Fire Prevention Plan

Blaydon Metal Recycling Site

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[1] Introduction

[1.1] Report Objectives

This Fire Prevention and Mitigation Plan (FPP) has been prepared for Northern Metal Recycling Limited's site for the proposed a Vehicle storage, depollution, and dismantling (authorised treatment facility); and Metal Recycling Facility at their site off Chainbridge Road, Blaydon (the Site).

This report has been prepared in accordance with the Environment Agency's web based guidance "Fire Prevention Plans: environmental permits (FPP guidance)" (Updated 11 January 2021)[1]" and Template for a Fire Prevention Plan and document "ESA Waste 28, Fire Control Guidance, Reducing Fire Risk at Waste Management Sites (Issue 2 April 2017) (Waste 28)[2]".

The objective of the FPP is to set out suitable measures to be implemented at the site which:

- minimise the likelihood of a fire happening.
- aim for a fire to be extinguished within 4 hours; and
- minimise the spread of fire within the site and to neighbouring sites.

The FPP is a standalone document and forms part of the site's management systems. This FPP sets out the fire prevention measures and procedures in place at the site. All site staff will be made aware of the location of this FPP and be able to access it at all times. Site staff and contractors working on site will be made aware of the contents of the FPP to aid prevention of fire and how to act during a fire if one breaks out. Procedures referenced in this standalone report can be found within the site Management System (MS) (Appendix A). Where applicable some of these procedures have been provided as appendices to this report.

[1] https://www.gov.uk/government/publications/fire-prevention-plans-environmental-permits/fire-prevention-plans-environmental-permits

[2] https://wishforum.org.uk/wp-content/uploads/2017/05/WASTE-28.pdf

[2] Site Operations

[2.1] Site Location

The site currently covers an area of land comprising approximately 0.41 hectares and is located at an approximate National Grid Reference of NZ1903163497 off Chainbridge Road. The site is located to the east of Blaydon approximately 6.4km to the west of Gateshead. The site is bounded in all directions by predominantly industrial land with both Chainbridge road and Blaydon highway to the north of the site.

The site surface comprises concrete impermeable hardstanding with drainage as shown on drawing K0238/3/003 and described further in section 7.3. There are four buildings located on site which are comprise a steel container (office), concrete base walls, steel frame, steel cladding and steel roofing (all other buildings). The buildings present on site comprise: the non-ferrous shed; the weighbridge; the office; and welfare facilities.

[2.2] Site Operations

The site currently operates as a transfer and treatment facility for waste accepting less than 75,000 tonnes per year (SR2022 No 4). The environmental permit boundary of the bespoke waste operations is detailed on the site plan (drawing K0238/3/001).

All wastes will be received in accordance with the waste acceptance procedures from report referenced K0238-AYE-R-ENV-00021 and the site's Environmental Management System (EMS).

[3] Risk of Fire

[3.1] Overview

The wastes to be received at the site will comprise ELVs, scrap metal (ferrous and non-ferrous) and batteries.

Processed non-combustible wastes include ferrous and non-ferrous metal, these are not considered combustible wastes (only scrap metals contaminated or mixed with other combustible wastes such as oils or plastics, prior to processing are classed as combustible wastes as defined in the FPP guidance). Non-combustible processed ferrous metal wastes and non-ferrous metals include copper, aluminium, brass, lead, stripped copper cable, stainless steel and mill scale.

However, if scrap metal accepted at the site is contaminated or mixed with other waste such as oils or plastics then the waste will be treated as though it is a combustible waste.

The Site operates a zero tolerance policy for gas canisters. Customers are informed of this and any loads that may contain gas canisters will not be accepted. Any gas canisters identified after acceptance will be stored in the quarantine area prior to off site removal in accordance with the waste rejection procedures.

Health and Safety of personnel is paramount at the site and procedures are in place to ensure that all staff are trained in the handling and processing of the waste types accepted (Appendix B). The location of all combustible, non-combustible and flammable / hazardous wastes and flammable materials are shown on the Site Layout Plan.

[3.2] Types of Combustible Material on Site

The FPP guidance distinguishes between combustible and low combustible waste types. The waste materials at the site that have the potential to be considered combustible are:

- Depolluted and un-depolluted ELVs (high combustible).
- Tyres.
- Scrap metal if contaminated or mixed with other waste such as oils or plastics (including shear infeed, 12A, shred, low grade cable, electric motors, household cable, turnings, and irony aluminium).

Table 1 and 2 detail the waste types accepted at the site and includes the maximum storage volume and timescales and storage type.

[3.2.1] Storage of End of Life Vehicles

End of Life Vehicles are excluded from the maximum pile size requirements as dictated by the FPP guidance. Undepolluted ELVs will be stored in an external bay with each vehicle accessible on one side. Vehicles will be stored with a maximum of five stacks (one car deep) and three vehicles high (providing the existing bay allows for sufficient freeboard of 1 m).

A maximum of 15 (i.e. 1 deep, 5 stacks and 3 high) undepolluted vehicles are proposed to be stored in the bay and therefore there will be a requirement to store with a 6 m separation distance between the rows or blocks (providing the ELVs remain within the bay, there is sufficient freeboard of 1 m and they are accessible on at least one side) as the vehicles will not exceed the maximum of 15 vehicles as shown on the site layout plan (K0238/3/003). Undepolluted ELVs will be transferred directly to the ATF facility for treatment.

The depollution process creates hazardous waste components that are required to be managed in accordance with EU Directive technical requirements for hazardous waste. The ELV is depolluted but all plastics, foams, textiles etc are left intact.

The depollution process of the ELVs and storage is detailed below. Formal procedures are in place for the ATF (Appendix C)

- Undepolluted ELVs are brought to Site via a recovery vehicle and manoeuvred into the relevant storage area prior to movement to the ATF depollution bay
- Immediately disconnect battery and remove from ELV – these are stored in the battery storage containers within the storage building.
- Fuel, oil filter, coolant, washer, brake fluid and power steering caps will all be removed.
- The liquids will be removed/drained and stored in the tanks adjacent to the storage building.
- Tyres are usually not on the ELV. However, if present they are then removed and stored in a temporary stockpile indicated on the site layout plan K0238/3/003. Alloys are then separated from the tyres with the aluminium alloys and processed tyres now placed in their relevant bays.
- Other items such as catalytic convertors will be removed from the ELV and deposited into a lockable container – these will be stored in the non-ferrous metal storage container and stored within the building for security purposes.
- The ELV will then be assessed for pyrotechnic devices and deployed using a suitable procedure or removed from site for subsequent neutralisation.
- The ELV is then removed from the building, baled and stored externally in a designated storage area within the Permit Boundary as shown on the Site Layout Plan (K0238/3/003).

In accordance with the Environment Agency's FPP guidance hazardous waste is not subject to FPP guidance however the depollution process creates hazardous products that can be flammable or potentially explosive. These are not considered combustible wastes as defined in the Environment Agency's FPPG and are therefore not part of the FPP but have been identified below in Table 1 and included as a potential cause of a fire as an ignition source. Flammable non-waste materials are identified in Table 3.

Table 1 ATF Waste Storage

Waste Stream	Maximum Storage	Maximum Storage time	Storage	Combustible/	Hazardous/ Flammable
Catalytic Convertors	50 converters	3 month – dispatched within 6 weeks	Non ferrous shed locked box	Non-combustible	Potentially hazardous
Lead Acid Batteries	25 tonnes	3 months - dispatched on an ad hoc basis	Non ferrous shed in sealed boxes	Combustible	Hazardous, flammable - source of ignition
Wheels and lead balance weights	0.205 m^3	3 months - dispatched on an ad hoc basis	RORO or stock piled in main yard area	Non-combustible	Hazardous
Oil Filters	205 litre drum	3 months – dispatched on an ad hoc basis	Bunded drum	Non-combustible	Hazardous flammable

Undepolluted ELV	15 ELVs	1 week	Adjacent to the non-ferrous building	Combustible	Hazardous
Depolluted ELV	20 ELVs		Adjacent to non-ferrous shed	Combustible	-

Both the airbags and seatbelt pretensioners will be detonated in the ELV in accordance with the DEFRA guidance[3]. When all of the depollution activities have been conducted, the ELV is classified as non-hazardous waste and stored prior baling and transfer off-site. All fluids and other items that have been removed, excluding deployed air bags, will still be classified as hazardous waste, and therefore the 50 tonnes permitted storage limit applies.

Storage times detailed above are likely to be reduced due to the high throughput at the Site.

[3.2.2] Battery Storage Procedure

NMR's battery storage procedure is detailed in full in Appendix D.

[3.2.2.1] Lead acid batteries

All batteries must be removed or disconnected as soon as practicable after the ELV arrives and before the ELV is stockpiled.

Lead acid batteries must be stored upright in acid resistant containers that prevent leaks and damage to batteries stored within them. These containers must be either lidded to prevent ingress of water, or the containers are stored in a designated area under cover.

[3.2.2.2] Lithium Ion batteries

Hybrids and electric vehicles may contain lithium ion batteries. Lithium ion batteries present a fire risk if they are damaged, exposed to moisture or high temperatures. They also pose a risk of re-ignition during a fire.

Lithium ion batteries must be visually inspected to check for any damage. Batteries must be discharged as soon as practicable after a hybrid or electric ELV (EV) arrives at the site and before being stockpiled. On removal from the ELV they must be stored in a watertight container. The container is specifically designed to store lithium batteries. Within the container the batteries must not stacked to avoid crushing or puncturing of the batteries.

NMR have confirmed that they currently have not commenced acceptance of lithium ion batteries.

[3.2.3] Waste Storage Capacities

The operational maximum storage capacity of each waste stream at the Metal Recycling Site is summarised in Table 2 below.

Scrap metal vary in combustibility risk based on the level of contaminants present. The scrap metal accepted at the Site is mostly furnace ready. Ferrous metals (iron and steel) in large forms such as plate are low combustibility due to the larger volume to surface area ratio of the grades meaning the material is kinetically stable in air and level of contaminants are low. Pre-processed scrap metal

[3] https://assets.publishing.service.gov.uk/media/5a79716840f0b63d72fc5dac/11-528-depolluting-end-of-life-vehicles-guidance.pdf

however has higher amounts of contaminants. Where scrap metal accepted at the site is contaminated or mixed with other waste such as oils or plastics then the waste will be treated as though it is a combustible waste.

Table 2 Metal Recycling Waste Storage

Waste Stream	Dimensions	Maximum Storage Capacity (m^3)	Maximum storage time	Storage	Combustible	Comments
Ferrous Metals						
Light Iron	40 cubic yard RoRo	30.58	3 months	External 40cyd RoRo	Combustible	Light iron often has residues of rubber, wood or plastic stuck to it.
Shear Infeed (HMS (No 1 &2))	40 cubic yard RoRo	30.58	3 months – processed daily and continually dispatched from Site.	External 40cyd RoRo	Combustible	As the material is a feedstock prior to sorting/ shearing contaminants or combustible material are expected
Discs	40 cubic yard RoRo	30.58	3 months	External 40cyd RoRo	Low Combustible	Disc brakes are routinely clean and free of any contaminants
Plate and Structural (PNS)	40 cubic yard RoRo	30.58	3 months – processed daily and continually dispatched from Site	External 40cyd RoRo	Low Combustible	As this material has been processed the vast majority of deleterious material has therefore been removed and therefore this is considered to be clean uncontaminated scrap.
Stainless Steel	40 cubic yard RoRo	30.58	3 months – processed daily and continually dispatched from Site	External 40cyd RoRo	Low Combustible	As the material has been processed to remove non-metallics the vast majority of deleterious material has therefore been removed and therefore this is considered to be clean uncontaminated scrap.
Mill Scale	40 cubic yard RoRo	30.58	3 months – dispatched within 6 weeks	External bay (not currently accepted at site)	Low Combustible	As the material has been processed to remove non-metallics the vast majority of deleterious material has therefore been removed and therefore this is considered to be clean uncontaminated scrap
Non-Ferrous Metals						
Metal Turnings/ Swarf	40 cubic yard RoRo	30.58	3 months – receive small quantities and typically dispatched within 1 month	External 40cyd RoRo	Combustible	The metal turnings / swarf and the presence of oil result in this wase stream posing a high risk of combustibility
Aluminium	40 cubic yard RoRo	30.58	3 months – dispatched on a weekly basis	External 40cyd RoRo	Non-Combustible	NMR consider that since this material has been processed in the yard that the vast majority of deleterious material has been removed and therefore this scrap metal is considered to be clean
Irony Aluminium	40 cubic yard RoRo	30.58	3 months – dispatched on a weekly basis	External 40cyd RoRo	Combustible	NMR have advised that irony aluminium could potentially be contaminated with automotive engines, engine covers, plastics, wood, and cabling.

Note:

If scrap metal accepted at the site is contaminated or mixed with other waste such as oils or plastics then the waste will be treated as though it is a combustible waste.

The Environment Agency FPP guidance states that containers should be accessible from at least one side. All containers on site (40 cubic yard RoRo and non-ferrous containers) are accessible from a minimum of one side as shown on the site layout plan K0238/3/003).

No skip or container containing waste that is on fire will be moved by site personnel. Only combustible waste skips or containers adjacent to the skip or container may be moved to prevent the spread of the fire. The movement of containers and skips will be determined by the Site Supervisor or if requested by the Fire and Rescue Service and will be dependent on the location and the contents of the skip or container on fire.

[3.2.4] Flammable Materials on Site

Flammable materials are those which have the potential to be easily ignited and can cause combustible wastes to catch fire.

This FPP has considered and mitigated for materials on site such as aerosols, fuels and chemicals which can pose a fire risk that are not covered by FPP guidance by ensuring they comply with Sector Guidance Note S5.06 recovery and disposal of hazardous and non-hazardous waste.

Any gas canisters will be segregated from any flammable materials and stored within a gas cage under cover in the Storage building. Flammable liquids (such as fuels and vehicle fluids) will be stored within purpose built bunded tanks as per table 3 below.

Waste to be stored in bays will be stored within concrete lego blocks or appropriate sealed concrete A-frame panels. The vehicle fluids are stored in a bunded tank. NMR do not propose to accept gas cannisters and therefore any gas canisters identified on acceptance will be stored within a purpose-built unit located by the weighbridge with a minimum 5m separation distance.

The location of fuels, vehicle fluids and aerosols are noted on the site layout plan K0238/3/003. Fuel used for mobile plant is stored as stated in Table 3.

Table 3 Flammable Materials

Flammable Material	Storage
Fuels	1,350 litres stored within a double skinned bunded storage tank adjacent to the storage building
Vehicle fluids	Double skinned tank stored within a purpose built bunded storage tank (110% capacity) adjacent to the storage building
Non-permitted quarantined gas aerosols	Stored in purpose made unit near the weighbridge with a minimum 5m separation distance

All flammable materials including fuels and oils are stored in accordance with the Oil Storage Regulations (The Control for pollution (Oil Storage) (England) Regulations 2001)).

[3.2.5] Persistent Organic Pollutants (POPs)

The EU Regulation on Persistent Organic Pollutants (POPs) requires materials found in ELVs such as foams and plastics that may contain certain flame retardants (Polybrominated diphenyl ethers (PBDEs) to be managed as POPs waste if above a certain concentration threshold as specified in concentration limit table in the Environment Agency guidance: Identify and dispose of waste containing persistent organic pollutants dated 8 June 2020.

Although their use of PBDEs in manufacture has been restricted within the EU since 2003/2004, they may still be present in end of life vehicles that are manufactured outside of the EU or that

incorporate plastic recyclate that contains listed PBDEs. Any POPS containing wastes will be stored separately in an independent bay as shown on the Site Layout Plan.

Common waste types that can contain POPs include: ELVs; Waste Electronic and Electrical Equipment (WEEE); and upholstered domestic seating. NMR accept ELVs and batteries.

Batteries at the site are stored according to their chemistry, upright in clearly labelled acid-resistant, leakproof container.

[4] Receptors

[4.1] Sensitive Receptors

Table 4 Sensitive Receptors within 1km

No.	Receptor Description	Receptor Type	Distance from Site (m)	Direction from Site	Frequency Downwind (%)
1	Shibdon Pond (LNR & SSSI)	Priority Habitats	270	ESE	1.7
2	Newcastle to Carlisle Railway Line	Railway	<10	S	0.9
3	Blaydon Business Centre	Industrial / Commercial	20	S	0.9
4	Blaydon Shopping Centre	Commercial	210	SW	5.6
5	Properties off Shibdon Road	Residential	420	SW	5.6
6	Blaydon West Primary School	School	565	WSW	4.7
7	Chain Bridge Road / B6137	Highway	<10	N	3.8
8	Blaydon Highway / A695	Highway	15	N	3.8
9	Blaydon Haughs Industrial Estate	Industrial / Commercial	70	N	3.8
10	River Tyne	Watercourse / Protected Species	250	NW	8.2
11	A1	Highway	400	E	3.9
12	Properties off Scotswood Road	Residential	855	N	3.8
13	Bells Close Industrial Estate	Industrial / Commercial	775	NE	8.3
14	Newburn Haugh Industrial Estate	Industrial / Commercial	450	NW	8.2
15	Northgate Vehicle Hire	Industrial / Commercial	<10	E	3.9
16	Blaydon Trade Estate / Chainbridge Road Industrial Estate	Industrial / Commercial	400	E	3.9
17	Derwenthaugh Industrial Estate	Industrial / Commercial	570	ESE	1.7
18	Playing Fields	Recreational	360	S	0.9
19	Properties off Shibdon Bank	Residential	490	S	0.6
20	Church of St Joseph and Presbytery Adjoining & Church of St Cuthbert	Place of Worship	480	NW	8.2
21	Properties off Cochran Street	Residential	750	W	4.3
22	Scotswood Road / A6085	Highway	720	NE	8.3
23	Mudflats / Intertidal Substrate Foreshore	Priority Habitat	240	NW	8.2
24	Lowland Meadows	Priority Habitat	700	N	3.8
25	Shibdon Dene / Deciduous Woodland	Priority Habitat	530	SW	5.6

[4.2] Effects of a Fire

The effects of a fire may be both immediate and long term, presenting a significant burden for Northern Metal Recycling Limited and regulatory agencies. The potential consequences of a fire have been discussed within the accompanying Environmental Risk Assessment and are reviewed below with reference to Environment Agency guidance and Waste 28:

- Firewater run-off transporting pollutants to surface water and groundwater.
- Thermal radiation harming nearby properties leading to fire spread.
- Creation of hazardous waste by the fire and impacts of firefighting.
- Explosions and projectiles harming sensitive receptors and spreading the fire to unaffected areas.

- Transport disruption resulting from road and rail closures.
- Nuisance from smoke, odour and particulates; and
- Threat to life and property.

If a fire were to occur at the site the fire / smoke emissions are likely to result in an impact in terms of:

I. Damage to buildings from explosions or projectiles resulting from the fire.

II. Degradation of health to the public, workers in nearby factories or emergency services.

III. Physical prevention of access to buildings and businesses downwind of the fire due to fire or smoke hazard. The degree of this impact will decrease with distance from the fire.

IV. Disruption to normal business operations due to employees / customers being unable to reach places of work.

V. Infiltration of smoke into the ventilation systems of adjacent warehouses.

VI. Potentially hazardous travelling conditions (loss of visibility) arising on transport links downwind of the fire.

VII. Loss of amenity to domestic receptors downwind of the fire.

A summary of these impacts and how they may affect specific receptors is detailed in Table 5.

Table 5 Relevant Hazard and Pathway

	Receptor Location	Hazard	Pathway
1	Shibdon Pond (LNR & SSSI)	Explosions and projectiles harming sensitive receptors and spreading the fire to unaffected areas. Transport disruption resulting from road and rail closures. Nuisance / health impacts from smoke, odour and particulates. Pollution of water courses from firewater.	Airborne / Site Drainage
2	Newcastle to Carlisle Railway Line		
3	Blaydon Business Centre		
4	Blaydon Shopping Centre		
5	Properties off Shibdon Road		
6	Blaydon West Primary School		
7	Chain Bridge Road / B6137		
8	Blaydon Highway / A695		
9	Blaydon Haughs Industrial Estate		
10	River Tyne		
11	A1		
12	Properties off Scotswood Road		
13	Bells Close Industrial Estate		
14	Newburn Haugh Industrial Estate		
15	Northgate Vehicle Hire		
16	Blaydon Trade Estate / Chainbridge Road Industrial Estate		
17	Derwenthaugh Industrial Estate		
18	Playing Fields		
19	Properties off Shibdon Bank		
20	Church of St Joseph and Presbytery Adjoining & Church of St Cuthbert		
21	Properties off Cochran Street		
22	Scotswood Road / A6085		
23	Mudflats / Intertidal Substrate Foreshore		
24	Lowland Meadows		
25	Shibdon Dene / Deciduous Woodland		

[5] Managing Common Causes of Fire

[5.1] Overview

The potential causes of a fire specific to the proposed activities on this Site are identified with reference to Environment Agency guidance and 'Waste 28' as summarised below:

- Arson or vandalism
- Plant or equipment failure
- Electrical Faults
- Discarded smoking materials
- Hot works, e.g., welding, cutting
- Industrial heaters
- Hot exhausts and engine parts
- Ignition sources
- Batteries
- Batteries from ELVs
- Leaks and spillages of oils and fuels
- Build-up of loose combustible waste
- Reactions between incompatible wastes/materials
- Deposited hot loads
- Hot and dry weather
- Self-combustion of stored waste materials

Any of the causes detailed above has the potential to either ignite the flammable waste types stored at the Site.

The Site will be operated in accordance with the site's Management System (MS) (Appendix A). The principal objectives of the MS are to ensure the efficient and safe operation of the site through the implementation of procedures that define staff roles and responsibilities supported by provision of appropriate training.

The MS includes procedures that:

- Control the position and source of ignition such as naked flames or heated elements to ensure adequate distance is maintained from stockpiles of combustible materials (EMS).
- Ensure staff and contractors follow safe working practices when undertaking hot work (Appendix E).

- Ensure staff, contractors and visitors are trained or inducted on correct safety and fire prevention procedures (EMS); and,
- Defines a regular maintenance and inspection programme for all site areas including machinery and good housekeeping including maintaining levels of dust, fibre and litter to a minimum (EMS).

In addition to the above the following control measures will be implemented to minimise any associated fire risks:

I. emergency lighting will be provided as appropriate.

II. emergency exit routes and signs will be kept clean and clear of obstructions at all times.

III. staff will be trained in the use of extinguishers, procedures for fire drills and evacuation; and

IV. records of training, induction, drills, alarm tests and fire certification will be kept on Site.

[5.1.1] Operational Procedures

Operational measures to be provided at the site include waste acceptance checks. The site has waste acceptance procedures (as per report referenced K0238-AYE-R-ENV-00021) to prevent unauthorised waste being accepted, as far as is practical, and for limiting their potential impact. Control of incoming wastes will be managed according to the Operator's waste acceptance procedures (EMS).

All vehicles delivering waste to the facility will be under the control of the site staff, all of whom will have been trained in the procedures (EMS) for the receipt of waste and the types of waste that are acceptable.

Waste acceptance procedures are contained within the site's Management System in section 4.2.

The potential causes of a fire specific to the proposed activities on this site and the measures employed to prevent them are identified with reference to Environment Agency guidance and 'Waste 28' as summarised below.

[5.2] Preventing Fire – Managing Common Causes of Fire

Potential Cause of Fire	Management Techniques
Arson or vandalism	Site security is paramount due to the high valued scrap metal located at the site. In accordance with the Scrap Metal Dealers Act 2013 the site has currently 9 CCTV cameras, 2 thermal cameras and 1 360° dome camera which are remotely monitored 24/7. The site is surrounded by 3.5m high solid concrete wall. The site entrance has a security gate which is locked outside of operational hours. The main entrance to the site is supervised by staff present in the weighbridge and staff present on site during operational hours. All containers stored externally are fully secured outside of operational hours. Outside of operational hours the ATF and the non-ferrous building are fully secured due to the high value materials stored and have intruder alarms which are activated outside of operational hours. Site buildings comprising offices and welfare facilities are also fully secured with intruder alarms. The site is fully locked and secured overnight and the security measures comprising the security boundary wall, CCTV system and intruder alarms provide adequate protection from any unauthorised access.
Plant, vehicle or equipment failure	Plant and machinery may present a fire risk and potential ignition source. Plant machinery and vehicles are regularly serviced and cleaned. A 6m exclusion zone will be maintained between plant or equipment and combustible waste when the machinery is not in use. The wastes are not stored near to or subject to vehicles or plant which may represent an ignition hazard. All plant and vehicles are to be regularly inspected on a daily basis and maintained in accordance with the manufacturer's specification.

Electrical faults	All electrics on Site will be inspected and certified by a qualified electrician. This includes all fixed wiring and electric cabling that includes any fire detection & alarm system, CCTV system, emergency lighting and machinery checks / services. Portable appliances are checked and certified every two years and fixed electrics every 5 years.
Discarded smoking materials	Northern Metal Recycling Limited enforces a strict no-smoking policy on site.
Hot works, e.g., welding, cutting	All staff and contractors will follow safe working practices and the hot work permit / permit to work protocols with no hot works carried out in proximity to stored wastes. Fire watches will be carried out during and after hot works have been undertaken. The fire watch will be maintained for a period of 1 hour. This is in line with the HSE recommendations which suggest a fire-watch should be maintained for a period of 30 minutes. If hot-works are carried out outside operational hours then a member of Staff will be required to stay for at least 1 hour to complete the fire watch. A visual inspection of the area will be carried out at the end of the working to ensure there is no evidence of a fire. The area designated for hot works is shown on the Site Layout Plan K0238.1.004.
Industrial heaters	There are no industrial heaters on Site.
Hot exhausts and engine parts	Plant machinery and vehicles are regularly serviced and cleaned. A 6 m exclusion zone will be maintained between plant or equipment and any combustible or flammable waste when the machinery is not in use. All plant or machinery is to be turned off when not in use. Only mobile plant to a specification suitable for handling this material will be in direct contact with the waste materials. Plant will be regularly inspected to ensure any wastes are cleared from around exhausts periodically throughout the day with a final inspection at the end of each working day. Fire watches in the form of visual checks will be carried out twice daily (including at the end of every working day) to detect signs of fire caused by dust settling on hot exhaust and engine parts. Fire watch procedures are provided in Table 6.
Ignition Sources	No combustible or flammable waste is stored within 6 m of any ignition sources. Ignition sources identified at the Site include: Heating or electric equipment – including electrical faults, faulty or damaged wiring – all heating and electric equipment are subject to inspection and maintenance as specified in the sections above for electrical faults. Mechanical or electric spark – caused by metal-on-metal contact: this is most likely to occur through processing of the scrap metal. All plant and machinery are fitted with fire extinguishers. Heat from plant and machinery – heat from plant and machinery are managed in accordance with the section on hot exhausts and engine parts; Flammable / hazardous items in wastes within waste being processed or stored – strict waste acceptable procedures are in place to inspect waste on arrival for any hazardous items in the waste such as batteries, gas cylinders etc. Waste is spread out on receipt to ensure there are no undetected hot items or hazardous materials. Where identified, the waste load is rejected and reloaded back on to the vehicle to be removed from site. Hot work – hot work procedures are in place and identified above in section 5.2. The procedures for controlling and managing the identified ignition sources are provided in the subheadings in section 5.2. As part of the visual inspection / fire watch at the end of the day a check is made of the 6 m separation distance between any plant and material when the site is not staffed.
Batteries	All scrap metal is visually inspected to ensure there are no batteries included. Any loads containing batteries are rejected and reload back on to the vehicle to be removed from site. However, the site is permitted to accept separately collected lead batteries, nickel metal hydride and lithium-ion vehicle batteries. All batteries are visually inspected on receipt to check for damage. All batteries are isolated and stored upright in clearly labelled, acid-resistant, leakproof containers. Batteries will be stored dependent on their chemistry. Procedures for the storage and handling of batteries are provided in the management system. These procedures have been included in Appendix D for reference. Battery storage areas are subject to periodic inspections for hot spots.
Batteries in end of life vehicles (ELVs)	On acceptance of ELVs, batteries are immediately disconnected and removed from the vehicle. The batteries are stored upright in a clearly labelled, acid-resistant, leakproof container. Procedures for the storage and handling of batteries are provided in the management system. Battery storage areas are subject to daily inspections for hot spots.
Leaks and spillages of oils and fuels	Leaks and spillages of oils and fuels may occur as a result of storage of oils and fuels and from leaking ELVs. This includes fuels and combustible liquids leaking or trailing from site vehicles and ELVs from vehicles being tracked around the site and before or after the de-pollution process. The site comprises concrete impermeable surface with one interceptor Any vehicles which are severely damaged, e.g., leaking oil or burnt out, will be rejected from site.

	The fuel tank on site is fully bunded and the Operator has advised is in good condition. All site vehicles and plant will be inspected daily, any vehicles or plant found leaking fuel or oil will be repaired immediately. Spillages will be cleared up immediately on discovery using spill kits available in the storage building. The spill kits contain clear instructions and all site staff are trained in how to use the spill kit. Visual inspections of the spill area will be used to monitor for the presence of oil. Regular maintenance and inspection of plant and equipment (EMS) will reduce the likelihood of spillages occurring.
Build-up of loose combustible waste, dust and fluff	Based on the waste types to be accepted and stored it is considered unlikely that any dust, loose combustible waste or fluff will be produced or build-up on site. The only waste streams accepted that could be considered a potential fugitive emission source is the metal turning swarf and mill scales. The metal turning swarf accepted at the Site is not considered to comprise of small enough material to be liberated. The mill scales accepted at the Site will be solid and heavy therefore unlikely to be liberated. Nevertheless, good housekeeping will be employed including cleaning to minimise levels of any dust, fibre and loose material. Visual assessments will be made of the site including key areas such as electrical equipment and treatment equipment to keep dust and loose combustible material to a minimum. Any loose combustible waste will be cleared immediately on identification. In addition, daily inspections of the site to ensure the Site is clean and tidy. The EMS specifies the checklist and frequency of the inspections.
Reactions between wastes	Wastes which have the potential to have a reaction, specifically different types of batteries, are segregated and stored in clearly labelled containers. The location of the batteries are indicated on drawing referenced K0238/3/003. Wastes are visually inspected on arrival and on deposition in the sorting area. Any non-conforming waste that has the potential to react with other wastes will be removed and placed in the quarantine area.
Hot loads or Ignited materials received at the Site	No ignited loads will be accepted. Robust waste acceptance procedures are in place and as such there is negligible risk of hot or ignited materials being accepted. All incoming waste is inspected on receipt for burning, smouldering or smoking waste. Where burning, smouldering or smoking wastes are identified the waste will be rejected and the Fire and Rescue Service called. The Site Manager will inform the Environment Agency and their guidance will be sought if necessary.
Self-combustion of stored waste materials (e.g., chemical oxidation, microbial decomposition)	The majority of the waste types to be accepted at the site are unlikely to self-combust. The combustible wastes, are removed from Site within 3 months though often sooner. Baled ELVs are fully depolluted before being baled. Visual inspection of the ELV bale storage area is undertaken on a daily basis and increasing to three times daily during summer months. Vigilance for signs of combustion over this short storage period are implemented as part of the Site waste acceptance procedures and routine/daily Site inspection procedures. Procedures in place to prevent self-combustion are presented in the below section.

[5.2.1] Preventing Self-Combustion

General self-combustion measures comprise:

- Management of Storage Time – maximum storage times are provided in Table 1 and 2. However storage times are reduced through normal operations due to the continual processing of the waste to enable space for further throughput. Storage of waste will not exceed the period specified within the FPP or permit. Storage times for the wastes have been presented as maximums and are within the maximum time permissible by the FPP guidance of 6 months. Waste will be treated or removed from the site as soon as possible and will be prioritised for treatment or removal off-site based on the following:
    - its type
    - its age on arrival
    - the date of arrival
    - the duration of storage on site

- Storage of waste at the site will follow the first-in-first-out principle. When waste is removed from storage bays for transfer off-site the bays are emptied in their entirety ensuring that first in waste is removed.

- Monitoring and Controlling Temperature – visual inspection of the wastes will be undertaken in accordance with Table 6.

- Reducing the exposed metal content – The material stored externally which are not covered comprise only mostly non-combustible wastes. Combustible waste such as turnings / swarf if accepted will be stored in an enclosed skip. Baled ELVs are stored for short durations prior to transfer off-site.

- Storage of waste in largest form for as long as possible prior to treatment:

    - Waste accepted on site is hand or mechanically sorted into separate waste streams for storage pending shearing where required The scrap metal is then physically treated via shearing in the Lefort Trax 600T mobile shear/baler. The shear/baler built on axels and entirely remote controlled which allows reduced handling of waste. The scrap metal is fed by machinery into the shear/baler where it is cut by 600 tonnes cutting force. The scrap metal then has the option of being baled by the machine.

    - Scrap metal is then removed from the site, typically within a maximum of 3 months with the vast majority of waste being removed in significantly less time i.e. light iron on a daily basis, ferrous and baled ELVs on a weekly basis with other types dependent on the market

- Procedures for hot weather and heating from sunlight – visual inspections of the waste in accordance with Table 6 will be increased in summer months to three times daily. Flammable wastes are kept undercover away from direct sunlight and heat.

The short storage duration of combustible waste stockpiles ensure that they do not self-heat which can potentially lead to self-combustion.

[6] Fire Detection and Firefighting Systems

[6.1] Fire Procedures – Equipment and Infrastructure

Table 6 Fire Procedures

Procedure	Equipment and Infrastructure
Firefighting equipment	Portable fire extinguishers are provided at strategic locations around the site and within the ATF and other site buildings. A check of the fire extinguishers (discharged/full, service in date) is undertaken on a monthly basis. All fire extinguishers are annually tested by an approved accredited supplier. The approved supplier also routinely makes recommendations on the type of extinguishers required based on the material present at the site. All fire extinguishers are hung up on wall brackets and appropriately sign posted for easy visibility. Fire extinguishers comprising powder and foam and water will be located in the storage building and at strategic locations around the site. It is proposed to source a sodium chloride fire extinguisher for the swarf to be stored externally. All site staff are trained in the use of fire extinguishers. The fire wardens are specially trained in the use of the sodium chloride D rated extinguisher. These specialist fire extinguishers feature a long lance on the end of a hose to safely tackle the fire from a safe distance. The application of the powder is at low pressure to avoid scattering burning materials. All mobile plant are fitted with fire extinguishers. The location of fire equipment is shown on the Site Layout Plan (Ref: K0238/3/003).
Fire Walls	All external storage bays comprise of concrete blocks constructed using interlocking concrete lego blocks which encompass the entire bay. The individual dimensions of the concrete blocks are 1,800 mm in length by 600 mm in height and 600 mm in width which are stacked to a height of 3.5 m. Other storage bays comprise Precast Concrete Wall Panels to a height of 3.5 m. The concrete security perimeter wall is constructed of precast concrete wall panels to a height of approximately 3.5m. The concrete blocks and precast concrete panels are classified as Class A1 non-combustible material. Each concrete block is fire resistant to at least 6 hours in accordance with BS 5623-3 (since replaced by BS EN 1996-1-2: 2005: Eurocode 6. Design of masonry structures. General rules. Structural fire design). As stated above all fire walls are classified as Class A11 fire resistant and provide fire resistance for over the minimum required 120 minutes. Concrete is identified in the Fire Prevention Plan Consultation Response produced by BRE2 to be a suitable material to use as firewalls. The Waste Industry Safety and Health Forum (WISH) guidance on reducing fire risk at waste management sites specifies that's 300 mm thick concrete provides adequate fire resistance. If a fire is detected in a single bay or stockpile, it is proposed to leave the material in situ due and if safe to do so and under direction from the Site Manager or nominated fire officer the Operator will attempt to remove any combustible wastes from the adjoining bays/stockpiles and place them in an unoccupied bay or other location isolated from the other bays. These wastes will be kept under observation in case they also begin to combust.
Fire Watches	Waste stockpiles are visually inspected on a daily basis, increasing in summer months to include three times daily for the baled ELVs. Vigilance for potentially hot loads/signs of combustion (e.g., steam or smoke rising from waste) is part of the site waste acceptance procedures and routine management of the stored wastes however it is considered unlikely based on the waste types accepted. Staff are fully trained in and aware of the site's waste acceptance and storage procedures. Consequently, continual observations will be being made for the visual triggers detailed below in Table 7 throughout the working day as the site is fully occupied.

Table 7 Detecting and Managing Hotspots

Visual Trigger	Action to be taken
Smoke	Where smoke is identified, the waste will be transferred to the quarantine area and spread out unless the waste is stored within a container. Where smouldering or burning waste material is identified, the smouldering or burning wastes will be extinguished. The Site Manager will carry out checks to confirm that no embers remain and that the associated heat has dissipated completely.
Vapour or Steam	Where vapour is identified, the waste will be isolated and spread out in order to allow the heat to dissipate from the waste pile, unless the waste is stored within a container. Intermittent turning of the waste will be carried out to promote cooling of the waste.

Fire Watch	A fire watch will be carried out by the Site Manager twice a day (including one end of day check) and will cover the following: • Confirm no bridging of waste or spilling from bays and that freeboard of 1 m space is available to ensure waste is contained adequality within the bays. • Confirm no smouldering, burning or heating material is present within any of the stockpiles as well as no signs of smoke or vapour. • Perform a visual check for any potential sources of ignition such as plant and electrical failure. • Where hot works are carried out, fire watches will be completed at more regular intervals during the activity and at the end of the working day.

[6.2] Early Fire Detection

Table 8 Early Fire Detection

Measure	Description
CCTV	CCTV is in operation 24 hours a day/ 7 days a week at the Site. The location of the 9 CCTV cameras, 2 thermal cameras and 1 360° dome camera are shown on the revised Site Layout Plan (---). Hikvision DS-2TD2628-3/QA Thermal & Optical Bi-spectrum Network Bullet Camera supports video analysis for perimeter protection, and also temperature exception alarm for early fire prevention. The model of camera utilised at site is understood to be used in temperature exception from -20°C to 150°C for early fire detection at sites The CCTV system was designed, installed, commissioned and maintained by Barrier Surveillance Systems Ltd who is a Security Systems and Alarms Inspection Board (SSAIB) approved installer. The CCTV system is also remotely monitored 24/7. The cameras are also connected to a monitor in the Site Office and are observed by site staff whilst the site is in operation.
Separation Distances	A separation distance of 6m is maintained for the combustible material in the non-ferrous shed. The remaining RoRo's containing combustible materials will be stored outside within their containers. Where waste is not stored within fire walls, a 6m separation distance will be maintained between all combustible or flammable wastes, site perimeter and buildings
Smoke Detectors	Smoke alarms are present onsite, one within the welfare room and one within the weighbridge office at the site

[6.3] Quarantine Area

A quarantine area has been allocated as shown on the Site Layout Plan. Due to the use of fire walls at the site it is considered safer to leave the combustible material in situ if a fire is detected. Processed tyres are stored in an enclosed 40 cubic yard RoRo container and therefore a fire would be contained. A small stockpile of tyres is proposed adjacent to the storage building which will have a 6m distance from any other stockpiles, waste or machinery.

However, as discussed above combustible waste will remain in situ if a fire is detected.

A potential quarantine area is available for use if required to place burning or heating waste in order to manage them or to move adjacent low combustible wastes to. A separation distance of at least 6 m has been provided around the potential quarantined waste area and other combustible materials.

The dimensions of the potential quarantine area allows for approximately 100m^3 of waste (based on dimensions of 5m x 10m x 2m). Since the largest pile of waste at the site is comprised of 15 undepolluted cars, the potential quarantine area will be able to hold more than 50% of the largest pile at site required by the FPP guidance.

[6.4] Procedure for Handling a

[6.5] Storing Non-Permitted Waste

A quarantine area has been allocated on the site layout plan (K0238/3/003) and will be utilised for materials that are pending testing, removal full inspection or are prohibited.

Materials will only be permitted to remain within the quarantine area for a maximum of 14 days unless an agreement has been reached with the Environment Agency to extend the storage time.

The following procedure has been prepared with reference to WISH 03 guidance4. For the avoidance of doubt, this report will not cover the relevant health and safety aspects for the storage and handling of gas cylinders.

Any gas cylinders identified at site will be inspected to assess the following[4]:

- their condition (leaking or damaged)
- if it is possible to identify the owner
- the contents of the cylinder

Gas cylinders and other waste that are not permitted to be accepted will be removed from the waste stream and stored upright with seals and protection caps in place4 within locked cages where it is not possible to send the items back to the appropriate owner. Cylinders will be stored away from other wastes with the number of other gas cylinders minimised4. Cylinders will be stored away from buildings, boundaries or where work is regularly undertaken at the site4

The following appropriate handling techniques will be followed in accordance with the WISH guidance4:

- assess if the valve present on the cylinder is closed and if any gas is escaping
- handling of the cylinders should be undertaken utilising the cylinder handling ring with a trolley utilised where required

However, where possible non-permitted wastes will be returned to the appropriate owner minimising the need for storage of non-permitted wastes within the quarantine area. Gas cylinders will be returned to the relevant owner of LPG cylinders in accordance with their rental agreement where possible utilising the advice provided on the Liquid Gas UK website (formerly named UKLPG)4.

Where it is not possible to trace the owner of the gas cylinder, the cylinders may be dropped off at a local civic amenity site where this has been agreed in advance4.

Where it is not possible to identify the owner of the gas cylinder, if the canister is unusual or if an approved collection agent cannot collect the gas cylinder, the cylinder will require assessment and treatment by a specialist to facilitate the safe recycling of the cylinder. Cylinders would only be suitable for shredding if they have had their valve removed and have been punctured (conform to British Standard BS EN 12816:2001). A consignment note would be required to state that they meet this British Standard.4 NMR do not propose to routinely accept these cylinders.

Waste rejection procedures are detailed in the Waste Acceptance Procedures referenced K0238-AYE-R-ENV-00021. It is not proposed to anticipate every different type of waste that will be required

[4] WISH (2015) WASTE 03 -Orphaned compressed gas cylinders in waste and recycling industries, Issue 1 – 2015, <https://www.wishforum.org.uk/wish-guidance/>

to be stored in the quarantine area as this is deemed to be excessive as NMR do not propose to accept waste not acceptable under their permit. Where wastes are identified within loads that are not permissible under the permit, these will be quarantined and are considered to occur in a small proportion of occasions.

However, any wastes that should be stored under cover (i.e. WEEE) will be provided temporary cover.

These waste types that are required to be quarantined will all follow the same storage and handling procedure below (extracted from the EMS).

A separation distance of at least 6 m has been provided around the quarantined waste area.

Gas cylinders and other waste that are not permitted to be accepted will be removed from the waste stream and stored within locked cages where it is not possible to send the items back to the appropriate owner pending off-site removal.

Waste within the quarantine area will be stored pending removal by the waste producer/carrier as soon as practicably possible. Materials will only be permitted to remain within the quarantine area for a maximum of 14 days unless an agreement has been reached with the Environment Agency to extend the storage time due to delays in off-site removal outside of NMRs control.

[6.6] Water Supply

The water supply requirements are provided in Table 9. Turning / swarf has not been considered as water is not appropriate for use in putting out a fire associated with this waste stream.

Table 9 Water Supply Requirements

Maximum pile volume in cubic metres	**Water supply needed in litres per minute**	**Overall water supply needed over 3 hours in litres**	**Total water available on site in litres**
30.58m^3 (Ferrous / Non-Ferrous Metals)	204	36,714	Hydrants shown on Site Layout Plan
Maximum Number of ELVs		**Maximum water supply required**	**Total water available on site in litres**
Undepolluted ELV (15 Cars)		15 x 1,800 litres = 27,000 litres	Hydrants shown on Site Layout Plan

Note: # if scrap metal is deemed to be contaminated or mixed with other waste such as oils or plastics then it will be treated as combustible waste.

Tyne and Wear Fire and Rescue Service have sent the location of three statutory fire hydrants along Chainbridge Road, locations of the hydrants are shown at Figure 1.

Figure 1 Hydrant Locations

It is assumed the fire hydrant are constructed to British Standards BS 750:2012. The minimum flow rate requirement for fire hydrants as dictated by British Standards is 1,200 litres/minute for industrial developments.

[7] Containing and mitigating the effect of a fire

[7.1] Fire Detected - Action Plan

There are two designated Fire Wardens and two First Aiders on site during operational hours.

In the event of a fire the following actions will be taken:

[7.1.1] Discovery of a Fire: Operational Hours

Any outbreak of fire at the site shall be treated as an emergency and if a fire is discovered the following actions will be undertaken:

- Any outbreak of fire at the Site shall be treated as an emergency and if a fire is discovered via CCTV or visual inspection the following actions will be undertaken:
- Raise Alarm by operating the two-way radio system, shouting “FIRE, FIRE, FIRE”.
- Or shout “FIRE, FIRE, FIRE”. Repeat.
- Ring the Fire and Rescue Service immediately by dialling 999; and
- Where it is safe to do so, without endangering the safety of persons, immediate action shall be taken to extinguish the fire using the site fire extinguishers by the Fire Marshalls. If it is not safe to do so then report to the fire assembly point.

Inform site management of any fire, its location and if the fire brigade has already been called. The Site Manager to liaise with the Fire and Rescue Service and will coordinate further activities.

[7.1.2] Outside of Operational Hours

On detection of a fire or incident the following procedure will be carried out outside of operational hours:

- Out of hours either EMCS or security guard will immediately call the Fire and Rescue Service.
- Site Management will be informed by EMCS or security guard.
- Site Management to attend the site to liaise with Fire and Rescue Service.
- Site Manager or nominated keyholder will attend site to shut down the interceptor.

[7.2] Emergency Action Plan

In the event of an outbreak of fire, all or some of the following actions will be undertaken as appropriate.

ALL FIRES ON SITE WILL BE TREATED AS AN EMERGENCY AND MUST BE REPORTED TO THE SITE MANAGER AS SOON AS POSSIBLE

- Where is it safe to do so and without endangering the safety of persons, immediate action shall be taken to extinguish the fire using on Site fire extinguishers / water supplies. No

one should attempt to fight a fire unless they have received training in the use of fire extinguishers.

- If the fire cannot be controlled on Site, then the Fire & Rescue Service is to be contacted by telephone immediately. Call **999** – Give the exact details including Site address and telephone number.
- The area of fire must be evacuated without generating panic. All Site personnel must make their way to the fire assembly points. Site personnel must ensure that no persons or vehicles re-enter the affected area.
- A check shall be conducted to ensure that all persons present on the Site are safe and accounted for as required for Fire Emergencies. Using clock cards and/or staff and visitor signing in sheets.
- The Site Manager is to contact the Environment Agency by telephone and in writing, as soon as reasonably practicable but within 24 hours, after the outbreak of a fire to advise them of the incident and of the action taken.
- Communication with local businesses and residents identified in the sensitive receptor table above will be undertaken in the event of a fire to reduce any environmental damage and risks to human health associated with smoke and dust. Communication will be carried out via door to door. A list of the contact details of the neighbouring businesses will be obtained and kept updated to ensure the Site Manager or nominated deputy can call the relevant contacts to inform them of a fire.
- Upon the outbreak of fire, the receipt of waste at the site is to be suspended and not resumed until authorised by the Site Manager after consultation with the Fire and Rescue Service and the Environment Agency. All waste will be diverted to other suitable facilities as listed in the site's Management System.
- Collected fire water to be retained as specified in Section 7.3. Any retained firewater will be removed from site by tanker if necessary for suitable disposal.

[7.3] Management of Fire Water

The site has a concrete impermeable surface with sealed drainage and an interceptor (Marsh NSBP 6 (Class 1) Bypass Separator). The site is surrounded by a 3.5m wall.

The interceptor has the silt capacity of 600 litres (0.6m^3) and an oil capacity of 90 litres (0.09m^3)[5]. The operations and external operational areas benefit from an impermeable concrete surface with a self-contained drainage system. The concrete yard has a fall at 10 mm per metre to enable all water to drain to the drainage system. The site layout plan for the site is shown on drawing ref: K0238/3/003.

[5] https://marshindustries.co.uk/products/hydroil-bypass-oil-separator/

[7.4] Post Incident Procedures

[7.4.1] Disposal of Fire Water

All fire water will be disposed of in accordance with the Water UK Protocol for the disposal of contaminated water and associated wastes at incidents[6]. After the fire is extinguished plans will immediately be made to dispose of any fire water.

Fire Water will either be pumped into tankers and sent off site to permitted or authorised waste management business or be discharged to foul sewer on agreement from the water company or water authority and if approved by the Environment Agency. A letter of agreement must be issued to the sewerage undertaker prior to disposal. This must be obtained prior to any discharge.

Northern Metals Recycling Limited maintains a list of Approved Contractors as part of its management system which provides a list of contractors that may be used to provide road tankers to remove fire water for offsite treatment and disposal at a permitted treatment and disposal facility. The list is reviewed on an annual basis.

All 'Duty of Care' obligations will be complied with at all stages of the removal of fire water.

[7.4.2] Disposal of Burnt Material/Waste

The disposal of burnt material / waste will be dependent on the type of waste or material that caught fire and the degree of combustion. An assessment will be undertaken to ascertain the condition of the waste / material. Northern Metal Recycling Limited have a list of Approved Contractors to which burnt material or waste can be sent. This list is routinely updated.

All 'Duty of Care' obligations will be complied with at all stages of the removal of combusted waste and / or material.

[7.4.3] Site Clearance

Once the site has been cleared of affected wastes, the infrastructure, including impermeable pavement will be inspected as required by suitably qualified engineers to determine whether any repairs are required.

If the fire was limited to only part of the site, operations at the site will be restricted to the unaffected area, providing that the site can comply in full with the permit conditions. No operations will commence in the affected area until all inspections and necessary repairs have been undertaken.

The Environment Agency will be notified of the inspections and repairs undertaken within five working days and the recommencement of full site operations. All repairs will be undertaken with independent CQA supervision.

Following any incident, the event will be recorded and reported for inclusion within the site's Management System.

Where it is considered that there is considerable contamination the Government Decontamination Service can be contacted for advice on clean-up protocols.

[6] Jointly issued by Water UK, Environment Agency, NIEA, Natural Resources Wales, DWI, Fera, Defra's CBRN Recovery Team, NFCC National Resilience. Protocol for the disposal of contaminated water and associated wastes at incidents. Version 16 – 30 April 2018

Site operations will not be recommenced until deemed safe to do so by the Fire and Rescue Service and the Environment Agency.

[7.5] Emergency Contact Details

Table 8 below provides relevant contact details for individuals to be used in the event of a fire on Site.

Table 10 Emergency Contact Details

Company	Position	Name	Telephone Number	Email
Northern Metals Recycling Limited	Site Manager	Jordan Bell	07486 891902	jordan@northernmetalrecycling.co.uk
Environment Agency	Incident Switchboard	N/A	0800 80 70 60	N/A
Fire and Rescue Service	Emergency	N/A	999	N/A
	Tyne and Wear Fire and Rescue Service	N/A	0191 444 1500	swalwell@twfire.gov.uk

[7.6] Fire Prevention Plan Review

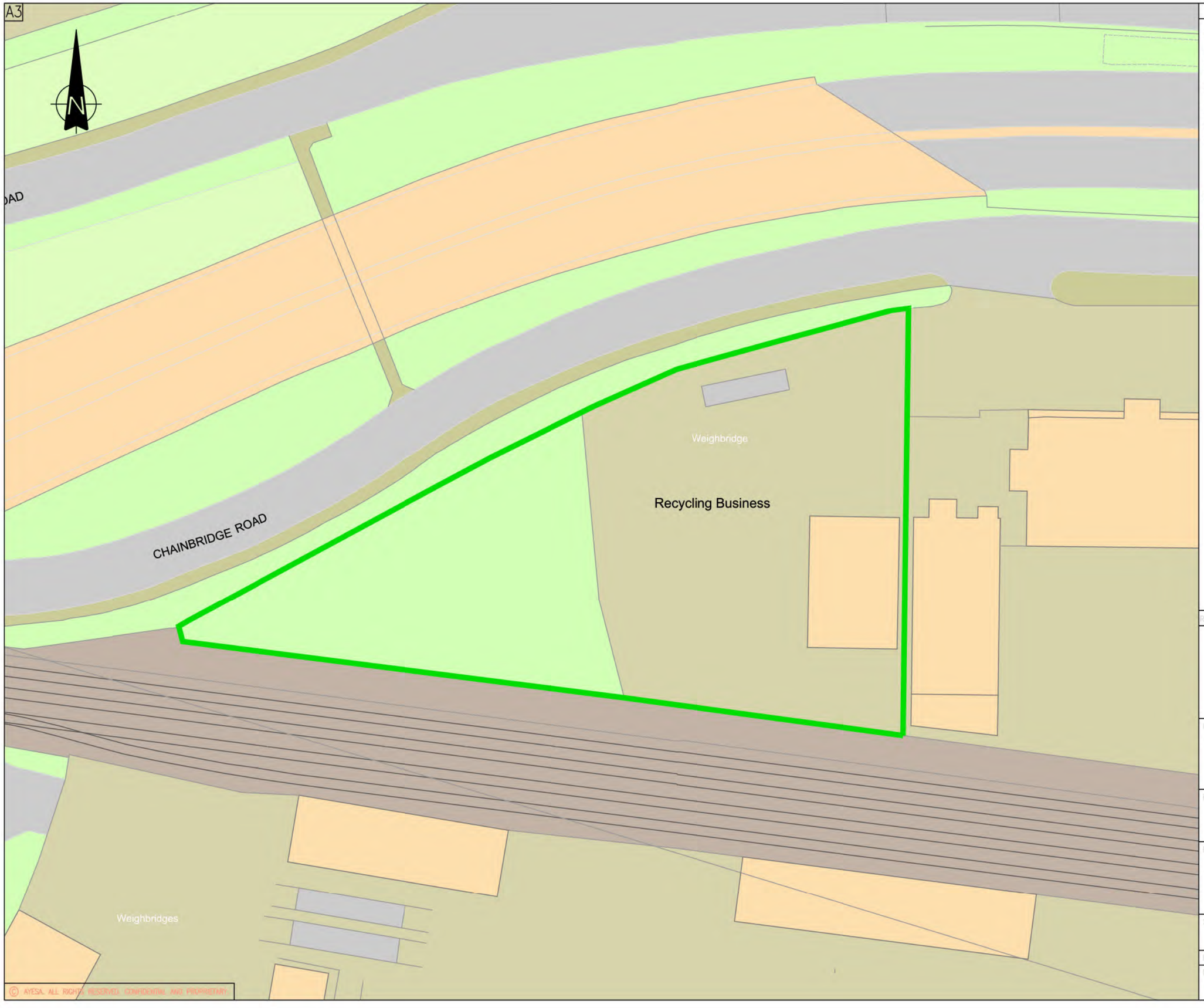
The Fire Prevention Plan will be reviewed on an annual basis. The annual review will incorporate any changes to the following:

- Site operations.
- Site infrastructure.
- Sensitive receptors.
- Fire risk associated with the Site.
- Fire Prevention Plan guidance; and
- Control measures in place.

The emergency procedures set out in section 7 of the Fire Prevention Plan will be tested through regular exercises (twice annually) to ensure staff are appropriately trained and the procedures in place are effective.

Any fire drills/ tests carried out at the Site will be assessed and where improvement is required these shall be integrated into the Fire Prevention Plan.

A3



GENERAL NOTES

NOTES:

1. ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES ABOVE ORDNANCE DATUM.

2. DO NOT SCALE FROM THIS DRAWING.

3. ANY ANOMALIES IDENTIFIED WITH THE DETAILS SHOWN ON THIS DRAWING ARE TO BE BROUGHT TO THE ATTENTION OF AYESA PRIOR TO CONSTRUCTION WORKS COMMENCING.

LEGEND:

PERMIT BOUNDARY

Rev	Date	Description	By	Chk	App

ayesa

CLIENT:
NORTHERN METAL RECYCLING LTD

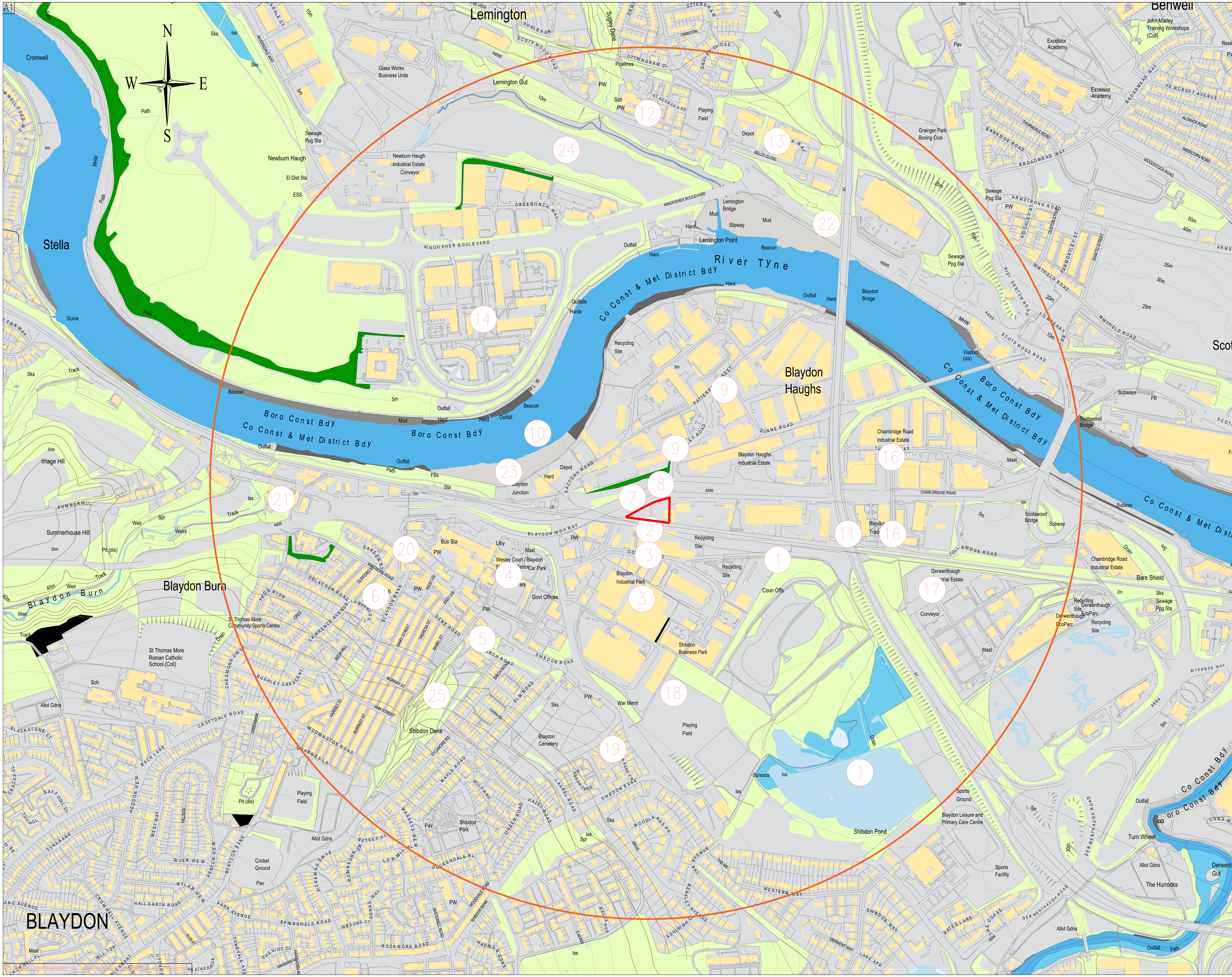
PROJECT:
BLAYDON METAL RECYCLING
AND ATF FACILITY, CHAINBRIDGE ROAD

DRAWING TITLE:
PERMIT BOUNDARY PLAN

STATUS:	SUITABILITY:
FINAL	–

Date: 03/04/25	Scales: 1:500	Drawn: JM	Chk: EG	App: JB

Project No:	Drg. No:	Rev:
K0238	K0238.3.001	00



GENERAL NOTES

NOTES:

1. ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES ABOVE ORDNANCE DATUM.

2. DO NOT SCALE FROM THIS DRAWING.

3. ANY ANOMALIES IDENTIFIED WITH THE DETAILS SHOWN ON THIS DRAWING ARE TO BE BROUGHT TO THE ATTENTION OF AYESA PRIOR TO CONSTRUCTION WORKS COMMENCING.

LEGEND:

PERMIT BOUNDARY

(10) RECEPTOR MARKER

1000M BUFFER ZONE

Rev	Date	Description	By	Chk	App

ayesa

CLIENT

NORTHERN METAL RECYCLING LTD

PROJECT

BLAYDON METAL RCYCLING AND ATF FACILITY

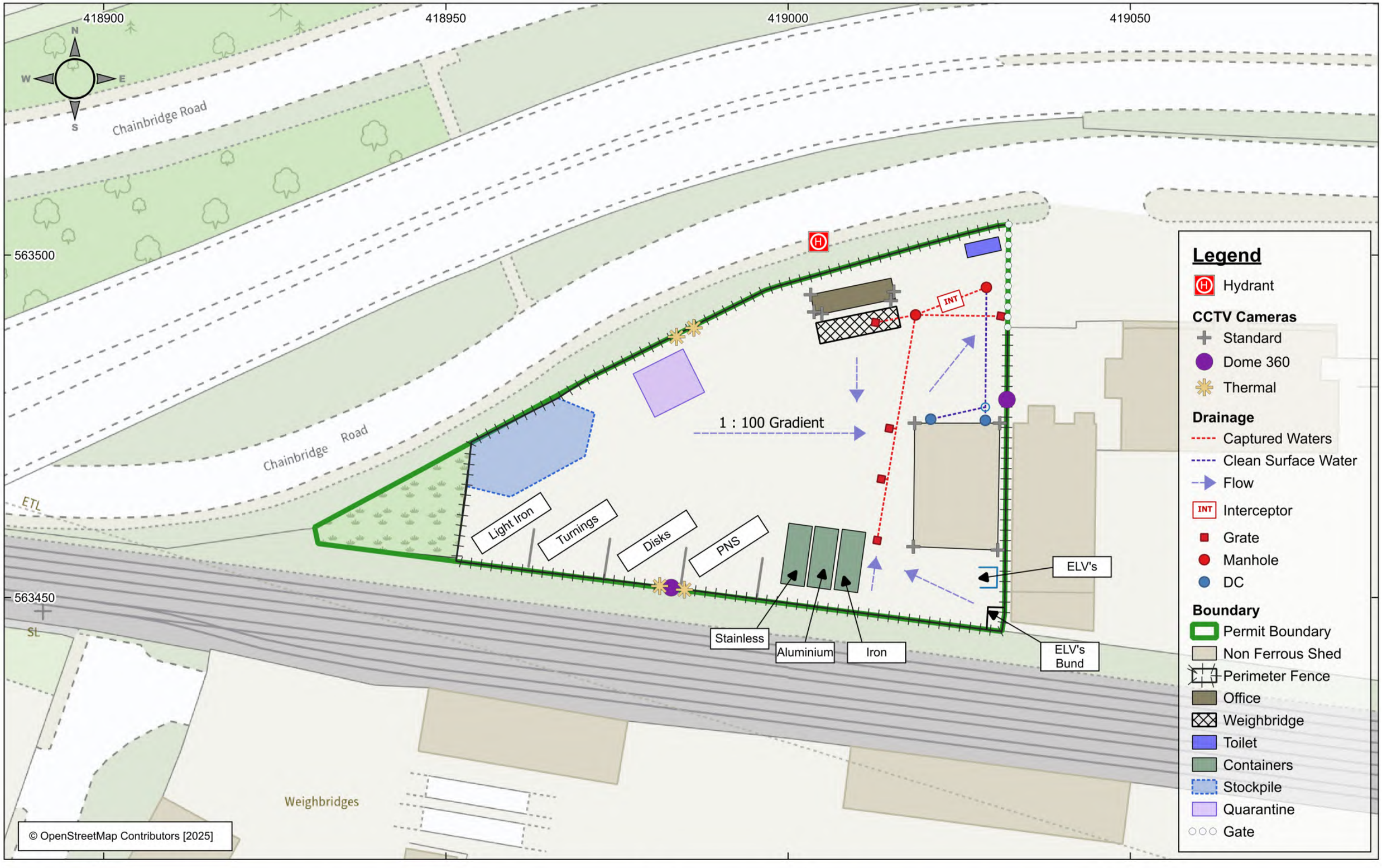
DRAWING TITLE

SENSITIVE RECEPTOR PLAN

STATUS

FINAL

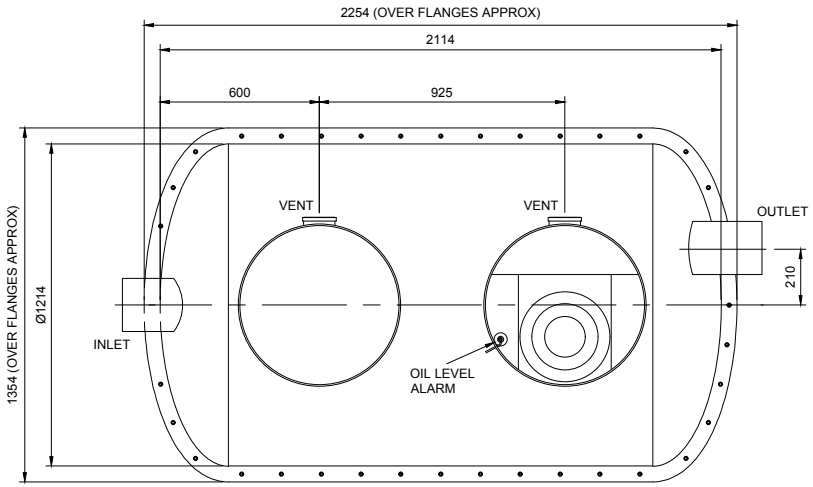
Date: 04/04/25	Scale: 1:4,000	Drawn: JM	Chk: EG	App: JB
Project No: K0238	Drg. No: K0238.3.002			Rev: 00



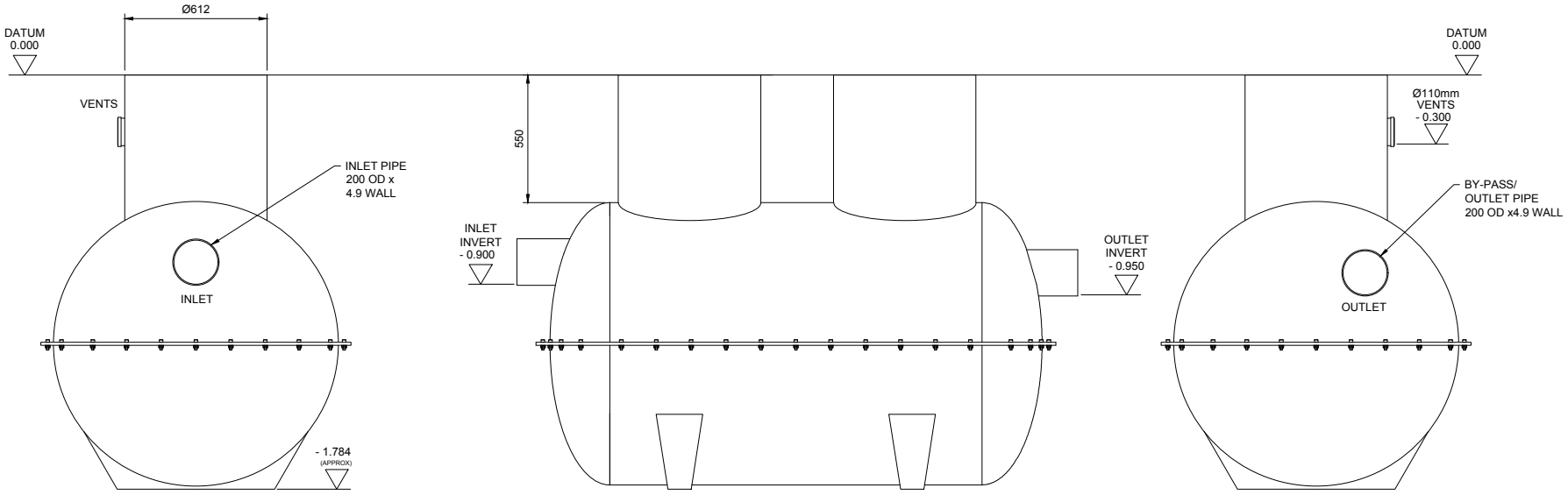
PROJECT: Blaydon Metal Recycling	SCALE: 1:500	DATE: 03/10/2025	Notes: This drawing is not to scale, it is for demonstrative purposes only.
DRAWING TITLE: Site Layout Plan	DRAWING REF: K0238.3.003	DRAWN: ON	

GENERAL NOTE:
All tanks are subject to a 2.5% tolerance on all dimensions.
Any internals (if shown) are for guidance only, and may vary due to individual specifications.

MAX. FLOW RATE : 60 LPS.



PLAN



VIEW ON INLET

SIDE VIEW

VIEW ON OUTLET

REV	DESCRIPTION	DATE	SIG
A	For Approval	03.07.17	P.L.
B	INLET / OUTLET PIPEWORK IS NOW 200mm O/D	10.06.20	GLF

ORIG. | CHKD | APP'D

SCALE: N.T.S. | DATE: 03.07.2017

3 RD ANGLE PROJECTION | DO NOT SCALE IF IN DOUBT ASK

CLIENT

TITLE

MARSH NSBP 6 (CLASS 1)
BYPASS SEPARATOR
Ø1.2m x 2.1m LONG.

MARSH
UNITS 9-13 ADDINGTON PARK IND. EST., LITTLE ADDINGTON, KETTERING, NORTHAMPTONSHIRE, NN14 4AS.
MARSH INDUSTRIES
Leaders in off-mains drainage

DRG. CUST NSBP 6 | REV B

Appendix A – EMS Summary

Environmental Management System Summary

Shildon Metal Recycling and Vehicle Depollution

Report No. K0238-AYE-R-ENV-00016

December 2024

Revision 00

Northern Metal Recycling Limited

Document Control

Project

Shildon Metal Recycling and Vehicle Depollution

Client

Northern Metal Recycling Limited

Document

Environmental Management System Summary

Report Number:

K0238-AYE-R-ENV-00016

Document Checking:

Date	Rev	Details of Issue	Prepared by	Checked by	Approved by
December 2024	00	Issued	Jackie Ferguson	Claire Heward	Claire Heward

Disclaimer: Please note that this report is based on specific information, instructions, and information from our Client and should not be relied upon by third parties.

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Contents

Appendix B – Waste Acceptance Procedures

Appendix C – Depollution Procedures

ELV- Vehicle Depollution Procedure

Authorised persons: Only persons who are competent and authorised may carry the de-polluting of vehicles.

- Ensure all ignition sources are removed, prior to starting de-polluting.
- Ensure all spillages are cleared and that adequate supply of absorbent material is available.
- Ensure good housekeeping is maintained throughout the process.
- Ensure the battery has been removed from the vehicle before it enters the depollution station.

Daily Checks, Prior to Getting Started

- Familiarise yourself with the layout of the equipment.
- Ensure that the equipment is free from damage – complete daily checklist and ensure you sign it.
- Ensure compressor is on and air is available by energising one of the pumps on/off control valves. (The pump operation will be audible).
- Ensure that the articulated arm extensions are clear from the area to be occupied by the vehicle.
- Ensure that there are no leaks from the Vehicle Depollution Unit (VDU), and that the outlet valves positioned above the VDU are open.
- Ensure the area around the vehicle lift/stand is free from obstructions or any item that may hinder free movement around it.
- Inspect all storage tank levels gauges for contents. Arrange for emptying by authorised contractor is required.
- Inspect storage tanks for any damage or leakage

Operations

- Adjust the vehicle heater controls to full heat if possible, this will allow a good flow of the refrigerant gas when removing.
- Remove the air-con refrigerant gas .
- Remove the vehicle fuel filler cap. If it cannot be removed, leave it in place, the fuel may still be removed successfully. Petrol should be removed as promptly as possible after removing the fuel filler cap.
- On raising the vehicle engine cover, note what type of fuel the vehicle has petrol, diesel, LPG.
- Remove all reservoir caps from the engine compartment.
- Turn on the screen wash and oil pumps on the VDU.
- Insert the screen wash suction tube into the reservoir, ensuring that the probe is inserted to the base to retrieve all of the fluid.
- Insert the oils suction tube into the brake, clutch and power steering fluid reservoirs in turn, ensuring that all fluids are removed
- Switch off the isolation valve fitted to the probes, stow the probe and turn off the pumps.
- Position the vehicle centrally on the vehicle lift making sure that it is in contact with the 2 supports
- With the car up a height remove the catalytic converter.
- Turn on the oil pump.
- Position the oil container/pantograph arm underneath the engine oil sump and filter.
- Remove the engine sump drain plug, or if necessary using a pneumatic tool, drill the sump at its lowest point.
- Remove the engine oil filter or if necessary using a pneumatic tool drill the filter to release the oil.
- At this time if appropriate, remove the oil filter and drain. (This may need to be performed from the underside of the vehicle depending on model)
- For the transmission oil, remove sump plug or using a pneumatic tool drill a hole into the gearbox.
- Ensure you empty the oil into the reception funnel/pantograph.
- If the vehicle has an automatic gearbox, using a pneumatic tool drill a hole and, in the gearbox, and torque converter.
- For four-wheel drive vehicles remove drain plug or using a pneumatic tool drill a hole in the rear differential.
- Turn on the coolant pump.

ELV- Vehicle Depollution Procedure

- Insert the coolant probe by piercing the bottom coolant hose with the spike. Ensure that the isolation valve is open.
- Place the hoses over the brake bleed nipples and open the bleed nipples with spanner. Ensure that each of the isolation valves is open.
- Remove the fuel. Be diligent with regard to ensuring that there are no un-authorised persons or ignition sources within the surrounding area.
- Once confident that the area is safe to work in, connect the static earth strap to the vehicle. The plastic components must not be rubbed prior to fuel removal since this could cause a build up of static charge.
- Ensure that the two isolation valves at the bases of the fuel inspection chamber are in the off position. (That is with the operating handle horizontal).
- Position the fuel removal unit under the low point of the fuel tank and using the foot operated pump, raise the unit so that the seal is pressed firmly against the tank to provide a seal.
- Using the hand operated pneumatic control valve, fire the fuel spike into the tank. Immediately reverse the spike to allow the fuel to drain into the inspection chamber.
- As the fuel drains into the inspection chamber, confirm the fuel type and then energise the correct pump.
- Decide if the fuel is to be routed to the clean or dirty storage tank and adjust the valve on the bottom of the chamber to that setting.
- Open the correct isolation valve at the base of the fuel inspection chamber. (At any time, the clean/dirty valve can be changes during the drainage procedure).
- Refit and or plug the oil drainage holes and clear the articulated arms from below the vehicle.
- When all of the fuel is drained from the fuel tank, slowly lower the fuel removal unit away, at this time, a small amount of fuel may still be present due to the pressure of the unit pushing the tank upwards. If so, then gently raise the unit using the foot pump until this has drained.
- Immediately plug the hole created by the fuel spike.
- Remove the static earth strap.
- Remove the fuel unit, turn off the isolation valve below the inspection chamber and turn off the pump.
- Check that all obstructions have been removed from below the vehicle and lift, including any tools and the articulated arms carrying the funnels.
- Check for any fuel or oil spills and clean up, if necessary, e.g. if petrol has been spilled and remove the vehicle.

Airbay / Seatbelt Detonation

- Referred to as SRS System: Supplementary Restraint System devices i.e. Airbags. It is essential that you adhere to the manufacturers procedures.
- There are many different airbags and systems on the market. Most SRS systems are equipped with a residual power source which will maintain power to the SRS module after the battery has been disconnected. Therefore the time needed to dissipate this power varies from make to make and even model to model. This all means, that you must follow the manufacturer's details for the time the module must be left after the battery has been disconnected.
- Mobile phones and radios are strictly prohibited. Smoking and naked lights are strictly prohibited. Access to the area is restricted to authorised personnel only. Deployment must not be carried out within the ELV area or near the tank farm.
- Place the ELV in a safe area away from the main storage area (stacked vehicles), the fuel stores and any traffic routes. Give yourself plenty of room to fully open the door, as this will aid access to the DCU.
- Move the seats to a position where you can gain access.
- Follow the earthing instructions, and ensure you touch the metal part of the vehicle before you touch any wiring, this will ensure any static on your person has gone.
- Carefully remove necessary panels and interior trim, to gain access to the DCU or single connectors. (When deploying via a single connector, disconnect the cables first before cutting wires).
- Ensure the vehicles windows and doors are closed.
- Ensure the battery has been removed and that the vehicle has been left for a minimum of 30 minutes after being disconnected.
- Ensure you and others stand at least 10 metres from the vehicle, and give a clear warning that deployment is about to start by shouting "Airbag deployment 3,2,1).
- Do not touch the module for approximately 30 minutes after, as it will be hot.

Appendix D - Battery Storage and Handling Procedures

Battery Storage Procedure

This document outlines the procedure for the storing of batteries to ensure the compliance with the permit conditions and the relevant environmental legislation

RESPONSIBILITY

It is the responsibility of the site manager to ensure that all material is received using the appropriate Duty of Care documentation and stored in line with this procedure. It is the responsibility of the Weighbridge staff involved in acceptance and identification of material coming onto site to ensure that documents are fully completed.

PROCEDURE

- Inspect the battery for any defects that could have potentially polluting consequences and take action if applicable.
- Inspect the battery storage area ensuring that there is clear labelling on the battery bin.
- Batteries are to be place into the battery bin in an upright position and ensure that the bin is not overfilled.
- Battery bins to be used must be free from any holes in either the base or sides.
- Store the bins in a covered area or with a suitable lid to ensure no rainwater can enter the bin.
- Any spills to be cleaned up immediately.

Typical battery storage box

Appendix E – Hot Works Procedures

Northern Metal Recycling Ltd

Hot Work Permit

Before initiating hot work, can this job be avoided? Is there a safer way?

This Hot Work permit is required for any operation involving open flames or producing heat and/or sparks. This includes, but is not limited to: Brazing, Grinding, Soldering, Thawing Pipe, Torch Applied Roofing and Welding.

Instructions:

1. Verify precautions listed below or do not proceed with work.
2. Complete this permit and issue to person(s) performing the work.
3. Retain this copy in the project file.

Location of Work:	Northern Metal Recycling	
Equipment Number:		
Purpose of work:	Oxy Propane Burning	Grinding
Name of person(s) doing the work:		
Name of fire watch person:		

I verify the above location has been examined, the precautions checked on the Precautions Checklist below to minimize the chance of fire.		
Managers Name:	Signature:	Date:

Hot Work Permit Checklist

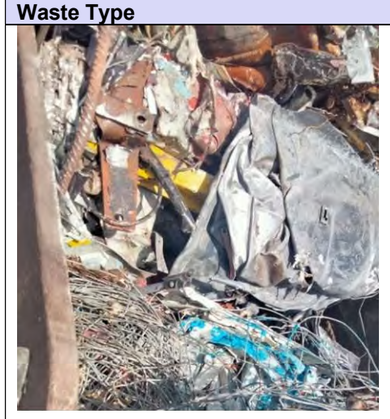
Yes	No	N/A	Item
			Are water hoses or fire extinguishers available and in good repair?
			Is hot work equipment in good repair?
			Have flammable liquids, dust, lint and oily deposits within 35ft. been removed?
			Have explosive atmosphere been eliminated? Test results:
			Has the work surface area been cleaned of grease, paint, etc.?
			Have combustible floors been wet down, covered with damp sand or covered with fire resistant sheets?
			Have surface areas below work area been protected?
			Have access ways below work area been barricaded?
			Are UV shields in place?
			Has enclosed equipment been cleansed of all combustibles?
			Have all containers been purged of flammable liquids and vapors?
			Will fire watch be provided during and for 60 minutes after work, including coffee and/or lunch breaks?
			Has fire watch been provided with suitable fire extinguishing devices?
			Has the fire watch person been trained in use of fire extinguishing devices and in sounding alarm(s) or other emergency communications?
			Has additional fire watch been assigned to adjoining areas, above and below?
			Hot work area will be monitored for 4 hours after completion of work?
			Other:
			Other:

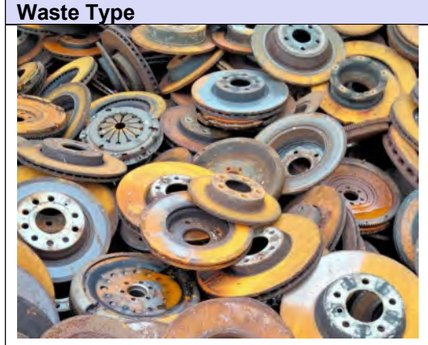
If you require any further information / guidance about this permit, please speak to a member of the management team before you commence any works.

Appendix F - Combustibility of Waste Types

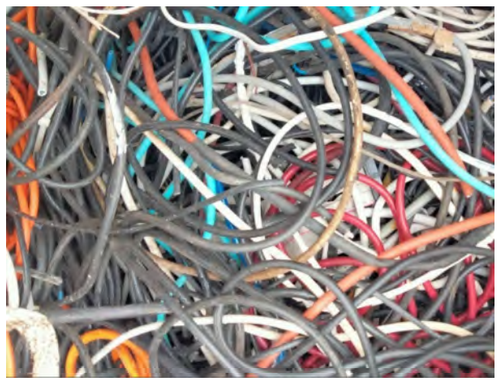
Table F.1 Combustibility of Waste Types at Site

Waste Type	Waste Description	BMRA Metal Recycling Fire Prevention guidance
Ferrous Metals		
Stainless steel 	Stainless steel is described as an alloy (typically chromium, molybdenum and nickel) which is more resistant to corrosion when compared to other alloys. Stainless steel is utilised for a variety of products including but not limited to hardware, appliances, food handling and processing. Stainless steel can be contaminated with other metals such as copper however any non-metallics are stripped and removed during processing. The EAs FPP guidance on combustible scrap metal is scrap metal contaminated or mixed with other waste such as oils or plastics. As the material has been processed to remove non-metallics the vast majority of deleterious material has therefore been removed and therefore this is considered to be clean uncontaminated scrap. This is reinforced by the high price for stainless steel due to its high quality. **Low Combustible**	
Plate and Structural (PNS Plates) or Plate and Girder (P&G) 	Plate and structural (PNS) plates typically comprise of large scrap metal from a range of sources including steel beams from factories. Generally this material is 'furnace ready' and does not require any further processing. PNS plates can be contaminated with other metals such as copper. Contamination is usually low and can comprise non-metallics. Any non-metallics are stripped off and removed at the Site. As this material has been processed the vast majority of deleterious material has therefore been removed and therefore this is considered to be clean uncontaminated scrap. This is reinforced by the high price for plate and structural due to its high quality. **Low Combustible**	Furnace ready and doesn't require further processing. Large volume to surface area ratio of this grade (0A), kinetically stable and won't combust even at very high temperatures. Low contamination (<0.3%) and generally where there is contamination it is of the non-combustible (i.e. brick dust etc). **Low Risk Combustible**
Shear Infeed (HMS (No 1 &2)) 	Heavy melting scrap (HMS) No 1 & 2 shear infeed comprises steel and iron (including galvanised and blackened steel) prior to processing. As the material is a feedstock prior to sorting/ shearing contaminants or combustible material are expected and therefore this stockpile presents a higher risk of combustion and therefore has been considered as combustible waste. **Combustible**	Next grade down from 0A and comprises large pieces of steel and iron. Large size of ferrous material (large volume to surface area) means it is generally stable in air and won't combust. Contamination levels are low (<1.5%) however contaminant can contain ignition sources such as batteries, wood, plastic or packaging. Elevated levels of contamination could present a higher risk of fire. **Low Risk Combustible**
HMS No1 & 2 Processed	Processed heavy melting scrap (HMS) No 1 & 2 comprises steel and iron (including galvanised or blackened steel). NMR are pending issue of the ISO certificate for their End Of Waste procedures which	

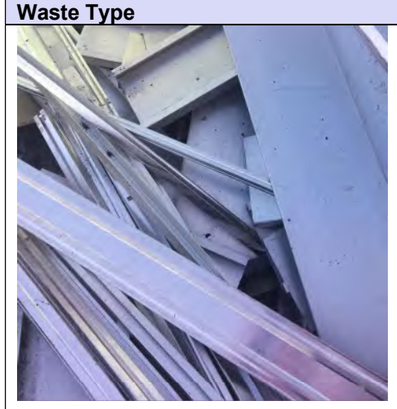
Waste Type	Waste Description	BMRA Metal Recycling Fire Prevention guidance
	verify the procedures followed to allow the scrap metals to cease to be waste when they have undergone treatment and meet the requirements in the Regulations. This requires the total amount of foreign materials to be ≤ 2 % by weight including combustible non-metallic materials such as rubber, plastic, fabric, wood and other chemical or organic substances and the scrap shall be free of visible oil, oily emulsions, lubricants or grease except negligible amounts that will not lead to any dripping. The material is sorted from the pre-processing stockpile. Any contaminants (combustible non-metallic) are removed and the material is inspected to ensure it is free of visible oils / lubricants. Routinely the material has very low contamination. In order to exhibit this the material meets the EOW criteria the scrap metal is required to be weighed, spread out with a magnet that attracts ferrous metal. The material collected by the magnet is then weighed with the difference recorded. NMR retain these records to demonstrate that they are achieving the EOW status with the total amount of foreign materials less than ≤ 2 % by weight. The scrap metal is considered to be 'clean' (i.e. foreign material less than 2% by weight) and present a low risk for combustibility. **Low risk combustible – combustible**	Next grade down from 0A and comprises large pieces of steel and iron. Large size of ferrous material (large volume to surface area) means it is generally stable in air and won't combust. Contamination levels are low (<1.5%) however contaminant can contain ignition sources such as batteries, wood, plastic or packaging. Elevated levels of contamination could present a higher risk of fire. **Low Risk Combustible**
Mill Scale – None on site at NMR for current photo	Mill scale is formed when outer layers of steel are passed through rolling mills to thin the material out. These outer areas become oxidised and flakes of metal crumb and fall onto the floor (often <5mm). This material is often contaminated with silica (an inert material). NMR consider this material to present a low risk for combustibility. However, this material is currently not being accepted on a regular basis. **Low Combustible**	
OS Plate – None on site at NMR for current photo	Oversized plate can comprise mis-manufactured steel scrap metal ranging in size, due to rollers being worn or used or stripped out of a factory floor. Steel plate is typically <1% contaminated with the main contaminant being inert material such as mud or dirt. This material is considered to be clean and present a low risk for combustibility. **Low Combustible**	
12A 	12a (or busheling) steel scrap is produced from manufacturing operations. It only applies to new production scrap. The steel may be sprayed with a thin coat of immiscible oil during its initial processing during manufacturing operations. Non-metallic contaminants are not expected but due to the potential presence of immiscible oil, NMR consider this waste type to potentially be combustible. **Combustible**	
Discs	Disc brakes largely comprise cast iron discs that are utilised in vehicles as part of their braking system. Disc brakes are routinely clean and free of any contaminants therefore the discs present a low risk for combustibility. **Low Combustible**	-

Waste Type	Waste Description	BMRA Metal Recycling Fire Prevention guidance
		
Shred 	Shred is the processed output from the shredder which may potentially include plastic residue from PVC window frames. Therefore, NMR consider this material to be potentially combustible. **Combustible**	Following fragmentiser waste entry: Non-metal residue from fragmentiser plant can contain significant amount of combustible materials such as textiles, plastics and wood. This waste type may also self-heat leading to an increased risk of combustion. **High Risk Combustible**
Light Steel Cuts 	Light steel cuts comprise clean, steel cutting sheets which is considered to be a premium grade of scrap metal. Light steel cuts are sorted at the site and as a result have very low contamination. This material presents a low risk for combustibility. **Low Combustible**	
Non-Ferrous Metals		
Copper 	Scrap copper accepted at the site is separated out by hand sorting / mechanical sorting. The scrap copper is usually accepted with no or very low contamination (<1% by weight). The scrap copper is considered to be non-combustible. **Non-Combustible**	Non-combustible in air and won't react with oxygen under normal condition (even if at extreme temperatures and smaller sized). Contaminants are generally low (<0.1%) by weight) with contaminants generally non-combustible (concrete, stones etc). **Low Risk Combustible**
Brass and Copper Radiators		Copper as described above.

Waste Type	Waste Description	BMRA Metal Recycling Fire Prevention guidance
	Scrap brass (alloy of copper and zinc) and copper radiators accepted at the site are separated out by hand sorting / mechanical sorting. As the brass and copper radiators are clean and free of contaminants they are considered non-combustible. **Non-Combustible**	Brass is an alloy of copper and zinc and does not combust. Contaminants are generally low (<0.2%) by weight) with contaminants generally non-combustible (concrete, stones etc). Very small amounts of combustible material may be present i.e. plastics with levels well below 0.1% but more likely <0.05%. **Low Risk Combustible**
Brass 	Brass alloys are a mixture of copper and zinc with other elements sometime present. Scrap brass accepted at the site is separated out by hand sorting / mechanical sorting. As the brass is clean and free of contaminants this is considered non-combustible. **Non-Combustible**	Brass is an alloy of copper and zinc and does not combust. Contaminants are generally low (<0.2%) by weight) with contaminants generally non-combustible (concrete, stones etc). Very small amounts of combustible material may be present i.e. plastics with levels well below 0.1% but more likely <0.05%. **Low Risk Combustible**
Lead 	Lead can be found in a range of products such as pipes. Scrap lead accepted at the site is separated out by hand sorting / mechanical sorting. Lead is considered to be clean and non-combustible. **Non-Combustible**	Lead reacts with oxygen forming lead oxides on the surface but not kinetically. Not considered combustible. **Low Risk Combustible**
Low Grade Cable 	Low grade cable comprises wire (copper) that has been covered by ferrous metals and insulated in a casing and are often associated with household items such as electrical goods. The low grade cable is generally larger than household cable. The low-grade cable is hand sorted / mechanically sorted at the site. Some of the low grade cable has a PVC coating therefore NMR consider this is to combustible waste. **Combustible**	Cable insulated by rubber or plastic which is a Combustible material. The risk is considered to be low to medium as the material is generally not contaminated by significant number of ignition sources. **Medium Risk Combustible**
Electric Motors	Electric motors can come from a range of potential sources such as vehicles. The electric motors may have plastic attached to the fans. Therefore, NMR class this as combustible waste.	

Waste Type	Waste Description	BMRA Metal Recycling Fire Prevention guidance
	**Combustible**	Motors and compressors are considered to have a low risk of self-combustion. However, the presence of batteries, oils and plastic materials in other component types may present a combustion risk. **Low Risk Combustible**
Household Cable 	Household cable is comprised of wire (often copper) that has been insulated in a casing and are often associated with household items such as electrical goods. NMR have advised that household cable can include a PVC coating. Therefore, NMR consider household cable to be combustible waste. **Combustible**	Cable insulated by rubber or plastic which is a Combustible material. The risk is considered to be low to medium as the material is generally not contaminated by significant number of ignition sources. **Medium Risk Combustible**
Metal Turnings/Swarf 	Metal turnings or swarf are small pieces of metal that have been generated during manufacturing processes. Metal turnings/swarf are understood to sometimes have been sprayed with a thin coat of immiscible oil during it's initial processing during manufacturing operations. The metal turnings / swarf have a high surface area and can comprise of reactive metals that are highly flammable. The metal turnings / swarf and the presence of oil result in this wase stream posing a high risk of combustibility and therefore are considered to be flammable and combustible waste. **Combustible**	Swarf and turnings have a high surface area and are often contaminated by oils which could be combustible. Materials within the swarf such as titanium, magnesium and calcium present a risk of reaction with oxygen which can result in unstable and explosive fires. **Medium Risk Combustible**
Aluminium	Aluminium scrap is a light-weight metal that can be utilised in a range of industries including but not limited to construction, engineering and manufacturing.	Aluminium can come in a variety of grades but normally as mixed aluminium scrap. Aluminium does react with oxygen readily but forms an impervious, white

Waste Type	Waste Description	BMRA Metal Recycling Fire Prevention guidance
	All aluminium accepted at the site is hand sorted or sorted via machinery. NMR consider that since this material has been processed in the yard that the vast majority of deleterious material has been removed and therefore this scrap metal is considered to be clean and present a low risk for combustibility. **Non-Combustible**	oxide layer (aluminium oxide) which prevents further oxidation. Therefore, this renders aluminium a non-combustible material. **Low Risk Combustible**
Irony Aluminium 	Irony aluminium is understood to be primarily comprised of aluminium (approx. 70%) and iron (approx. 30%). NMR have advised that irony aluminium could potentially be contaminated with automotive engines, engine covers, plastics, wood, and cabling. Therefore, this waste type has been classed as combustible. **Combustible**	-
Alloy Wheels 	Alloy wheels are sourced from vehicles and comprise primarily magnesium and aluminium alloy with other metals such as chromium and molybdenum. NMR consider that since this material has been processed in the yard that the vast majority of deleterious material has been removed and therefore this scrap metal is considered to be clean and present a low risk for combustibility. **Low Combustibility**	-
HE9	HE9 is a grade of scrap aluminium which is often used for window frames, door frames, signs.	-

Waste Type	Waste Description	BMRA Metal Recycling Fire Prevention guidance
	NMR have advised that the majority of the time HE9 is considered to be clean however it does have the potential to be coated in a plastic film coating and therefore is potentially combustible. **Combustible**	
Catalytic Convertors	Catalytic Convertors are removed from the undepolluted ELVS and also sorted from the pre-processed material. Catalytic convertors are potentially hazardous and therefore non-combustible. **Non-combustible**	-
Lead Acid Batteries	Lead acid batteries are accepted as hazardous and flammable and are considered combustible. **Combustible**	-
Lithium-Ion Batteries	Lithium-Ion batteries are not accepted as a separate waste stream and are instead sorted from the pre-processed material. Lithium ion batteries are hazardous and flammable and are considered combustible. **Combustible**	-
Wheels and lead balance weights	Wheels and lead balance weights are hazardous. **Non-combustible**	-
Fuels and oils	Fuels and oils are stored as flammable waste. **Flammable** Further notes: FPP guidance states hazardous and flammable. But also noted: “prevent fuels and combustible liquids leaking or trailing from site vehicles and ELVs” HSE describe ‘flammable liquid’ means a liquid with a flashpoint of 60 °C or below[7]. Combustible liquids with a flashpoint above 60 °C[7] Flashpoint - the minimum temperature at which a liquid, under specific test conditions, gives off sufficient flammable vapour to ignite momentarily on the application of an ignition source. Very fuel dependent	Flammable liquids. **Combustible (diesel, oils).**
Vehicle Fluids	Vehicle fluids are stored as flammable waste. **Flammable** FPP guidance states: this guidance also does not apply to the storage of coal, materials, or wastes that are: liquid.	Flammable liquids. **Combustible (diesel, oils)**
Airbags		-

[7] https://www.hse.gov.uk/pubns/priced/hsg140.pdf

Waste Type	Waste Description	BMRA Metal Recycling Fire Prevention guidance
	Airbags are removed from the undepolluted ELVs during depollution and deployed as part of the depollution procedure. Airbags are potentially explosive and are considered to be combustible. Deployed airbags are considered neutralised. **Combustible** FPP guidance states: this guidance also does not apply to the storage of coal, materials, or wastes that are: hazardous. Explosive components (for example air bags) = hazardous waste 16 01 10* (AH)	
Oil Filter	Oil filters are hazardous and potentially flammable. Oil filters are stored as hazardous waste and are considered to be combustible. **Combustible** FPP guidance states: this guidance also does not apply to the storage of coal, materials, or wastes that are: hazardous. Oil filters= hazardous waste 16 01 07* (AH)	-
Seatbelt pre-tensioners	Seatbelt pre-tensioners are potentially hazardous and potentially explosive as they may contain explosive or have stored mechanical energy (a large spring) that is deployed mechanically or electrically. If they contain explosive devices, they will be deployed as part of the depollution procedure. The seatbelt pre-tensioners are considered to be combustible. **Combustible** FPP guidance states: this guidance also does not apply to the storage of coal, materials, or wastes that are: hazardous. explosive components (for example air bags) = hazardous waste 16 01 10* (AH)	-
Undepolluted ELVs	Undepolluted ELVs are hazardous and comprise of large amounts of combustible materials. Undepolluted ELVs are treated as hazardous and combustible waste. **Combustible**	Components in ELV are combustible and the activities of depollution, dismantling and treatment for recovery present significant fire or explosion hazardous. **Medium Risk Combustible**
Depolluted ELVs	Depolluted ELVs are non-hazardous and comprise of large amounts of combustible materials. Depolluted ELVs are treated as non-hazardous and combustible waste. **Combustible**	Components in ELV are combustible and the activities of depollution, dismantling and treatment for recovery present significant fire or explosion hazardous. **Medium Risk Combustible**