire water can be held within these two tanks and re-used as an additional water source. Once the fire has been extinguished, the fire water will be tested prior to either discharge to sewage (subject to consent from the sewerage undertaker) or removed off site via tanker to an appropriate facility for treatment. The outside yard has an interceptor located at the bottom of the yard by the site entrance, which (during normal operations) collects any clean uncontaminated rainwater that falls onto the outside yard prior to discharge to sewer. In the case of a fire within the building or outside yard area the interceptor valve can be shut off, sealing all fire water on site. The fire water can then be pumped to either of the two 20,000l storage tanks located on site or held on site within the yard, prior to testing and discharge to sewer, or removal off site via tanker.

The roof gutters which collect clean rainwater which falls onto the roof of the building link to a separate storm drain which goes underground and is not linked to the outside yard containment area. It is not possible for any contaminated run-off to enter this drain. The impermeable hardstanding area immediately adjacent to the building entrance doors drains to sewer, through the interceptor as illustrated on the site drainage plan provided within the drawings section of this variation application.

A sump (1 m x 1m sump pit) is located to the west of the building where fire-run off water will be collected. A submersible pump will transfer the run-off to the two 20,000l storage tanks located outside the building, to allow one of two things:

- To contain the run-off water on-site prior to a Short-Term Discharge Authorisation being obtained from Severn Trent Water Ltd to allow discharge to sewer; or
- In the event discharge to sewer is not possible, collected run-off will be removed from site using road tankers, for onwards treatment or disposal at a suitably authorised facility.

2.4.2 Emissions to Air

There will be no new point source emissions to air from the changes proposed to site operations. The site does have use of a generator, however the capacity of this falls below 1MWth input, thus falls outside the scope of the Medium Combustion Plant Directive, and does not require further assessment or monitoring.

2.4.3 Accidents

The site implements emergency protocols as part of their existing Environment Management System, which includes existing Accident and Emergency Response measures. The changes proposed to the existing permit do not introduce any new accident risks or hazards to the site however the procedures for detecting and suppressing fires on site, as well as measures to contain fire run-off have been updated. An updated Fire Prevention Plan has this been submitted in support of this application to reflect the changes proposed.

A copy of the sites existing Emergency Spillage Procedure is provided within Appendix G to this report.

3 OPERATING TECHNIQUES AND BAT ASSESSMENT

3.1 INPUT MATERIALS

Waste types will be restricted to the waste codes stipulated in the varied bespoke Permit; however the intention is for the site to continue to primarily accept just one waste stream (19 10 02 - wastes from shredding of metal-containing wastes consisting primarily of non-ferrous waste).

All materials will be tipped directly into the building, with all treatment activities taking place inside the building. Materials loading for export will be stored in the yard in sealed contained skips.

Only small volumes of chemicals will be stored on site. Chemicals will be stored within an appropriate container with integral secondary containment providing more than 110% of the largest volume stored or 25% of the total storage capacity (whichever is the greatest volume). Containers will be regularly inspected to ensure they remain fit for purpose and containment remains intact with no potential for odour release. All wastes generated on site including any waste oils will be stored in appropriate containers to minimise odours. The site uses diesel as well as electricity to run various plant and equipment. The site has a fuel oil storage tank which is serviced with appropriately sized secondary containment.

3.2 PLANT AND EQUIPMENT

Site infrastructure consists of a single industrial unit and concreted yard area to the front of the building. The site is accessed from Rabone Road via shared access into the Industrial Estate. The site is secured with palisade fencing along the northern and Eastern boundary of the site, with the fence connecting to a brick wall along the western and southern perimeter of the site. The brick wall forms part of the bridge which is located immediately south / south-west of the site.

All plant and equipment will be located within the industrial unit and will include:

- 3 x Gas forklift;
- 1 x Telescopic Loader;
- 1 x Small Mobile Generator;
- 3 x Feed Hopper;
- 8 x Conveyor Belt;
- 1 x Mechanical Processing Machines;
- 2 x ECS Metal Separators with ferrous magnets;
- 2 x waste storage area;
- 1 x loading area
- 2 x Fire Water Tank;
- 1 x Bag Loader;
- 2 x 360 degree crane;
- Office & Welfare Area;
- 1 x Container Loader;
- 1 x Radioactive detection unit.

3.3 PRE-ACCEPTANCE OF WASTE PROCEDURE

All deliveries to the site will be subject to pre-acceptance evaluation prior to arrival on site and a delivery schedule agreed with customers.

There will be no ad-hoc deliveries. In the event that a vehicle arrives on site and it is verified that there has been no prior arrangement made, the delivery will be rejected, the vehicle turned away, and the incident recorded in the site diary.

The following information will be requested from all customers prior to booking in for acceptance:

- Waste EWC Code and written description of waste;
- Process generating SIC Code;
- Waste quantity; and
- Anticipated date and time of delivery.

Contracts will not be arranged until the Operator is confident that the Facility is able to receive the load, and that the nature of material can also be processed without operations impacting on any nearby sensitive receptors or compromising the Facility's operational controls.

3.4 WASTE ACCEPTANCE PROCEDURE

The site will follow strict waste acceptance procedures specific to each different waste stream to be received at the facility.

Waste will be delivered to the facility by a combination of heavy and light goods vehicles.

Drivers of all vehicles delivering waste must report to the staff upon arrival to confirm the nature of the waste and complete the relevant documentation. Where appropriate, first-time visitors will be required to confirm their registration as a waste carrier to the site and will be issued with instructions on health and safety and site procedures. Thereafter waste carrier registration will be checked on an ad-hoc basis or as required.

All visitors to the site will be required to sign the Visitors Book before receiving induction and proceeding onto the site as well as signing out prior to leaving.

Waste will only be accepted at the site if it is in accordance with the provisions laid down in accordance with the sites Environmental Permit and associated Schedule of permitted waste types. Any new drivers to the site will receive a Site Safety Induction. Wastes will also only be accepted if sufficient storage capacity exists at the site for such wastes at any time.

A record will be kept of the date and time of waste deliveries, the quantity, description and EWC code for the waste deposited at the site, the name of the company and their representative delivering (if applicable) each load of waste, the vehicle registration number as well as type of vehicle, transfer note or consignment note number and any other specific details required under Duty of Care. A record of all rejected wastes will be made in the site diary, including details stating the reasons for rejection.

3.5 STORAGE OF WASTES

The location and layout of the waste storage areas are illustrated within the drawings provided in the drawings section of this permit variation application. Upon delivery to site, waste materials will be stored in two separate storage areas located within the main building. Wastes delivered to site will be dry loads,

with low probability of run-off from waste storage areas. That said, all drainage from these bays will be contained within the building and directed to a central drain, and internal drainage which will connect to a storage tank located outside of the building, which can be used to collect fire water in the event of the water cannons being activated as all fire water contained within the building.

Materials that will undergo separation treatment will be left to cool prior to being stored in one of the contained bins outside, prior to dispatch.

Waste storage areas will maintain a 6m distance from fixed plant and equipment. The forklift truck will be stored overnight within the building, maintaining at least 6 metres distance from any other combustible materials. All plant will be moved to the yard at the start of the day, prior to any waste deliveries to site.

Staff on site will ensure good housekeeping practices are implemented on site and the site is regularly swept to remove excess dust.

The site will operate a first in, first out policy to reduce the storage time of material held on site. Routinely wastes delivered to site will be processed the same day, however stored for no longer than 48 hours before processing. The longest duration of storage of any stockpile will be 1 month.

Materials will arrive in small volumes that will be delivered to an empty storage bay (Bay 1 or Bay 2). Once in the bay the material will be given a batch number. Material will be processed through the site in batches, with each batch number tracked through the treatment process. All batch data records will be recorded electronically and made available for inspection.

The waste bays are located > 6 metres distance from each other and all plant or equipment. Any lubricants / grease stored on site for maintenance of equipment will be held within a secure container and stored > 6 metres distance from any waste stockpile. A COSHH cabinet is located within the office rooms, which is separate from the main processing area by a fire wall.

The maximum stockpile sizes and volumes of waste storage areas are summarised within Table 3.5.1 below.

Table 3.5.1 Stockpiile Size, Volume and Dimensions

Stockpile Reference	Waste Type	EWC Code	Maximum Stockpile Size (LxWxH)	Stockpiles Size (M^2)	Stockpile Size (M^3)	Maximum Weight (tonnes)
Storage Area 1	Wastes consisting of non-ferrous waste Loose 80mm	Various Predominantly 19 10 02	TBC	TBC	224	75
Storage Area 2	Wastes consisting of non-ferrous waste Loose 80mm	Various Predominantly 19 10 02	TBC	TBC	150	50
Loading Area	Wastes consisting of non-ferrous waste Loose 80mm	Various Predominantly	TBC	TBC	150	50

		19 10 02				
Quarantine 40-yard Skip	Various	Various	6 x 2.4 x 2.7	14	30	-

3.6 QUARANTINE AREA

The site has a designated quarantine skip located outside the main building, as illustrated within the site layout plans. Whist the EA's guidance states that quarantine areas should large enough to accommodate 50% of the largest stockpile of waste (a maximum of 112m^3), the dedicated skip at this facility is sized to hold less than 50%, however this is considered appropriate for the level of fire risk at the site (which is considered very low due to the nature of waste streams accepted at the site). The placement of water cannons within the building also makes it extremely unlikely that the quarantine skip will need to be used in the event of a fire, as fire extinguishing measures will effectively put out any fire at the source. A dedicated water cannon will however be located adjacent to the quarantine skip as well, which can be activated in the event of a fire. This allows for effective and efficient fire extinguishing measures in smaller batch sizes if required. The use of the quarantine area will be determined by the Technically Competent Manager (TCM) at the time and will be dependant to the nature of the material to be quarantined / nature of the incident.

3.7 FIRE DETECTION SYSTEM

A new fire detection system will be installed at the site (FORADE Fire Detection System). This system will monitor waste storage areas continuously and will initiate fire response procedures if triggered when the system detects a fault, heat, smoke, or flame signature. The system has been designed by Warmetechnik Ltd (a German based engineering company). The system utilises an automated water-based fire detecting sensors, which trigger strategically placed water cannons, located adjacent to each waste storage area. Detection zones are pre-programmed based on high-risk areas (e.g. storage areas, shredder bay, sorting line). Further details of the fire detection system are provided within the drawings section of this permit variation application.

3.8 FIRE SUPPRESSION SYSTEM

Within the building there is a new fire suppression system which will cover all areas of the building, as well as the quarantine skip located immediately outside of the warehouse building. The water cannons will be directed over each storage area as illustrated within the site layout plans provided in the drawings section of this permit variation application. The automatic water cannon system will consist of 5 water cannons designed to disperse 36m^3 of water per minute. Further details of the cannon specification is provided within the Fire Prevention Plan submitted with this permit variation application.

Two water storage tanks with the capacity of 25m^3 each (25,000 litres) are located adjacent to the main warehouse in the yard area, along the western perimeter of the building. In consideration of the stockpile size, and the size of material being 150mm, the proposed volume of water to be dispersed is considered

to be sufficient to suppress any fire within the storage bay, allowing sufficient time for the Fire Response Service (FRS) to arrive on site.

The water cannon system will have autorecognition, so will either emit a direct cannon or mist spray to the designated area depending on whether a naked flame is shown or whether a high heat spot is detected. This system will automatically notify the site manager as well as send phone alerts to the directors of the business.

3.9 WATER SUPPLY

The fire suppression system is provided via two 25,000-litre water tanks located adjacent to the building.

Calculations are provided within the Fire Prevention Plan submitted with this permit variation application, with the new fire suppression system being able to operate the following:

- $36m^3$ of water per minute / 6,000 litres per minute;
- $1080m^3$ of water per ½ hour / 180,000 litres per ½ hour.

3.10 RELEVANT OPERATING TECHNIQUES AND STANDARDS

Information provided below describes the operational measures and techniques to be used to control emission from the changes proposed to the site (as identified within Chapter 1 above) and describes how these techniques meet Best Available Techniques (BAT).

The relevant technical standards applicable to this installation are described within the Best Available Techniques Reference Document (BREF) and BAT Conclusions Document for Waste Treatment Industries under 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.

Consideration has also been given to best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for the non-ferrous metals industries.

The Environment Agency has also published appropriate measures guidance for the treatment of metal waste in shredders (published in October 2021).

3.11 ENVIRONMENTAL MANAGEMENT SYSTEM

The Environment Agency relies heavily upon the use of effective Environmental Management Systems (EMS) as a driver for environmental compliance and improvement.

The existing system has been certified to ISO 14001; 45001; and 9001 standards and will remain effective, and will not require any substantial changes as a result of this variation application other than the site emissions plan and site layout plans requiring updating. The existing management teams, staffing and systems currently in place will remain fit for purpose.

3.12 Raw Materials & Justification of their use

Raw Materials essentially will remain unchanged as a result of this variation application. The changes proposed will however increase the maximum throughput capacity of the site. Raw material consumption across the site will be monitored in accordance with BAT requirements and reported to the EA as part of annual reporting requirements.

3.13 Energy Efficiency and Energy Consumption

The Operator implements existing energy efficiency measures which forms part of the EMS, and include monitoring of specific energy consumption data, setting key performance indicators on an annual basis.

It is not anticipated that the changes will largely alter the energy consumption across the site for electricity or natural gas consumption.

3.14 Water Consumption

The Operator implements existing water efficiency measures which forms part of the EMS, and include monitoring of water consumption data, setting key performance indicators on an annual basis. Water consumption across the site is not anticipated to increase but will be monitored in accordance with BAT requirements and reported to the EA as part of annual reporting requirements.

3.15 Waste Management

There will be no new waste streams generated on site as a result of the changes proposed to the site.

Records of all wastes removed from site will be recorded, held securely, and made available for inspection by the Environment Agency upon request. Should any new waste streams be generated during either normal or abnormal operations, the Operator will apply the principles of the Waste Hierarchy prior to removal off site.

3.16 Accident Management

The Operator has developed emergency procedures for dealing with any incidents or events that could result in pollution. The changes proposed to the installation do not introduce any new potential accidents or abnormal scenarios, thus the sites existing emergency procedures; business continuity; crisis management plans, safe systems of work, etc remain fit for purpose.

A copy of the sites existing Standard Operating Procedure (SOP) for managing emergency spillages is provided within Appendix G to this report.

3.17 Site Layout Plans

A number of drawings have been submitted in support of this variation application. These drawings include the following:

- Existing Permitted Site Boundary Plan;
- An updated site layout plan which illustrates the location of all new infrastructure; and
- Point source emissions Plan.

These drawings are to replace those previously submitted with the original application.

3.18 BAT ASSESSMENT

A BAT Assessment has been completed for the site against relevant technical standards applicable to this installation (**Steel Bright Road BAT Assessment –** best available techniques (BAT) conclusions for ***waste treatment***, under Directive 2010/75/EU of the European Parliament and of the Council).

A copy of the BAT Assessment is provided within Appendix E of this report.

3.19 EMISSIONS AND MONITORING

The site currently has one point source emission to sewer located at the front entrance to the outside yard of the site (S1). Only clean surface water run-off discharges to sewer during normal operations.

There are no other point source emissions from the site to either air, land or groundwaters.

The site will be visually inspected on a daily basis by the Site Manager as part of normal routine daily tasks. In the event that any issues are identified such as damage to walls or drainage system etc, repairs will be made, and the event recorded in the site diary.

In the event of an emergency or loss of containment / use of the emergency water cannons, a slam shut valve located at the outlet of the full retention oil interceptor can be closed, and any contaminated run-off contained on site within the drainage system. The effluent can then be either pumped to one of the two water storage tanks located at the rear of the building, or it can be tested and discharged to sewer following consent obtained from the sewerage undertaker, or tankered off site to an appropriate facility for onward treatment.

The plant and mechanical treatment processing equipment will undergo routine maintenance to ensure they remain in good working order. Dust filters fitted to the main process line which provide dust abatement is routinely monitored to ensure they remain in good working order, and the bags can be replaced before reaching saturation (when the bags are approx. 75-80% full) or when there is significant reduction in airflow/suction or visible damage.

As there will be no point source emissions to the environment from other than clean surface water run-off during normal operations, there is no requirement for emissions monitoring, other than routine operational process monitoring, including routine visual inspections and integrity checks of liquid containers, secondary containment, and site impermeable surfacing. Amenity impacts such as odour and noise will be monitored as per control measures specified within the sites Environmental Risk Assessment.

3.20 REPORTING

As part of the sites Environmental Management System, audits will be carried out on an annual basis to check that all activities are being undertaken in line with the requirements of the Environmental Permit, Management Procedures, and associated legislation.

Frequency of reporting monitoring data to the Environment Agency will be in accordance with conditions specified within the permit. Reports submitted will use the appropriate reporting forms as required by the regulatory.

As a minimum, the Operator will ensure the following information is recorded:

- Any changes to the as-built design throughout the life of Operations at the site;
- Annual hours of operation;
- Abnormal Events or Emergencies;
- Complaints and actions taken;
- Plant/equipment failure;
- Periods of Maintenance or Downtime;
- Any Incidents/accidents on site and actions taken;
- Waste acceptance and duty of care documentation;
- Training Matrix;
- Site inspections;
- Security failures;
- Emissions monitoring;
- Testing of firefighting equipment, fire drills;
- Environment Agency Compliance Assessment Reports (CARs); and
- Reportable incidents in accordance with the Permit.

All records will be held in the site office and will be made available on request. Any records held electronically will be backed up on a regular basis.

APPENDICES

APPENDIX A – ENVIRONMENTAL PERMIT

APPENDIX B – WAMITAB CERTIFICATION

APPENDIX C – ENVIRONMENTAL RISK ASSESSMENT

Table A: Risk Assessment and Risk Management Techniques

Hazard	Receptor	Pathway	Risk Management Techniques	Probability of Exposure	Consequence	Overall Risk
Noise						
Noise generated from additional plant and equipment	Nearby Human Receptors	Noise through the air	The likelihood and risk of noise emissions causing annoyance or disturbance to any sensitive receptors from the newly proposed operations is considered to be negligible. The majority of new process equipment will be located within the existing building which will already provide noise attenuation. Some specific equipment will be fitted with housing itself that has noise attenuation. The Operator will continue to implement a planned preventative maintenance regime to ensure equipment remains fit for purpose and equipment operates within optimum conditions and minimises generation of noise and/or vibration. Operational procedures are in place to investigate and respond to any complaints about noise. Records will be maintained on site.	Low	Low	Low
Noise generated from new plant, equipment and vehicle movements				Low	Low	low
Odour						
Malodors from generated from waste storage	Local Workforce at Site; Nearby Human Receptors	Transportation through the air	The likelihood and risk of odour emissions causing annoyance or disturbance to any sensitive receptors from site operations is considered to be negligible. The Operator will continue to implement a planned preventative maintenance regime to ensure equipment remains fit for purpose and equipment operates within optimum conditions and minimises generation of odours. Operational procedures are in place to investigate and respond to any complaints about odours. Records will be maintained on site.	Low	Low	Low
Discharges to Sewer						
Breach of Trade Effluent Consent Limits	Local Workforce at Site; Waste Water Treatment Works Downstream	Transportation through sewer network	Only clean surface water run-off will be discharged from site to foul sewer under normal operations. In the event of an emergency on site which will result in contaminated site run-off, this will be retained on site, to allow sampling prior to obtaining consent from the sewerage undertaker to allow effluent to be discharged to sewer. The Operator will continue to implement a planned preventative maintenance regime to ensure equipment remains fit for purpose and equipment operates within optimum conditions Records will be maintained on site.	Low	Low	Low

Hazard	Receptor	Pathway	Risk Management Techniques	Probability of Exposure	Consequence	Overall Risk
Fugitive or Abnormal Emissions						
Gas Leak	Local Workforce at Site; Nearby Human Receptors;	Transportation through the air	The Operator will undertake routine checks across to site to identify any ammonia leaks. In the event a leak is detected emergency procedures will be followed.	Low	Low	Low
Fugitive Dust Release			The Operator will continue to implement a planned preventative maintenance programme that will include regular checks on all equipment to ensure they are operating within optimum conditions, including dust filters fitted to the main treatment processing line. Appointed professional, registered & qualified contractors for inspecting, servicing & maintaining refrigeration equipment and repairing any leaks without delay.			
Loss of Containment		Transportation across land & site drains	The Operator will continue to implement a planned preventative maintenance programme that will include regular checks on all plant and equipment to ensure they remain in good repair and fit for purpose. Appointed professional, registered & qualified contractors for inspecting, servicing & maintaining refrigeration equipment and repairing any leaks without delay. Secondary containment is provided where required.			

APPENDIX D – WASTE TYPES

APPENDIX E – BAT ASSESSMENT

Steel Bright Road BAT Assessment – best available techniques (BAT) conclusions for ***waste treatment***, under Directive 2010/75/EU of the European Parliament and of the Council.

The table below provides a comparison of the design and operational aspects of the proposed changes as a result of this variation against the Waste Treatment BAT Conclusions. This assessment only considers BAT in the context of the process changes.

BATC Reference Number	Requirement	Design and/or operational proposals	Compliant with BAT Conclusion?
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 features described by the BATC.	The Operator implements their own Environmental Management System (EMS) which follows ISO14001 principles. The proposed changes described in this variation will be managed under the existing EMS, with existing procedures amended as required to reflect the new fire detection and suppression system, as well as the new site waste storage and drainage arrangement.	Yes
BAT 2	In order to improve the overall environmental performance of the plant, BAT is to use all of the techniques given below: • Set up and implement waste characterisation and pre-acceptance procedures • Set up and implement waste acceptance procedures • Set up and implement a waste tracking system and inventory • Set up and implement an output quality management system • Ensure waste segregation • Ensure waste compatibility prior to mixing or blending of waste • Sort incoming solid waste	The proposed changes described in this variation will be managed under the existing EMS, with existing waste procedures amended as required to reflect the additional waste streams.	N/A
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	An inventory of waste water and waste gas streams will be implemented to fully meet BAT requirements.	Yes

BATC Reference Number	Requirement	Design and/or operational proposals	Compliant with BAT Conclusion?
	gas streams, as part of the environmental management system (see BAT 1), that incorporates all of the features defined by the BATC.		
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: • Optimised storage location • Adequate storage capacity • Safe storage operation • Separate area for storage and handling of packaged hazardous waste	As per existing procedures at the site, all waste will be stored in suitably sized storage areas, with waste lubricating oils and greases from maintenance activities stored in containers in a clearly defined area of the COSHH storage area pending collection by an appropriately accredited waste contractor.	Yes
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.	The proposed changes described in this variation will be managed under the existing EMS, with existing waste handling and transfer procedures amended as required to reflect the additional waste streams.	Yes
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).	This BATC is not relevant to the proposed changes (there is no new source of emissions to water) and there is no change to these aspects associated with wider installation as a result of this variation.	N/A

BATC Reference Number	Requirement	Design and/or operational proposals	Compliant with BAT Conclusion?
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.	This BATC is not relevant to the proposed changes (there is no new source of emissions to water) and there is no change to these aspects associated with site as a result of this variation.	N/A
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.	This BATC is not relevant to the proposed changes (there is no new source of emissions to air) and there is no change to these aspects associated with site as a result of this variation.	Yes
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 below	The proposed changes described in this variation will be managed under the existing EMS, and there will be no change to potentially diffuse emissions to air from site. Existing procedures for site monitoring will be implemented across the site to fully meet BAT requirements.	Yes
BAT 10	BAT is to periodically monitor odour emissions.	The likelihood of odour emissions is considered negligible given the nature of the waste materials to be accepted at the site. Periodic monitoring of odour emissions from site will be	Yes

BATC Reference Number	Requirement	Design and/or operational proposals	Compliant with BAT Conclusion?
		undertaken, on a need basis or after the receipt of an odour complaint.	
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	Metering of electrical consumption will be included on all new components introduced by this variation, whilst records of the annual consumption of the new raw materials will be kept, with the existing raw materials inventory updated accordingly. These will be reported to the EA on an annual basis as required by the permit.	Yes
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	The likelihood of odour emissions is considered negligible given the nature of the waste materials to be accepted at the site. Periodic monitoring of odour emissions from site will be undertaken, on a need basis or after the receipt of an odour complaint.	Yes
BAT 13	In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to use one or a	The likelihood of odour emissions is considered negligible given the nature of the waste materials to be accepted at the site. Periodic monitoring of odour emissions from site will be	Yes

BATC Reference Number	Requirement	Design and/or operational proposals	Compliant with BAT Conclusion?
	combination of the techniques given below: • Minimising residence times • Using chemical treatment • Optimising aerobic treatment	undertaken, on a need basis or after receipt of an odour complaint.	
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. a) Minimising the number of potential diffuse emission sources b) Selection and use of high-integrity equipment c) Corrosion prevention d) Containment, collection and treatment of diffuse emissions e) Dampening f) Maintenance	Control measures in place to reduce fugitive emissions from site include: a) Minimising the number of potential diffuse emission sources b) Selection and use of high-integrity equipment c) Corrosion prevention d) Containment, collection and treatment of diffuse emissions e) Dampening f) Maintenance g) minimising the potential for diffuse emissions through appropriate design of the storage and injection piping layout Potential leaks associated with the new infrastructure will be identified and rectified using existing established procedures.	Yes

BATC Reference Number	Requirement	Design and/or operational proposals	Compliant with BAT Conclusion?
	g) Cleaning of waste treatment and storage areas h) Leak detection and repair (LDAR) programme		
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 below. • Correct plant design • Plant management	This BATC is not relevant to the site	N/A
BAT 16	In order to reduce emissions to air from flares when flaring is unavoidable, BAT is to use both of the techniques given below. • Correct design of flaring devices • Monitoring and recording as part of flare management	This BATC is not relevant to the site	N/A
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 elements described in the BATC.	The existing noise impact of the site is low risk. The site has never received a substantiated noise compliant during its operation. Measures to control noise emissions from the existing site operations include daily compliance inspections for excessive noise and vibration. As substantiated noise complaints have never been received, it was not considered necessary to develop a noise management plant The proposed changes themselves also have low noise generating potential and no significant noise impact is expected as a result of this variation.	Yes

BATC Reference Number	Requirement	Design and/or operational proposals	Compliant with BAT Conclusion?
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. a) appropriate location of equipment and buildings b) operational measures c) low-noise equipment d) noise and vibration control equipment e) noise attenuation	Potential noise emissions associated with the proposed changes will be controlled through routine inspection and maintenance of equipment and appropriate staff training	Yes
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 by the BATC.	This BATC is not relevant to the proposed changes (there is no new source of emissions to water) and there is no change to these aspects associated with site as a result of this variation.	Yes
BAT 20	In order to reduce emissions to water, BAT is to treat waste water using an appropriate combination of the techniques given by the BATC.	This BATC is not relevant to the proposed changes (there is no new source of emissions to water) and there is no change to these aspects associated with site as a result of this variation.	Yes

BATC Reference Number	Requirement	Design and/or operational proposals	Compliant with BAT Conclusion?
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: a. Protection measures b. Management of incidental/accidental emissions c. Incident/accident registration and assessment system	The site has an existing emergency protocols which identify hazards posed by the plant and the associated risks. The protocols define measures to then address these risks. These include an inventory of pollutants present or likely to be present which could have environmental consequences if they escape. This variation includes the implementation of an updated fire detection and suppression system across the site, including an enhanced drainage catchment and containment design. An updated Fire Prevention Plan for the site has been prepared to address all potential emergency procedures in the event of a fire on site.	Yes
BAT 22	In order to use materials efficiently, BAT is to substitute materials with waste.	BAT 22 is not applicable to the proposed changes.	N/A
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 operator will monitor energy usage across the site and record energy data in the plant log. Annual energy performance parameters will be reported to the EA annually as per reporting requirements stated within the permit.	Yes
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).	Waste lubricating oils and greases will be decanted into the original containers from which they were imported before being removed from site by a suitably accredited waste contractor.	Yes

BATC Reference Number	Requirement	Design and/or operational proposals	Compliant with BAT Conclusion?
BAT 25	In order to reduce emissions to air of dust, and of particulate-bound metals, PCDD/F and dioxin-like PCBs, BAT is to apply BAT 14d and to use one or a combination of the techniques given below.		Yes
BAT 26	In order to improve the overall environmental performance, and to prevent emissions due to accidents and incidents	BAT 26 is not applicable to the proposed changes.	N/A
BAT 27	In order to prevent deflagrations and to reduce emissions when deflagrations occur	BAT 27 is not applicable to the proposed changes.	N/A
BAT 28	In order to use energy efficiently, BAT is to keep the shredder feed stable	The operator will monitor energy usage across the site and record energy data in the plant log. Annual energy performance parameters will be reported to the EA annually as per reporting requirements stated within the permit.	Yes
BAT 29	In order to prevent or, where that is not practicable, to reduce emissions of organic compounds to air	The likelihood of release of organic compounds to air from site operations is considered negligible given the nature of the waste materials to be accepted at the site, and that all treatment activities will take place within a building.	Yes
BAT 30	In order to prevent emissions due to explosions when treating WEEE containing VFCs and/or VHCs	BAT 32 is not applicable to the proposed changes and the proposed WEEE wastes to be accepted on site will not contain VFCs and/or VHCs	N/A
BAT 31	In order to reduce emissions to air of organic compounds	BAT 31 is not applicable to the proposed changes.	N/A
BAT 32	BAT 32. In order to reduce mercury emissions to air, BAT is to collect mercury emissions at source, to send	BAT 32 is not applicable to the proposed changes.	N/A

BATC Reference Number	Requirement	Design and/or operational proposals	Compliant with BAT Conclusion?
	them to abatement and to carry out adequate monitoring.		
BAT 33 to 53 are not relevant as they refer to treatment process different to those taking place at the installation			

APPENDIX F - Appropriate Measures Assessment

Treating metal waste in shredders: appropriate measures for permitted facilities

Appropriate Measure	Site Compliance (Y / N / N/a)
1. Mechanical treatment in shredders	Y
2. General management appropriate measures	Y
3. Waste pre-acceptance, acceptance and tracking appropriate measures	Y
4. Waste storage, segregation and handling appropriate measures	Y
5. Waste treatment appropriate measures	Y
6. Emissions control appropriate measures	Y
7. Emission limits, monitoring and appropriate measures	Y
8. Process efficiency appropriate measures	Y

APPENDIX G – EMERGENCY SPILLAGE PROCEDURE