



EMR Group Ltd

# Fire Prevention Plan

EMR SILVERTOWN

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## Fire Prevention Plan – EMR Silvertown

### Introduction

In line with Environment Agency (EA) Fire Prevention Plan (FPP) Guidance, this document has been generated to focus on aspects of fire prevention and appropriate fire response and aims to facilitate the prevention of fires for a fast and effective response in any waste fire emergency response at the EMR Silvertown metal recycling facility.

### Fire Prevention Plan - Objectives

This document forms part of the site's Environmental Management System (EMS) held on site and intended to satisfy EA requirements as a 'standalone' and specific FPP with regards to waste activities undertaken by EMR at our Silvertown (Non-ferrous) Facility. This FPP aims to meet the following objectives:

- Minimise the likelihood of a fire happening
- Aim for a fire to be extinguished within 4 hours
- Minimise the spread of fire within the site and to neighbouring sites

Where EMR fails to meet strict FPP criteria in meeting the objectives laid out above, suitable 'alternative measures' will be demonstrated with the aim of meeting these objectives (see section 1.5 below).

## Section 1 – The Site

### 1.1 Location of Site/Community/Sensitivity

The EMR Silvertown site is situated within an industrial estate at Unit 6, Factory Road, London, E16 2EJ at grid reference: TQ 42825 79905. The site although surrounded by other industry is located approx. 120m south from the nearest residential housing. The River Thames lies directly 180m south of the site and London City Airport is located 0.5Km to the North of the site

### 1.2 Site Activities

Primary site activities includes the buying, processing, storage and treatment of ferrous and non-ferrous metal wastes i.e. the sorting, baling, stripping, cutting, shearing, dismantling, shredding, separation, breaking and bulking of non-ferrous metals including, aluminium, copper, lead, stainless steel and the acceptance, storage and bulking of electrical cables (copper) and lead acid batteries. In addition ELV depollution occurs on site following the purchasing of polluted ELVs and depolluting these before being transported to other markets for down-stream processing and recycling.

### 1.3 Layout/Infrastructure

From Site Layout Plan in (Appendix 3) of site, it can be seen some of the site's footprint is taken up by the main non-ferrous building and most of non-ferrous metal storage and site activities occur within this building.

See Site Plan in Appendix 3 for details.

#### **1.4 Types of Combustible/Flammable Materials**

Most types of non-ferrous metals are non-combustible (e.g. copper, lead, aluminium, brass are all non-combustible metals) but the combustible waste materials which are normally present on site include light iron, waste lead acid batteries, general waste (from offices and welfare facilities) and wood (mainly wooden pallets).

Flammable materials (non-wastes) and substances normally present on site comprise the following: Diesel / fuel oil; Propane gas bottles; Engine oil and Hydraulic oil.

##### **1.4.1 Combustible/Flammable Substances and Materials**

Combustible materials normally present at the EMR Silvertown site will comprise the following:

1. Light Iron / frag feed.
2. LDA (large non-hazardous WEEE e.g. washing machines, tumble dryers)
3. Shearing
4. Lead Acid Batteries
5. General Waste (offices & welfare facilities)
6. Paper and Cardboard (office)
7. Wooden pallets
8. Polluted ELVs (awaiting depollution process)
9. Depolluted ELVs (transferred to frag feed)
10. Diesel / fuel oil
11. Propane gas bottles
12. Engine oil
13. Hydraulic oil

#### **1.5 Alternative Measures Employed**

No alternative measures will be employed at this site.

## **Section 2 – Preventing Fire**

### **2.1 Pile Sizes/Volumes**

See table 1 below:

#### **2.1.1 Preventing Fire - Table 1**

(Note: NC = Non- combustible; C = Combustible; LC = Low combustibility)

<b>Waste stream</b>  C- Combustible  LC- Non-combustible	<b>Location</b> (must match site plan)	<b>How it is stored</b> For example this may include piles, bays, containers, skips, racks, bales	<b>Max. length / m</b>	<b>Max. width / m</b>	<b>Max. height / m</b>	<b>Volume / m<sup>3</sup></b>	<b>Max. time material will be stored</b>
Light iron and / or LDA <b>(C)</b>	Yard	Bays	10	10	4	400	3 months
Copper and copper cable <b>(LC)</b>	Building	Bays	5	5	3	75	3 months
Aluminium <b>(LC)</b>	Yard	Bays	10	10	4	400	3 months
Cable (copper & plastic) <b>(LC)</b>	Yard and building	Bays / rollonoff containers	10	10	4	400	3 months
Iron-Aluminium composite (Irony ally) <b>(LC)</b>	Yard	Bays	10	10	4	400	3 months
Brass <b>(NC)</b>	Building	Bays	5	3	1	15	3 months
Lead <b>(LC)</b>	Yard	Bays	3	3	1	6	3 months
Lead acid batteries <b>(C)</b>	Building	20 x Battery bins	1.5	1	1	1.5	3 months
Stainless Steel <b>(LC)</b>	Yard	Bay	5	3	1	15	3 months
General waste (incl. office waste) <b>(C)</b>	Yard	2 x 250L wheelie bins	2	1	1	0.25	3 months
Wood waste (broken pallets etc.) <b>(C)</b>	Yard	Pallets	1	1	2	2	3 months

## **2.2 Waste Management Methodology**

### **2.2.1 First In/First Out (FIFO)**

A FIFO (First in /First Out) waste management regime will be implemented at the Silvertown site. All waste transactions (movements and transfers) and weights measured will be recorded via the weighbridges onto the waste data software system known as 'Trade 2' and data will be inputted on to Trade 2 by trained competent personnel only, such as trained Weighbridge Operatives and Depot Managers. The Trade 2 system also acts as a real time database and tracker to facilitate the tracking of waste, which in turn allows FIFO to be applied effectively.

### **2.2.2 Acceptance**

All wastes accepted into the EMR Silvertown depot will be checked that they are permitted on to the site as described in the site's Environmental Permit and Environmental Management Plan or EMP (formerly Working Plan), or site exemption criteria where relevant; using waste descriptions and relevant European Waste Catalogue (EWC) code six digit codes as listed in the permit (and EMP),. If a Waste Transfer Note (WTN) is available, this will be checked against the requisite detail (as outlined the relevant procedure: EPP 1.1 the Duty of Care – Acceptance of incoming material and completed on the WTN, any non-compliant wastes (including ignition sources, lithium batteries etc.) will be intercepted, managed and controlled as described in the sections below.

For Hazardous Wastes incoming loads may be accompanied by Hazardous Waste Consignment Notes (HWCNs) -see Hazardous Waste section below. [See Waste Acceptance procedures: EPP1.1 The Duty of Care – Acceptance of incoming material.

### **2.2.3 Inspection and Rejection of Waste Material**

All incoming waste that is accepted at EMR sites will be visually checked and inspected following admittance onto the site weighbridge; visual inspection may entail either direct inspection or the use of CCTV cameras (e.g. overhead cameras).

When waste materials have been tipped / unloaded, they will be additionally checked / inspected for non-permitted 'rogue' or prohibited items of waste materials (including flammable substances and ignition sources) that could contravene (breach) the permit or exemption conditions, these will include combustible or flammable items or materials or ignition sources (e.g. gas bottles, Li-ion batteries, aerosols). Non-compliant loads will be either quarantined (for onward disposal at an appropriately permitted and approved facility) or rejected from site.

Once any problem with the quality of the load is noted and non-compliance has been established, information will be passed back to the weighbridge or to a responsible person by the relevant communication system used in the yard (normally radio) and as soon as the load is checked and passed for acceptance, the load will then be transferred to the appropriate area or stockpile for processing.

Where relevant and appropriate the grade and EWC code will be amended on the system / waste transfer note (WTN) if it is different to the description grade (and / or EWC code) it was weighed in as. Once this process has been completed and everything is found to be correct on the WTN / ticket the weighbridge operative will then sign the ticket.

Any material found to be contrary to the environmental permit conditions (e.g. flammable aerosols or rogue gas cylinders present in load), is either rejected from the site and loaded back onto the vehicle and the weighbridge or the site supervisor / manager is informed of the rejection, or the waste material /item is isolated (quarantined) in the designated quarantine area and ultimately removed from site and transferred to a suitable permitted and approved waste treatment or disposal facility.

#### **2.2.4 Treatment**

Treatments on site comprise physical treatment, which entails the sorting and segregation of ferrous and non-ferrous metals and batteries, depollution of ELVs and the baling and shearing of these metals as a size reduction process to facilitate bulking of the segregated materials in containers for onward transfer and export for metal recycling.

#### **2.2.4 Recording Waste Movement**

All waste movements and transactions are recorded electronically on the company's electronic Trade 2 weighbridge software system. Waste Returns (for inward and outward waste) are submitted to the EA for all permitted sites, this data is accessed from the Trade 2 system.

### **2.3 Materials/Waste Storage Management**

#### **2.3.1 Duration and Stock Rotation**

Storage and rotation of scrap will be facilitated by the (real time) Trade 2 electronic waste management system, including stock level sheets, linked to the Trade 2 weighbridge system which is available for all UK EMR depots including EMR Silvertown.

This electronic system allows for the effective stock management of waste materials on site and for logistically efficient inter-depot transfers thus facilitating fast turn -round of materials (< 72h) and keeping stock levels at reasonably low levels (i.e. within EA FPP guidelines). This strategy (and the supporting electronic software system) is also driven by EMRs' business model of fast, efficient and compliant throughput and keeping stock levels low at depots.

No scrap metals or any other waste materials will be stored any longer than 1-3 months. Waste (scrap) materials (as listed) will normally be stored for less than 1 month and will usually be processed and disposed of (recycled) and transported offsite as product (or for further processing) within 1 week. Combustible waste materials (listed in Table 1) under normal circumstances are not stored on site for longer than 72 hours and are normally exported from site within a maximum limit of one week.

In the unlikely event of waste metal being stored longer than 3 months (abnormal or emergency situations), or in piles greater than those specified in FPP guidance – stock rotation will be considered, unless suitable alternative measures can be demonstrated.

#### **2.3.2 Waste Bale Storage**

Non-ferrous metal bales may be stored on site from time to time (e.g. aluminium) and are therefore are non-combustible / demonstrate low combustible. No combustible baled wastes of any type will be stored on site.



### **2.3.3 End of Life Vehicle (ELV) Storage**

A specified treatment process undertaken on site entails the storage and depollution of End of Life Vehicles (ELVs). This is undertaken in line with the End of Life Vehicles directive brought into force in November 2003.

Incoming (un-depolluted) ELVs will be stored only on areas of the site as outlined on the site plan. Storage and treatment areas will be engineered with appropriate, impervious concrete surfaces and provided with appropriate equipment for the treatment of water (including rainwater) via full retention interceptors (oil fuel interceptor) prior to discharge from site to Thames Water foul sewer (currently awaiting a Discharge Consent to be agreed). ELVs (undepolluted) will be stored at no more than 2 x cars high.

The End-of-Life Vehicle Regulations 2003, Statutory Instrument No. 2635 regulates the acceptance, storage and depollution of end of life vehicles.

### **2.3.4 End of Life Treatment Operations**

The treatment of ELVs will only be carried out in area of the site which has the following (see attached site H&S plan for location of ELV treatment area):

Treatment operations for the depollution of end of life vehicles (ELVs):

The treatment / depollution of waste ELVs will consist of following when applicable

- the removal of the battery or batteries;
- the removal of the liquefied petroleum gas tank (if applicable);
- the removal or neutralisation of all potentially explosive components (including air bags and seat belt tensioners) through deployment;
  - Removal, collection and storage of operating fluids and which will include: Petrol or Diesel (995 litres each petrol/ petrol/ diesel)
  - Engine Oil (2,500 litres)
  - Brake fluid (200 litres)
  - Windscreen wash water / antifreeze mix (ethylene glycol) (995 litres)
  - Shock absorber oil (500 litres)
  - Air conditioning gases (where applicable) into dedicated 25L container.
  - Batteries are always removed from undepolluted ELVs before being stored on site (prior to depollution), to remove potential ignition sources.

### **2.3.5 Waste Stored in Containers (Types/Accessibility/Ability to move)**

Batteries are stored in plastic battery bins on site (stackable with fork-lift groves at base).

General waste and office waste (including paper and cardboard for recycling) will be stored in 250cubic litre wheelie bins. Wood waste (mainly pallets) will be stored and stacked as separate items.

## **2.4 Managing Common Causes of Fires**

How the business manages common causes of fire is listed in the table 2 below

### **2.4.1 Managing Common Causes of Fire - Table 2**

The management, prevention and control of common causes of fire are outlined below.

<b>Managing Common Causes of Fire</b>	
<b>Risk</b>	<b>Control Measure (if required)</b>
Arson	24 hour remotely manned CCTV (MITIE); site inspections are conducted at least twice daily.
Plant/Equipment /small office waste or items.	Fire extinguishers and requisite equipment (e.g. mobile plant) in vicinity of most operational and non-operational areas, maintained according to maintenance schedule.
Electrical Fault/Maintenance	Fire / heat sensors in buildings containing electrical equipment. Fixed wire testing and maintenance conducted on regular scheduled basis. RCDs installed where relevant and as appropriate.
Smoking Policy	Smoking only permitted in designated smoking areas
Hot Works	Permit- to –work raised for most hot works activities; fire extinguisher and water made available near-by. Safe Working Procedures in place for all hot work activities.
Industrial Heaters	None are permitted on site.
Hot Exhausts	All plant exhausts are concealed and are never in contact or near flammable / combustible materials.
Batteries	Kept in bin containers areas under cover in building away from ignition sources and other flammable / combustible materials
Leaks & Spillages	Spill sorb is applied to all oil and fuel spillages and cleared immediately
Build-up of Loose Combustible Materials	No combustible materials are stored loose in any large volumes, therefore minimal firefighting capacity is required.
Reactions between Wastes	No reactive wastes stored on site but with regard to small chemical containers and gas cylinders ('chemical & solvent smalls'), oxidisers are stored separately from hydrocarbon gases, solvents, paints etc. (e.g. in lockable, steel yellow cabinet, with hazard warning signs applied).
Hot Loads	N/a
Heat & Spark Protection / DSEAR controls	Electrical earthing will be installed where applicable; no other ignition sources are normally present on site apart from ad-hoc maintenance welding and oxy- propane cutting (Permit-to-Work is employed where appropriate). DSEAR risk assessment controls implemented within ELV building; only ATEX approved equipment allowed inside ELV building. Radios / mobile phones or any other potentially sparking equipment prohibited from building.
Gas Bottles & Other Flammables	Stored upright in cages and chained (away from ignition sources, other flammable / combustible materials and oxidisers. i.e. min. 6m separation distances)
Smoke/Heat/Flame Detectors	Installed in high risk areas of site (e.g. occupied buildings)

## 2.5 Detection Systems

The site possesses 24 hour remotely manned CCTV (contracted provider: MITIE) and thermal imaging cameras.

During normal operational hours the site is also monitored at least twice daily (for any smouldering, ignition sources, housekeeping etc.) by the site manager / supervisor and this recorded in the site diary.

If any maintenance burning (oxy-propane cutting) or welding activities are taking place on site, this is monitored frequently and if it is a high risk activity (e.g. burning activities close to flammable materials) then a Permit-to-Work (PTW) is raised and issued by a competence, authorised person.

EMR use one of two types of thermal cameras and at the Silvertown non-ferrous site the one installed is the Q1941 which operates by detection by variation of pixel count.

The Q1941 detects on pixel count it on movement in the detection area – IE person, tree blowing , white bag blowing across the site scrap moving. On alert the alarm is send to the external monitoring station for them to act on. All EMR IP cameras used are made by Axis.

In addition, MITIE (Contractor) actively monitor the site (CCTV) out of hours, originally employed to identify intruders they are now also used to visually detect fires, which they report to authorised /designated person (s) (usually depot manager on their mobile phone, followed by next person on list if unobtainable – see internal contact on Emergency plan).

Sequence of actions following detection:

- MITIE once they have detected the fire will contact list of individuals shown on Emergency Plan (see attached showing named individuals and mobile telephone numbers).
- The first contact to respond will immediately make their way to the site
- Authorised (AP) will isolate the site (electricity) as shown in EP, if relevant and required.
- AP will assess the fire and organise key drains to be blocked with appropriate drain mats / bungs if safe to do so and confirmation to MITIE that they have arrived on site
- AP will close the penstock valve and contact emergency services (FRS) and the EMR area manager plus next nearest site staff
- AP will wait for assistance from additional site staff and attempt to fight the fire (if safe to do so) according to EMR fire safety procedures until the FRS arrive and they will then relinquish control to the FRS commander.

Smoke alarms (Category 3) will also be installed in main office/ weighbridge office buildings.

The level of detection system is appropriate for the type of facility, in particular the non or low-combustibility of the materials stored on site. The fire detection systems implemented have been designed to ensure that the three main aims of the EA's FPP guidance are met; namely minimise the likelihood of a fire happening, aim for a fire to be extinguished within four hours, and minimise the spread of fire within the site and to neighbouring sites.

## **2.6 Demonstrating Quality of Stock**

Strict waste acceptance, inspection and rejection procedures ensure quality of stock, facilitated by the removal of prohibited items or rejection or quarantining of contaminated loads. Additionally most EMR export facilities, possess ISO9001 EoW (End of Waste) quality management systems (e.g. EMR Tilbury Dock) and therefore quality management controls in place are also a significant driver

for ensuring metal grades meet minimum quality standards (e.g. requirement for < 2 % contamination in many scrap metal product grades)

### **Section 3 – Preventing Spread/Limiting Impact of Fire**

This section is to demonstrate that the company can limit the impact/spread of any fire (should it happen), and that it aims to extinguish any fire within 4 hours.

#### **3.1 Separation distances**

Separation distances between piles of combustible scrap metal will be a minimum of six metres, limiting the spread of any fire, which will also allow for the emergency services to access any fire and for the site to move materials in and out of the designated quarantine area as and when required. Combustible waste metals will also be separated from other combustible metal, flammable materials (e.g. gas cylinders) and parked or stationary mobile plant by a minimum of 6 metres.

#### **3.2 Use of Fire Walls**

Fire walls will be used as an alternative to separation distances when feasible (for example the walls of the building).

#### **3.3 Storage of Waste in Bays**

Fire walls will also be used as part of storage bay infrastructure for combustible metal wastes, and where separate piles can be stored without the need for any separation distance. Consideration will be given for available 'freeboard' space between the top of the pile and that of the bay walls, to prevent fire spread through flying sparks and hot embers by leaving a serviceable gap at the top of the pile below the height of the bay walls.

Bays walls on site will be comprised of either concrete 'Lego' type blocks or steel plate, 6mm thick and 2m high and of various lengths and will act as 'Fire walls' (reference: MCRMA Technical Paper no. 7). Waste / scrap materials stored in bays at the Silvertown site also comprise non-ferrous scrap materials which are non-combustible materials (excepting zinc). Non-ferrous metals are stored in bays within the non-ferrous building as well as being stored externally in bays.

#### **3.4 Use of Suppression Systems**

Suppression systems will be used as an 'active firefighting' (refer to section 3.5) measure to assist the Fire Rescue Service and their appliances.

##### **3.4.1 Building Suppression and Other Site Suppression Systems on site**

For the type of waste activities employed on site and in the main building a suitable fire suppression system will be in place the EMR Silvertown site, which will ensure the integrity of the building in any incident and prevent spread to neighbouring property etc. the suppression comprises a combination of fire extinguishers at strategic locations (see site plan), fire hoses and water sprays.

##### **3.4.3 Third Party Certification (UKAS Accreditation)**

- Not applicable (no automated systems)

#### **3.5 Active Firefighting**

All operatives receive basic fire-fighting training. Fire-fighting equipment such as fire extinguishers, monitors and hoses are located in strategic areas of the site (see site plan).

Appropriate equipment (hoses / monitors) are strategically located to assist in any fire-fighting required anywhere on site. A quarantine area is also available if materials are required to be moved to this location (see also relevant EPPs and site Emergency Plan).

In addition to the above the site carry out recorded emergency and fire drills on a quarterly basis. A report of the drill is normally produced with any learnings from the drill taken and actions for improvement recorded

### **3.5.1 Quarantined (prohibited items), quarantine Area and Punitive Measures**

All sealed canisters or other rogue ignition / flammable sources (identified either during the weighbridge inspection, during tipping, or during the opening of a bale), will be removed and quarantined in the lockable rogue gas cylinder cage (if a rogue gas cylinder identified) to await collection by an approved contractor.

Any prohibited items intercepted (e.g. sealed gas canisters) are traced back to the customer or supplier, and they are then contacted and fined the appropriate amount: normally £200 for the first offence, leading up to a maximum of £1000 and a ban from site for persistent offenders.

In the rare event of any larger unauthorised wastes inadvertently being accepted on site, an area of the site would be quarantined/cordoned off until the material can be assessed and appropriately disposed of and EMR staff would be notified of the quarantined material. The size of the site is not large enough to accommodate more than one quarantine area, it may not always be fixed in the same location.

## **3.6 Water Supplies**

### **3.6.1 Availability of Water**

Normally there will be sufficient amount of water available for the relatively small quantities of combustible waste material present on site.

The water provision for fighting comprises:

1 x 30,000L tank

4 x fixed water cannons (as displayed on the site plan in Appendix 3). These are of steel pipework construction. These are fed by the 30,000 ltr tank.

10 x 1000L IBCs (top cut off) containing water (temporary cover) – to be used as ‘water bombs’ dropped on burning stockpiles (externally only). These will be located near to the areas of the site where a fire could potentially occur such as the Shear, Mixed WEEE bay and Shearing piles.

The site will be equipped with 10 x (1000L) opened topped IBCs filled with water which, in the event of a fire, will be hoisted by the grab cranes (on site) and dropped on to any scrap heaps on fire (one by one and only if safe to do so and under direction of a competent person or the FRS where relevant) and these water deluge ‘water bombs’ will provide an instant large volume of water to aid the extinguishing of the fire - especially in the early stages (note: just the water will be tipped in the event of a fire the IBC will be removed once emptied (as top is cut off, this will be almost instantaneous).

The IBCs will be clearly labelled and stored in strategic locations (and covered to prevent ingress of debris); a loose lid is normally placed on top of each to facilitate the deluge, when needed in an emergency.

### 3.6.3 Managing Firewater (Containment)

Fire water would be contained either within the building or the external concrete impermeable surface of the site, volumes are likely to be low (as volumes of combustible materials are low at the non-ferrous metal site). Any fire water will also be contained within the interceptor as well as on site. Following a major fire, an approved vacuum tanker contractor would be employed to empty the interceptor and dispose of the fire water at an approved and permitted site.

WATER CONTAINMENT CAPACITY (CONTAMINATED /FIRE WATER)	
Estimated volume of fire water generated	800m <sup>3</sup>
Area of site available	8500m <sup>2</sup>
TOTAL VOLUME:	1020m <sup>3</sup>

### 3.7 Notifying Stakeholders

The notification of stakeholders (both internal and external) is detailed in the accompanying Emergency Plan.

### 3.8 Contingency Planning

In the event of a serious fire and the site needed to close for whatever reason, there are other alternative EMR depots available nearby within the London area that ferrous and non-ferrous metals can be diverted to at short notice:

EMR Edmonton (ferrous and non-ferrous metals and shear site)

EMR Neasden (ferrous and non-ferrous metals)

EMR Boreham (ferrous and non-ferrous metals and shear site)

EMR Erith (ferrous and non-ferrous metals and shear site)

EMR Willesden (ferrous metal and shredder site)

EMR Wandsworth (non-ferrous & ferrous metals / shear site)

### **3.8.1 Clearance & Decontamination**

Immediately following a fire incident on site, fire water used in fighting the fire will subsequently generate significant quantities of potentially polluting, contaminated water. This will initially flow towards the nearest drains, through underground pipework and ultimately into the full retention interceptor, discharge to sewer will be prevented until this contaminated fire water is cleared and disposed of.

Once the fire has been extinguished, plans will immediately be made to dispose of any fire water to an authorised and permitted waste facility. EMR as a company, employs only approved and permitted contractors to treat and dispose of waste and waste effluent from its sites. Cleansing Services Group (CSG) or Veolia are the likely Approved Contractors which may be used to provide road tankers to suck / remove fire water for offsite treatment and disposal at a permitted treatment and disposal facility for the Ashford facility. The main contractor (approved) that would be used to remove fire water and clear the interceptors, post a major fire would be Cleansing Services Group (CSG), the waste fire water being transferred by tanker to the approved treatment plant (for treatment & disposal).

### **3.8.2 Becoming Operational**

The disposal of burnt material / waste will largely depend on the waste / scrap itself and the levels of combustion that has occurred; for example partially combusted light iron or steel can waste (in feed) once fully extinguished and cooled will be transferred to an EMR shredder site for further processing in a fragmentiser (as it will largely consist of the remaining residual metals). Other waste materials produced following a fire (e.g. combusted organic / wood waste) would need to be characterised and classified (under WM3) and assessed (WAC test) to ascertain its suitability for landfill (or treatment) and then transferred to (the approved and permitted) waste facility for treatment or disposal. An approved and permitted landfill site will be used to dispose of any waste materials generated by the fire compliantly.

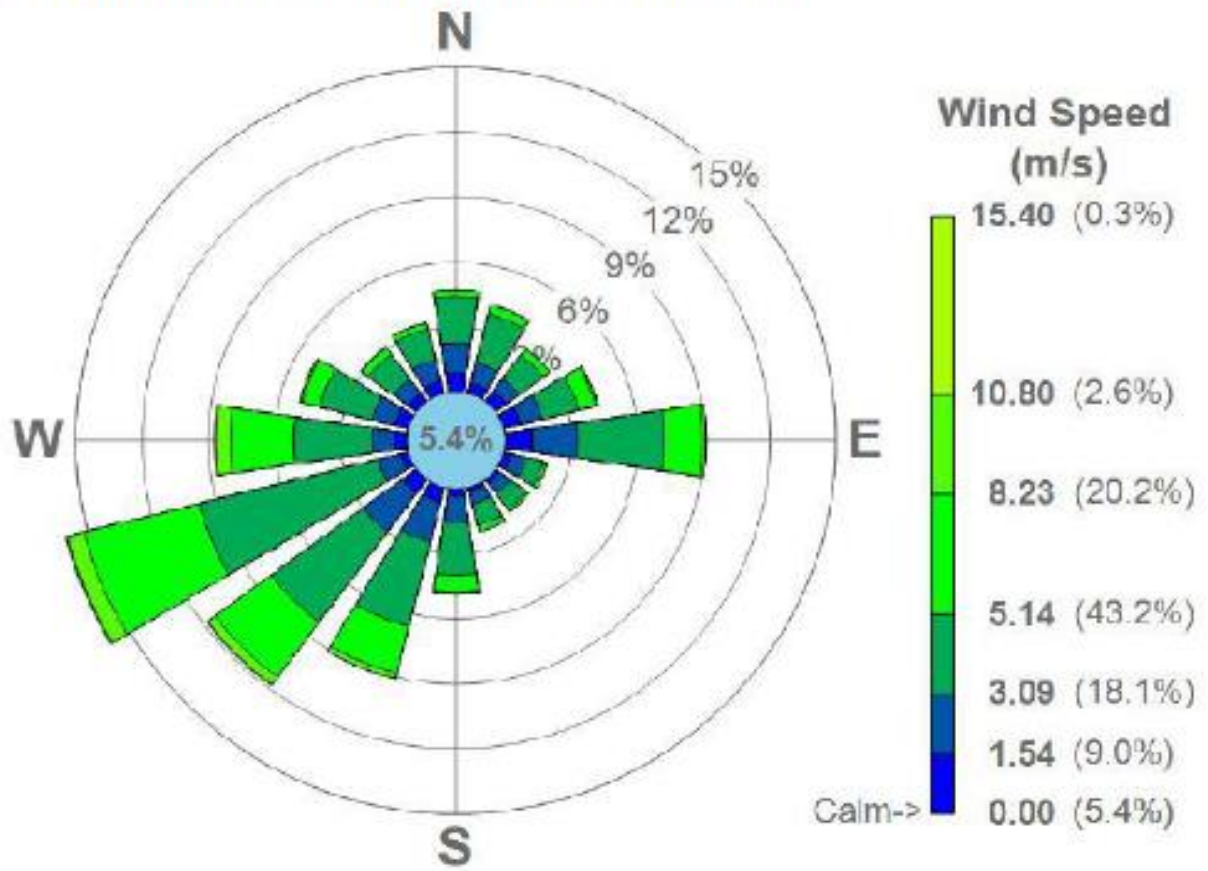
Operations will not continue until the site has been fully decontaminated and assessed as fit for purpose, both operationally and in achieving full FPP guidance.

Other EMR sites will be available to divert incoming scrap / waste materials in the Event of a fire (or other emergency) and details of these sites are provided in the contingency plan outlined above.

Following any environmental incident including fires, details of the event will be recorded and reported on an Event log and on EMR's electronic TCM SHE management system. This Event log or electronic reporting system will facilitate any investigation and details recorded (including sequence of events, size and extent of fire, damage sustained - internally and externally), the investigation report and actions taken recorded are all recorded on the TCM Event log.

**APPENDIX 1 – WIND ROSE (London City Airport)**

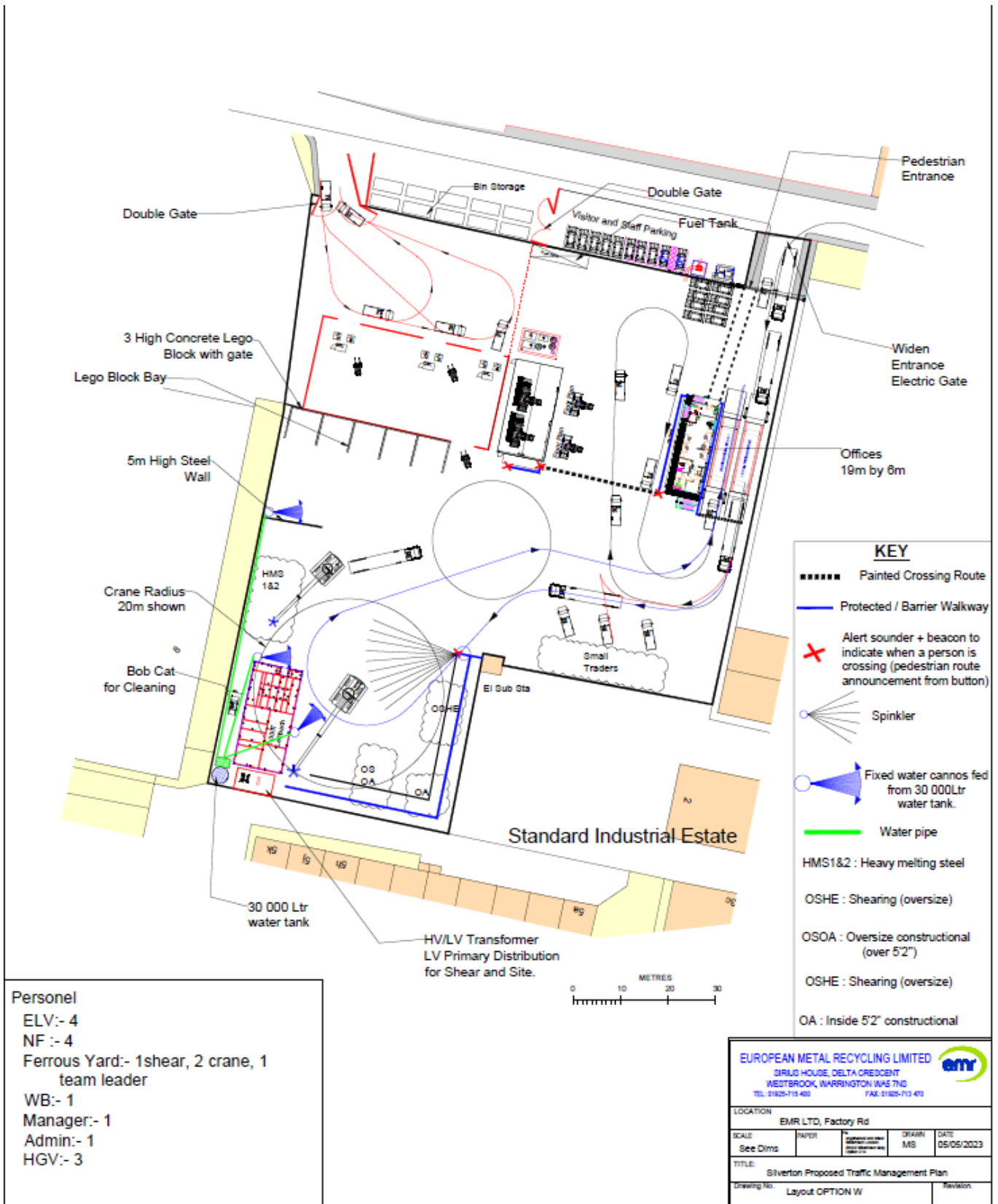
**Figure 1. Wind rose indicating prevailing wind directions**



*Figure 1: Wind rose taken from London City Airport*



**APPENDIX 2 – SITE LAYOUT PLAN**



## APPENDIX 3 – SENSITIVE RECEPTORS MAP

**EMR Silvertown: Sensitive Receptors within 1 km Plan**



Client: European Metal Recycling (EMR Silvertown)

Job Title: Sensitive Receptor Plan

Drawing Title: Sensitive receptors within 1 km plan

Date: April 2023

Version: Version 1

Job Ref: 129-002810

**Key:**

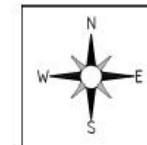
— Permit boundary

— 1 km boundary

① Identified receptors

Scale:

1m ————— 500m



**mayer**  
environmental

## EMR Silvertown Sensitive Receptors within 1 km Table

### Human Receptors.

Receptor Type	Map Ref.	Sector 1 (NE)	Map Ref.	Sector 2 (SE)	Map Ref.	Sector 3 (SW)	Map Ref.	Sector 4 (NW)
Residential	3	Residential properties on Brixham Street, Dockland Street, Rymill Street, Rebourne Way, Antwerp Way, Pier Road, Woodman Street, Clermont Street, Storey Street, Glenister Street, Robert Street, Church Street, Station Street, Milk Street, Fishguard Way, Grimsby Grove, Barge House Road, Hartlepool Close, Woolwich Manor Way.	5	Residential Properties on Duke of Wellington Avenue, Monk Street, Market Street.	4	Residential properties on Harlinger Street, Ruston Road, Spindle Close, Antelope Road, Boneta Road, Venus Road, Leda Road, Europe Road, Lord Warwick Street, Sunsbury Street, St Mary Street, Kingsman Street.	1	Residential properties on Drew Road, Parker Street, Parker close, Saville Road, Wythes Road, Leonard Street, Holt Road, Lord Street, Muir Street, Newland Street, Tate Road, Ben Tillet Close.
							2	Residential properties on Rawsthorne Close, Kennard Street, Sheldrake Close, Winifred Street, Fernhill Street, Manwood Street, Silverland Street, Grenadier Street.
Commercial / Industrial / Recreational (Inc. schools and places of worship)	7	London Design and Engineering UTC, Docklands Library, Way Out East Gallery, Knowledge Dock Business and Innovation Centre, Pronto Eat, Costa Coffee, University of East London Dockland Campus, LEYF - Children's	11	The Metal Recycling Group, BT/Openreach, LoveWorld UK, Hanson Direct Mail, Go-Ahead London, Ady's Garage, Woolwich Foot Tunnel.	19	Gaidam Carpentry, Euro Car Parts, Mate Bike, Le Wouri, McDonald's, InstaVolt Charging Station, Harlinger Lodge Annexe, Roman Tiles, Sparks Theatrical	6	London Borough of Newham Altitude Jobcentre, Royal Albert Quay, Altitude, RAD London, Beckton Park DLR Station.

<i>Commercial / Industrial / Recreational (inc. schools and places of worship) continued.</i>		Garden Nursery & Pre-School.				Lighting Hire, Mimi's Kitchen, EWS Ltd UK, Crixus Studios, KVD Construction & Building Maintenance.		
	8	London City Airport	16	Woolwich Ambulance Station, Waterfront Leisure Centre, ESB Charging Station, Primark, CFT Cathedral, Travelodge, Callis Yard, SET Woolwich, Ferryview Health Centre, The Castle Tavern, Seventh Sun Piercings & Tattoos, Engu Spot, First Choice Café, Bagel Boss, AT-VR, Boots, BHF Shop, Wick Tower, MoreYoga, Royal Arsenal School of Music, Zipcar.	8	London City Airport	9	London City Airport Hotel, Albert Road Surgery, North Woolwich Learning Zone, Hertz London City Airport, Zipcar, Henley Arms, Doggy Holidays, King George V House.
	10	Henley Arms, The Parish of North Woolwich With Silvertown, North Woolwich Dental Clinic, Ezras Mobile Tyres, Store Road Pumping Station, Royal Standard Hotel, Day Lewis Pharmacy North Woolwich, FusionFoods, Nisa Local, Flava Del Ltd, New Covenant Church Woolwich, Woodman Community	17	St Mary Magdalene Church Woolwich, St Mary's Gardens, New Wine Church, Gateway House, Deluxe Riverview, Chelline Hair and Beauty Products, Sunbury Street Playground, Vivis 21 Kitchen, Springall building services,	22	Avis Car Hire, Pret A Manger, London City Airport DLR station, Dew Primary School. The girl of Sandwich, Pizzaza E16, Courtyard by Marriott Hotel, Londis, Team Pro Limited.	12	Tate & Lyle sugars, Menace Model Management, Go-Ahead London Silvertown Bus Garage, Links Event Solutions, Community Food Enterprises, Pastor Victoria.

		Centre, Fight For Peace, Jumma Salah, Ganicreates.		Kingsman Parade Sub Post Office.				
	13	Royal Victoria Gardens, Phoenix Bowls club.	18	Lower Mast House, Global Language Expert, Sky Sail House, Woolwich Dockyard Drydocks, Tee Me Up, Woolwich Dockyard Fishing Lakes, Clockhouse Community Centre.				

Nature and Heritage Conservation Sites (Source DEFRA MAGIC MAP).

Receptor Type	Map Ref.	Sector 1 (NE)	Map Ref.	Sector 2 (SE)	Map Ref.	Sector 3 (SW)	Map Ref.	Sector 4 (NW)
Woodland Improvement zone	Scattered areas around St Mary's Church and Royal Victoria Gardens.							
Priority Habitat Inventory Mudflat			20	Mudflat	20	Mudflat		
Priority Habitat Inventory Deciduous Woodland			21	Deciduous Woodland				
Flood risk information for the site location	The site is in flood zone 3. This means it has a high probability of flooding from rivers and the sea. (Source: Flood map for planning).							
Keeping Rivers Cool	Covers the North East and South West of the site.							
Groundwater Vulnerability Map	Medium-High.							
Soilscape	Loamy and clayey soils of coastal flats with naturally high groundwater.							
Air Quality Management Area (AQMA)	Newham AQMA- Particulate Matter PM10 and Nitrogen dioxide NO2.							
Royal Albert Dock	14	Royal Albert Dock					14	Royal Albert Dock
River Thames			15	River Thames	15	River Thames		