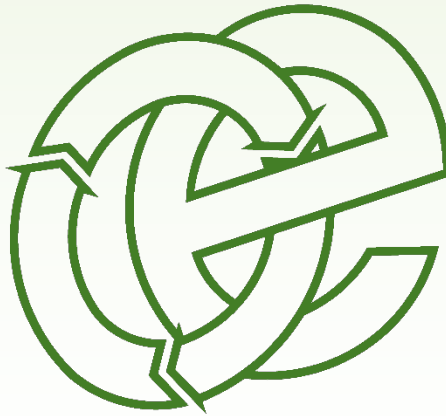


# ENVIRONMENTAL RISK ASSESSMENT

Land Adj To Millhouse Garage, Hale Road, Widnes, Cheshire, WA8 0TL

**Global Metal Recycling Ltd**

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## **List of Appendices:**

**Appendix I - Drawings**

# **1 Introduction**

## **1.1 Note**

- 1.1.1 Global Metal Recycling Ltd is the Environmental Permit (EP) holder and currently operates under standard rules permit SR2008No21 (NB3332RD/A001), which was issued on 06/02/2013.
- 1.1.2 The purpose of this document is to assess the risk of adding a Household, Commercial & Industrial Waste Transfer Station with treatment to the permit and varying the current permit from a standard rules permit to bespoke permit.
- 1.1.3 The site will operate in accordance with an Environmental Management System (EMS) and other associated management plans which will form part of the Environmental Permit regulated by the Environment Agency (EA).
- 1.1.4 All site staff should be provided with a copy of this ERA and be aware of where it is located on site.
- 1.1.5 All environmental risks identified in this document should be acted upon accordingly by site management to ensure all environmental risks can be appropriately managed/controlled.
- 1.1.6 This document primarily considers environmental risks associated with the site. This does not aim to provide detailed Health and Safety risk assessments as required separately through the necessary legislation.

## 1.2 Limits of activities

1.2.1 Specified waste management operations include waste disposal and waste recovery operations listed Annex IIA and IIB of The Waste Framework Directive 2008/98/EC and THE following limits of activities are set out in the tables below for each activity:

**Table 1.1 -Proposed Permitted Operations – HCI WTS**

<b>TABLE S1.1 activities</b>		
<b>Activity reference</b>	<b>Description of activities for waste operations</b>	<b>Limits of activities</b>
Household, commercial & industrial waste transfer station with treatment	<p><b>D15:</b> Storage pending any of the operations numbered D1 to D14 (excluding temporary storage, pending collection, on the site where it is produced)</p> <p><b>R13:</b> Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)</p> <p><b>D14:</b> Repackaging prior to submission to any of the operations numbered D1 to 13</p> <p><b>D9:</b> Physico-chemical treatment not specified elsewhere in Annex IIA which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D8 and D10 to D12</p> <p><b>R3:</b> Recycling/reclamation of organic substances which are not used as solvents</p> <p><b>R4:</b> Recycling/reclamation of metals and metal compounds</p> <p><b>R5:</b> Recycling/reclamation of other inorganic materials</p>	<p>Treatment consisting only manual sorting, separation, screening, blending, baling, shredding, crushing or compaction of waste into different components for disposal, (no more than 75 tonnes per day) or recovery.</p> <p>Subject to any other requirements of this permit wastes shall be stored for no longer than 3 years prior to recovery.</p> <p>Waste types suitable for acceptance are limited to those specified in Section 2.3 below.</p>

**Table 1.2 -Proposed Permitted Operations – MRS**

<b>TABLE S1.1 activities</b>		
<b>Activity reference</b>	<b>Description of activities for waste operations</b>	<b>Limits of activities</b>
Metal Recycling Site	<p>R13: Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)</p> <p>R4: Recycling/reclamation of metals and metal compounds</p>	<p>Treatment consisting only of sorting, separation, grading, shearing, shredding, baling, compacting, crushing, granulating and cutting of ferrous metals or alloys and nonferrous metals into different components for recovery.</p> <p>The maximum quantity of non-hazardous waste subject to a shredding operation shall not exceed 75 tonnes per day.</p> <p>There shall be no treatment of catalytic converters including decanning, other than sorting and separating from other wastes.</p> <p>There shall be no treatment of lead acid batteries.</p> <p>The maximum quantity of hazardous waste stored at the site shall not exceed 50 tonnes at any one time.</p> <p>No more than 10 tonnes of intact waste vehicle catalytic converters (waste code 16 01 21* or 16 01 22) shall be stored at the site at any one time.</p> <p>Wastes shall be stored for no longer than 3 years prior to recovery.</p>

1.2.2 The treatment on-site can consist of manual sorting, separation, screening, baling, shredding, crushing or compaction of waste into different components for disposal, (no more than 50 tonnes per day) or recovery.

1.2.3 Global Metal Recycling Ltd do not currently bale or crush any waste at the site initially so this ERA will focus solely on the other activities taking place. In the event the operator starts to crush or bale, this ERA will be revised and submitted to the EA for approval.





## 2 Site Receptors

### 2.1 Receptor Plan

2.1.1 A Receptor Plan has been produced to accompany this ERA and is shown in Appendix I referenced as on Drawing No. MILL/3344/04. The receptors highlighted are those which are considered to be at risk from the site.

### 2.2 List of receptors

2.2.1 The receptors illustrated on the Receptor Plan are also shown in the table below with approximate distances to these properties.

**Table 2.1 – Distances to Selected, Representative Sensitive Locations**

Receptor Reference	Receptor	Location	Approximate distance from site boundary (m)
A	Numerous surrounding industrial and commercial uses	Surrounding	Adjacent – 1,000
B	Residential dwellings / blocks referenced as <b>R1</b> on receptor plan	South & south-west	295 – 1,000
C	Residential dwellings / blocks referenced as <b>R2</b> on receptor plan	North-west	720 – 1,000
D	Residential dwellings / blocks referenced as <b>R3</b> on receptor plan	North-west	760 – 920
E	Residential dwellings / blocks referenced as <b>R4</b> on receptor plan	North-east	400 – 1,000
F	Residential dwellings / blocks referenced as <b>R5</b> on receptor plan	North-west – north-east	580 – 1,000
G	St Michael's Catholic Primary School	North-east	500
H	Halebank C of E School	South-west	820
I	Ferndale Mews and Ferndale Court Care Homes	North-east	580 - 620
J	Amore Complex and Helping Hands Care Homes	South-east	500 - 560
K	Surrounding highway networks	Surrounding	0– 1,000
L	Nearby leisure / retail	Surrounding	200 – 1,000
M	Ditton Brook	South-west	10
N	Steward's Brook	South-east	680
O	Mersey Estuary (Ramsar/SSSI)	South-east	900
P	Hale Woods Nature Reserve	North-west	60
Q	Clincton Wood Nature Reserve	North-west	720
R	Habitats and species including Deciduous Woodlands and protected species	West – east	60 – 1,000
S	Manchester to Mersey Railway Line	South	10

- 2.2.2 The above receptors are clearly identifiable on Drawing No. MILL/3344/04 which should be referenced when reviewing these receptors. The receptor plan is scaled meaning the above areas can be clearly reviewed with exact distances from the site boundary.
- 2.2.3 In addition to the above, the site and wider site is located within Flood Zone 3, information regarding this in terms of flooding risk, evacuation etc. is detailed in Section 5.0 of this ERA. The location of the flood zone with a 200m radius is shown on MILL/3344/04.

## **3 Environmental Risk Assessment Model**

### **3.1 Fundamental considerations**

3.1.1 **Source/Hazard:** A property or situation that in particular circumstances could lead to harm.

3.1.2 **Consequences:** The adverse effects or harm as the result of realising a hazard which causes the quality of human health or the environment to be impaired in the short or long term.

3.1.3 **Risk:** A combination of the probability of occurrence of a defined hazard and the magnitude of the consequences of the occurrence.

### **3.2 Pathway**

3.2.1 Important in the assessment of a particular risk(s) and to inform the subsequent management of the risk(s) is the identification of the pathway(s) through which the risk may affect the identified receptor(s). The following are examples of pathways:

- Air
- Ground
- Water
- Direct contact / exposure

### 3.3 Consequences

3.3.1 The following table highlights the consequences of the hazard(s) identified and the abbreviations for each as used in the Risk Assessment Table in Section 3:

Abbreviation	Consequences
A	MINOR INJURY
B	MAJOR INJURY
C	DEATH
D	AIR POLLUTION
E	WATER POLLUTION
F	POLLUTION OF LAND

### 3.4 Effects of consequences

3.4.1 In order to quantify the level of risk and identify the appropriate management procedures, the potential effects must be considered, as outlined in the table below:

Abbreviation	Effect of Consequences	Management Required?
S	SEVERE	In all cases
Mo	MODERATE	In most cases
Mi	MILD	Occasionally
N	NEGLIGIBLE	No

*Note: "Management" is the action required to reduce the risk of a hazard causing a problem on site. Contingency measures are procedures which are in place to reduce the consequences of a hazard.*

### 3.5 Risk estimation and evaluation (probability/frequency of occurrence of hazard)

3.5.1 The following table allows the likelihood of an occurrence of an identified risk to be assessed:

	Probability	Evaluation
1	Very likely	Could occur during any working day
2	Likely	Could occur regularly
3	Possible	Event possible
4	Unlikely	Event very unlikely

### 3.6 Risk assessment outcome (combination of probability & consequence)

3.6.1 The following table shows the resultant risk of an identified hazard or potential situation. This uses the hierarchy of both probability and consequence to assess the level of risk. The level of risk determines what level of management would be required in order to reduce the risk of occurrence and/or scale.

		Consequence			
		S	Mo	Mi	N
Probability	1	High	High	Medium	Low
	2	High	Medium	Low	Near-Zero
	3	Medium	Low	Near-Zero	N/A
	4	Low	Near-Zero	N/A	N/A

3.6.2 Where the risk assessment outcome is high, first-level management of the risk is essential, i.e. removal of hazard, implementation of major infrastructure/structural design measures to contain the risk/hazard and company policy changes to incorporate the management of the risk. All risk management measures must be supplemented with detailed induction training, spot training and tool-box talks to ensure all site staff and users are made fully aware of the risk/hazard, all potential consequences and necessary management and contingency procedures.

- 3.6.3 Where the risk assessment outcome is medium, the management of the risk should be tackled by management or delegates. If removal of the hazard is not possible, management will normally be met through implementing minor structural design measures or by imposing procedures for the prevention of occurrences which will be conveyed to all site staff through the appropriate training, including any contingency measures/procedures.
- 3.6.4 Where the risk assessment outcome is low, the management of the risk can be done wholly through appropriate training to site staff including any contingency measures/procedures.
- 3.6.5 Where the risk assessment outcome is near-zero, site staff should be made aware of the possibility of an occurrence and contingency measures should be readily available to all staff should they be required.

## 4 Risk assessment table

### 4.1 Table

4.1.1 The following pages contain the site-specific risk assessment for the site with appropriate remedial actions, recommendations and comments included for each identified hazard, potential contaminant or situation. The table also contains references to the appropriate section(s) of the site's EMS for additional management procedures. As discussed in Section 3.6 above, all situations which identify a risk from Low –High should be incorporated into the staff/visitor training schedule, where appropriate and acted on as required.

Hazard / Potential Contaminant or Situation	Source(s)	Pathway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments
Dust / particulates	<p>Formation of dust on site surfaces during dry and windy weather on both areas of the site.</p> <p>Waste delivery vehicles depositing and collecting dusty waste during dry and windy weather conditions</p> <p>Storage of potentially dusty/waste material externally (AREAS 14, 15, 16, 23, 24 – 28)</p> <p>Loading of mixed C&amp;D waste into mechanical treatment plant from external areas of the site</p> <p>Mechanically treating mixed C&amp;D waste externally using a trommel screen</p> <p>Shredding of wood in external areas of the site</p> <p>Settlement of dust of processing plant</p> <p>Breakdown of mobile suppression systems linked to treatment plants</p> <p>Droughts or water bans leading to a water shortage</p> <p>Malfunction of manual suppression systems</p>	Air	Receptors A – S on Table 2.1	A, B, D, E	Mo	3	Low	Reference should be made to the site specific Dust Management Plan (Doc Ref. MILL-3344-F) in terms of dust control but in summary, the site will implement the following measures below daily to reduce the impact of dust.

Hazard / Potential Contaminant or Situation	Source(s)	Pathway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments
Odour	<p>Storage of potentially odorous waste material externally (AREAS 15, 17, 81 – 21 and 28.</p> <p>Poor housekeeping leading to waste becoming trapped in site surfaces, storage bays or buildings</p> <p>Dry/hot weather conditions exceeding three dry days following a period of wet weather including a combination of both</p> <p>Prevailing wind to towards residential receptor locations</p> <p>Staff negligence leading to odour releases from unauthorised waste acceptance and treatment</p>	Air	Receptors A – J and L on Table 2.1	A, D	Mi to Mo	3	Low	Reference should be made to the site-specific Odour Management Plan (Doc Ref. MILL-3344-G) in terms of odour control.
Litter	<p>Litter escaping from external storage bays or containers (AREAS 15, 17 – 22 and 28.</p> <p>Vehicles delivering / removing and waste during dry and windy weather conditions including unsheeted / poorly sheeted skips on delivery / removal vehicles</p> <p>Poor or faulty storage containment i.e. bays, damaged skips/containers</p> <p>Poor housekeeping</p> <p>Staff negligence leading to litter escaping off site</p> <p>Winds exceeding 4 or above on the Beaufort Scale meaning litter could be blown around on site or exceed fences.</p>	AIR	Receptors A – S on Table 2.1	A to C E,F	Mi to Mo	4	Low	<p>The has the following to prevent litter escaping:</p> <ul style="list-style-type: none"> <li>- All waste storage areas on site are within dedicated bays with at least a 0.5m high freeboard. Combustible (light) waste storage will have a 1.0m freeboard other than when we being stored in a container.</li> <li>- Boundary treatments comprise a 3.0m high wall spanning the boundary of the site.</li> <li>- Three no. litter picks throughout each working day including full inspections on and off site</li> <li>- Use of a Bobcat Skidstear with sweep attachment use twice a day to collect any small debris</li> <li>- Use the complaint’s procedure from the EMS (Section 4.10) to ensure any litter complaints are addressed and substantiated.</li> </ul> <p>All light waste with potential to be blown around i.e. paper, cardboard, plastic, residual and plasterboard will be stored in containers.</p> <p>There will be no tipping or sorting wases of any wastes which are likely to be blown around during conditions of high winds, this considered to be 9 or above on the Beaufort Scale. During this periods, skips/containers storing light waste will be sheeted.</p> <p>All vehicles entering and leaving the site will be sheeted to comply with the requirements of the Duty of Care legislation.</p> <p>Customers will be told not to overload skips.</p>



Hazard / Potential Contaminant or Situation	Source(s)	Pathway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments
Noise/ vibration	<p>Fixed and mobile plant and machinery breakdowns or malfunctions (<b>existing</b>)</p> <p>Tipping / loading waste into vehicles, fixed and mobile plant in external areas of the site (<b>existing</b>)</p> <p>Operating mechanical treatment plants in external areas of the site i.e. trommel screen, wood shredder and metal shear (<b>proposed</b>)</p> <p>Operating mobile plant in all areas of the site during a Saturday (<b>existing</b>)</p> <p>Hot works / cutting, size reduction of large items of scrap metal (<b>existing</b>)</p> <p>Dismantling / crushing of articulated trailers (<b>existing</b>)</p>	Air or ground by vibration	Receptors A – J, L – N and P – R on Table 2.1	A, D	Mo	3	Low	<p>The nearest NSRs are situated approximately 295m to the south-west on Lovel Terrace, 315m to the south off Wellingford Avenue, and 425m to the north off Hale Road. These measurements have been taken from the nearest boundary of the site. Between these NSR are large industrial buildings, the busy Manchester – Mersey railway line, which is adjacent to the site to the south and other waste management facilities which will make the existing background noise level high or screen any potentially noisy activities from the site.</p> <p>There is a concrete batching facility situated approximately 85m to the north-west of the houses on Whitstable Close so it is considered this site will comprise the main source of noise.</p> <p>The site does not operate during hours which are considered unsociable and therefore likely to lead to complaints.</p> <p>There is already suitable noise mitigation provided on site in addition to the off-site industrial buildings and other waste facilities infrastructure. The site is also situated in a lower setting to other surrounding premises.</p> <p>The site currently shreds wood, dismantles trailers by crushing with an excavator and tips, sort and crushes scrap metal, these would still be considered the most nosiest activities at the site in addition to the new activities proposed. It is important to note these activities have never generated any noise complaints since the site has been operational for over 10 years.</p> <p>Drop heights will be kept to a minimise noise / vibration by using a grab rather than shovel enabling waste to be dropped from minimal height.</p> <p>Management will ensure that all loading plant operated is functioning suitably i.e. moving parts to be regularly lubricated.</p> <p>Operatives will be informed to turn off engines when the plant is not in use and no revving of engines will be permitted at the site i.e. no idling policy</p> <p>Any malfunctions in plant i.e. missing screws/bolts which result in excessive noise will be decommissioned until an alternative loading plant sourced.</p> <p>If repairs to the site are required, the work is to be undertaken with due regard for the possible noise nuisance and during the normal working day.</p>

Hazard / Potential Contaminant or Situation	Source(s)	Pathway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments
								<p>In the event of major repair work being undertaken which is likely to cause significant noise and disruption, neighbouring residents and the EA will be notified in advance</p> <p>Reference should be made to Section 2.6 of the operator's FPP in relation to preventative maintenance checks to reduce the likelihood of fixed or mobile plant failure.</p> <p>Use the complaint's procedure from the EMS (Section 4.10) to ensure any noise complaints are addressed and substantiated.</p>
Vermin causing leptospirosis and other respiratory diseases	<p>Poor housekeeping</p> <p>Staff negligence leading to acceptance of unauthorised waste giving rise to pests</p> <p>Storing trade waste bins for excessive time periods</p>	Water, direct contact with waste	Receptors A – J and L on Table 2.1	A to C	Mi to Mo	4	Near zero	<p>The containment of all waste and the strict waste acceptance criteria presents a very low risk of the site attracting pests.</p> <p>If any waste which could give rise to pests such as food waste is detected on arrival to the site or after deposit it will be marked as rejected and placed in quarantine for removal off site as soon as practicable. As shown on Drawing No. MILL/3344/03, no wastes which could give rise to pests are being stored in open areas of the site, and any residual (non-recyclable) material will be contained in sealed 40 cubic yard, roll on roll off skips</p> <p>The wastes before being unloaded from the skip will be inspected for contrary items and any material found not suitable or contain any wastes with the potential to cause pests will not be unloaded and left in the skip. The driver collecting the skip will also carry out a check of the contents to ensure no food waste or other wastes likely to create pests is present.</p> <p>Any wastes identified during the incoming waste inspections which do not conform to site acceptance criteria will not be accepted and/or removed and quarantined immediately to await safe removal from site. The EA will be contacted (where necessary) if the non-conforming waste discovered is likely to lead to a breach of permit conditions.</p> <p>Wear PPE - gloves and masks as appropriate</p> <p>Site inspections daily</p> <p>Pest controller called in the event of pests being present at the site or complaints received from receptors</p> <p>Any wastes with the potential to cause pests accepted which are not shown on Drawing No. MILL/3344/03 will be stored within a secure bay or container and removed from site within 48 hours.</p>

Hazard / Potential Contaminant or Situation	Source(s)	Pathway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments
Fire/ smoke / particulates	Refer to Section 2.1 of operator's FPP	Air, direct contact	Receptors A – S on Table 2.1	A to F	Mi to S	3	Medium	Refer to Fire Prevention Plan MILL-3344-B.  No fires are permitted on site.  No waste will be burnt on site.
Vehicle collision/ accidents including impacts and injury	Poor visibility  Spillages of oils/fluids causing vehicles to skid  Lack of PPE worn by staff  Staff negligence i.e. mobile plant operators  Excessive waste storage causing collapse of stored materials / falling materials and reducing accessibility around the site	Direct contact	Receptors A, K, L, M & S on Table 2.1  Site personnel / visitors  Vehicle users  Pedestrians	A to F	Mi to S	3	Low	Good housekeeping (Refer to Section 4.2 of EMS) in terms of daily inspections.  Fuel storage procedures shown in Section 2.7 of the EMS and stored in a double bunded tank internally as shown on Drawing No. MILL/3344/03.  Good vehicle management and refer to Section 2.6 of the operator's FPP in relation to preventative maintenance check to reduce the likelihood of fixed or mobile plant failure.  Ensure all free-standing waste storage areas are in the correct locations and access areas are kept clear as shown on Drawing No. MILL/3344/03.  An accident logbook is kept in the site office so all new and existing staff members can review previous accidents.  Encouragement for staff for greater number of "accident-free days" to encourage a safer working environment  Appropriate signage throughout the site.  All staff have radio's and use horns / alarms on equipment to alert them of their presence  The operator has trained staff who control vehicle movements throughout the site.  Vehicle movements on site restricted to 5mph.  Dedicated staff & visitor parking areas as shown on Drawing No. MILL/3344/03.  Staff training procedures shown in Section 6 of the EMS.

Hazard / Potential Contaminant or Situation	Source(s)	Pathway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments
Leachate	<p>Poor housekeeping</p> <p>Staff negligence leading to acceptance of unauthorised waste giving rise to leachate</p> <p>Defects to the concrete surfaces storing waste</p> <p>Defects to the underground storage tanks</p>	Ground	Receptors M – R on Table 2.1	E, F	Mi to S	3	Low	<p>Waste storage/treatment is undertaken on an impermeable concrete surface with sealed system. Sealed tanks where potentially contaminated water drains to are checked weekly or daily in heavy rainfall events.</p> <p>All maintenance/housekeeping are listed on daily record/inspection forms. The inspection form will be completed by a person who is familiar with the requirements of the EMS and EP for the site. All details of defects, problems and repairs carried out will be recorded on the form on the day that each event occurs. Detailed comments may also be recorded in a site diary. All repairs will be carried out as soon as practically possible.</p> <p>All employees are given induction training and subsequent regular training to identify those waste types which are permitted for acceptance at the site under the site’s EP and those wastes which are not. This will include specific training to identify those common wastes which may be found following deposit and are not permitted at the site and will also include more obscure wastes and how to handle these wastes safely. All employees are advised that they should refer any unrecognisable or unknown wastes to senior management, who should, in turn, follow procedures outlined in the EMS and/or contact the EA to agree a suitable method for removal</p> <p>Regular (minimum daily) checks of site surface infrastructure (as above).</p> <p>Fuel storage procedures shown in Section 2.9 of the EMS and stored in double banded tanks within the workshop/non-ferrous building as shown on Drawing No. MILL/3344/03</p> <p>Dedicated mobile quarantine skip for intercepted leachable wastes found during initial inspections ensuring isolation and quick removal off site. The skip may be positioned in various positions of the site depending how operations permit.</p> <p>Any wastes which are liable to give rise to contamination will be removed from site or placed into the quarantine skip/area. The site operations to allow for the storage uncontaminated wastes and on a hardstanding surface</p>

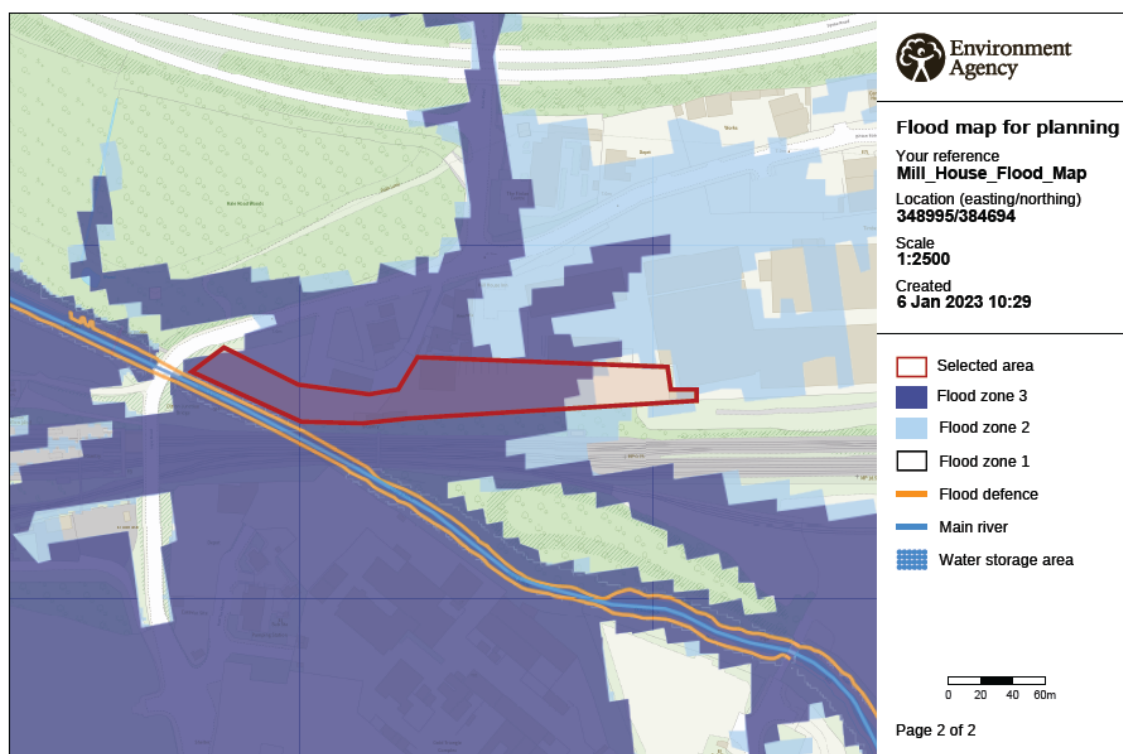
Hazard / Potential Contaminant or Situation	Source(s)	Pathway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments
Hydrocarbons including release of gases/fumes/vapours/volatiles	<p>Spills from fuel tanks</p> <p>Drips when refuelling</p> <p>During delivery</p> <p>Leakage from stored drums</p> <p>Fixed and mobile plant malfunction</p> <p>Mixing of waste/ chemicals</p> <p>Spillage of chemicals</p> <p>Overtured vehicle plant/plant failure</p> <p>Reaction between stored wastes</p> <p>Poor housekeeping</p> <p>Staff negligence leading to acceptance of unauthorised waste</p> <p>Defects to the concrete surfaces storing waste</p> <p>Defects to the underground storage tanks</p>	<p>Ground - direct contact, ingestion</p> <p>Inhalation (of volatiles)</p>	Receptors M – R on Table 2.1	A, B, D, E, F	Mi to S	3	Low	<p>Fuel storage procedures shown in Section 2.9 of the EMS and stored in double bunded tanks within the workshop/non-ferrous building as shown on Drawing No. MILL/3344/03.</p> <p>All plant manoeuvring takes place on an impermeable concrete surface with sealed drainage and refer to Section 4.2 of the EMS in terms of daily inspections.</p> <p>The site is surfaced with concrete and has a sealed drainage system.</p> <p>Where plant is operated; drip trays will be available to ensure that fuels are contained.</p> <p>Spill kits kept close to source(s) of hazards as shown on Drawing No. MILL/3344/03.</p> <p>Reference should be made to Section 2.6 of the FPP in relation to preventative maintenance checks to reduce the likelihood of fixed or mobile plant failure which is source of most fires from waste sites.</p> <p>Any spillages identified will be dealt with in accordance with the spillage procedures outlined in section 5.3 of the EMS.</p> <p>Dedicated mobile quarantine skip for intercepted I wastes found during initial inspections ensuring isolation and quick removal off site. The skip may be positioned in various positions of the site depending how operations permit (see Section 3.9 of EMS).</p> <p>Very little potential for hydrocarbons to be released from site given the wastes accepted and stored i.e. no ELVs containing hazardous fuels, liquids or hazardous engine components.</p> <p>Ensure all waste storage areas are stored as per the waste storage table and locations shown on Drawing No. MILL/3344/03 to reduce the risk reactions of stored waste, fire and collisions between plant causing release of fumes.</p> <p>No gas is stored at the site.</p> <p>Waste storage/treatment is undertaken on an impermeable concrete surface with sealed system. Sealed tanks where potentially contaminated water drains to are checked weekly or daily in heavy rainfall events.</p>

Hazard / Potential Contaminant or Situation	Source(s)	Pathway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments
Adverse weather conditions	High winds Poor visibility due to fog Freezing weather conditions Droughts, warm, hot weather Long periods of rainfall i.e. excessively for 3 no. days	Direct contact	Receptors A, K, L, M & S on Table 2.1  Site personnel / visitors  Vehicle users  Pedestrians	A to F	Mi to S	3	Low	<p><b>High winds</b> - There will be no sorting, processing or treatment of any wastes which are likely to be blown around during conditions of high winds. Vehicles leaving the site will be sheeted to comply with the requirements of the Duty of Care legislation.</p> <p><b>Poor visibility</b> – The site will not operate in conditions of poor visibility such as dense fog to reduce the risk of accident or vehicle collision.</p> <p><b>Freezing weather</b> – The site has road salt available on site to lay on site surfaces to prevent vehicles and staff skidding causing accidents or injuries. The continuous movement of plant on site will also prevent site surfaces from icing over in winter months.</p> <p><b>Droughts / warm weather</b> - The site can source further dust suppression equipment such as bowsers, dust cannons if dust became a nuisance due to these weather conditions.</p> <p><b>Long periods of rainfall or flood events</b> – Due to the site’s surface there is very limited potential for mud tracking off site. All vehicles will undergo a stringent check and vehicle chassis would be sprayed using hoses to reduce the risk of mud tracking off site. If this isn’t suitable, the operator would source a road sweeper until weather conditions improve. The site is not located within a flood risk zone.</p> <p>The operator will set up a notification alert with the Met Office to receive prior notifications of the above unforeseen adverse weather conditions to ensure mitigation can be put in place prior to the event. The site may be forced to close during events which could cause a significant risk to staff, human health or the environment.</p>

## 5 Flood Risk & Management Plan

### 5.1 Site location

5.1.1 The site is located within Flood Zone 3 (FZ3) and areas deemed to be in FZ3 have been shown to have 1% or greater chance of flooding from rivers in any year (between 1:1000 and 1:100 chance) or between 0.1% – 0.5% chance of flooding from the sea in any year (between 1:1000 and 1:200 chance).



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### 5.2 Sources of flood risk

5.2.1 The principal source of flood risk in respect of the site is the Ditton Brook. The Ditton Brook is situated directly to the south of the site and flows generally from north-west to the south east towards its confluence with the River Mersey to the south-east. The Ditton Brook. It is likely that any areas of the site within Flood Zone 3 during 1 in 100-year flooding event the site will be inundated from the western edge of the site.

5.2.2 Based on information presented on the Gov.UK website the east of site is shown as being at a low risk of surface water flooding hence the annual probability of surface water flooding occurring at the site is between 1 in 1,000 and 1 in 100.

5.2.3 Based on information presented on the Gov.UK website the site is not located within the maximum extent of an area which is at risk of reservoir flooding.

### **5.3 Probability of flooding**

5.3.1 Based on the information presented in the section above, there is no significant risk posed to the site by flooding due to other sources. As the site is located close to and at an elevation significantly higher than the Mersey Estuary it is considered that there is no significant risk of sewer flooding at a time when fluvial or tidal flooding is not occurring. The operator is unaware of any other potential sources of flood risk to the site.

### **5.4 Depth and level of the design flood**

5.4.1 Based on the available flood mapping information and aerial photography data the extent of Flood Zone 2 comprises an elevation of approximately 10m above Ordnance Datum and the extent of Flood Zone 3 comprises an elevation no higher than 9m AOD. The elevation of the site ranges between approximately 9m AOD at the eastern and western edges and approximately 7m AOD in a small area of the centre of the site. and the site is generally flat. It is therefore likely that the majority of the site may be inundated at depths ranging between 0m and 1m during the 1 in 100 / 1 in 200 year and 1 in 1,000 year flooding events respectively. It is likely that the centre of the site will be inundated at greater depths during such flooding events.

### **5.5 Flood evacuation and monitoring procedures**

5.5.1 During the 1 in 100 year / 1 in 200-year flooding event the site is likely to inundate from the west of the site. No plant, machinery or containers will be placed in the north west



area of the site and this area comprises a temporary waste storage for a period of 1-2 hours. It is proposed that a flood warning would be evident at least 24 hours of the event at which the operator can take necessary measures as set out in the sections below.

- 5.5.2 The site is in the flood warning or alert area in respect of the Ditton Brook. The operator will sign up to receive flood warnings and alerts from the EA in this area. The three-day flood risk forecast in respect of the area will be monitored as appropriate and in particular if heavy rain is expected in the coming days.
- 5.5.3 In the event that a flood alert is issued all mobile plant and equipment will be moved to higher ground or impounded in the on-site building in preparation for the evacuation (if necessary) of the site.
- 5.5.4 The EA Floodline will be contacted on 0845 988 1188 as necessary for up to date flooding information. Hauliers expected to make deliveries and collections of waste or material to or from the site during or following shortly the expected duration of any flooding event will be contacted and the deliveries rescheduled for a later time should the EA advise that there is a significant possibility of flooding at the site.
- 5.5.5 The number of site personnel will be minimised insofar as is practicable whilst any flood alert is in place in order to facilitate the evacuation of the site in a prompt manner. A watching brief will be kept on water levels of the Ditton Brook. Should water levels be observed to rise to levels at which it is considered by the Site Manager a significant risk of the inundation of the site or surrounding industrial estate, the site will be evacuated immediately via the access road to the north of the site i.e. Hale Road.
- 5.5.6 In the event Hale Road to the north of the site is flooded or inaccessible due to traffic congestion, personnel evacuating the site will head further north out of the site onto Ditton Road.

- 5.5.7 In the event that a Flood Warning is issued all fixed plant will be shut down, all mobile plant will be moved to the highest ground and the site will be secured and evacuated immediately, provided that in the opinion of the site manager, there is no significant risk of the rapid inundation of the site. Any lighter than water containers or any containers containing potentially polluting matter will be moved away from the centre of the site and secured at elevations greater than 9m where feasible close to the waste storage bays in the northern central part of the site to minimise the possibility of contact with water.
- 5.5.8 No deliveries or collections of wastes or materials to or from the site will take place whilst a Flood Warning or Severe Flood Warning is in place. If, in the opinion of the site manager, the inundation of the access road is imminent, the site will be evacuated immediately with personnel heading north towards Hale Road/Ditton Road as discussed above as necessary. If the evacuation of the site is not possible due to the inundation of the access road, site personnel will assemble in the site offices, contact the EA and/or the emergency services and await advice or instruction.
- 5.5.9 In the event a Severe Flood Warning is issued site personnel will evacuate the site immediately if it is practicable to do so, thence heading south and then east to higher ground on Staines Road. If evacuation is not feasible due to the inundation of the access road site personnel will assemble to the site offices, contact the EA and/or the emergency services and await advice or instruction.
- 5.5.10 Due to the likely low depths of water at the site during the 1 in 100 / 200 year events and in the initial stages of the 1 in 1,000 year events it is extremely unlikely that the site may be inundated to a sufficient depth to prevent evacuation of site personnel to higher ground.

## **5.6 Surface water management**

- 5.6.1 Following the proposed development rainwater incident to the site will drain to ground consistent with the current situation. The site is generally flat but direction of flow slopes west to east, in the direction of the existing sewers.
- 5.6.2 It is unlikely there would be any potential contamination of groundwater or surface water from the waste stored i.e. clean tyres or plant / equipment on site which is subject to annual preventative maintenance by the manufacturer and daily checks by the applicant to ensure it is fit for purpose which will reduce the potential for leakages/spillages. No fuels/liquids are stored at the site and the site office will contain spill kits in the event of a plant/vehicle malfunction.

## **5.7 Conclusions and recommendations**

- 5.7.1 It is concluded that the measures set out in the flood evacuation plan are sufficient for the site to be evacuated safely and in good time in the scenario where an extreme flood affects the site.
- 5.7.2 It is recommended that this risk assessment of flooding is reviewed and updated as necessary should new information become available in respect of the risk of any potential source of flooding to the site or following the inundation of the site by any source of flooding in the future.

# Appendix I

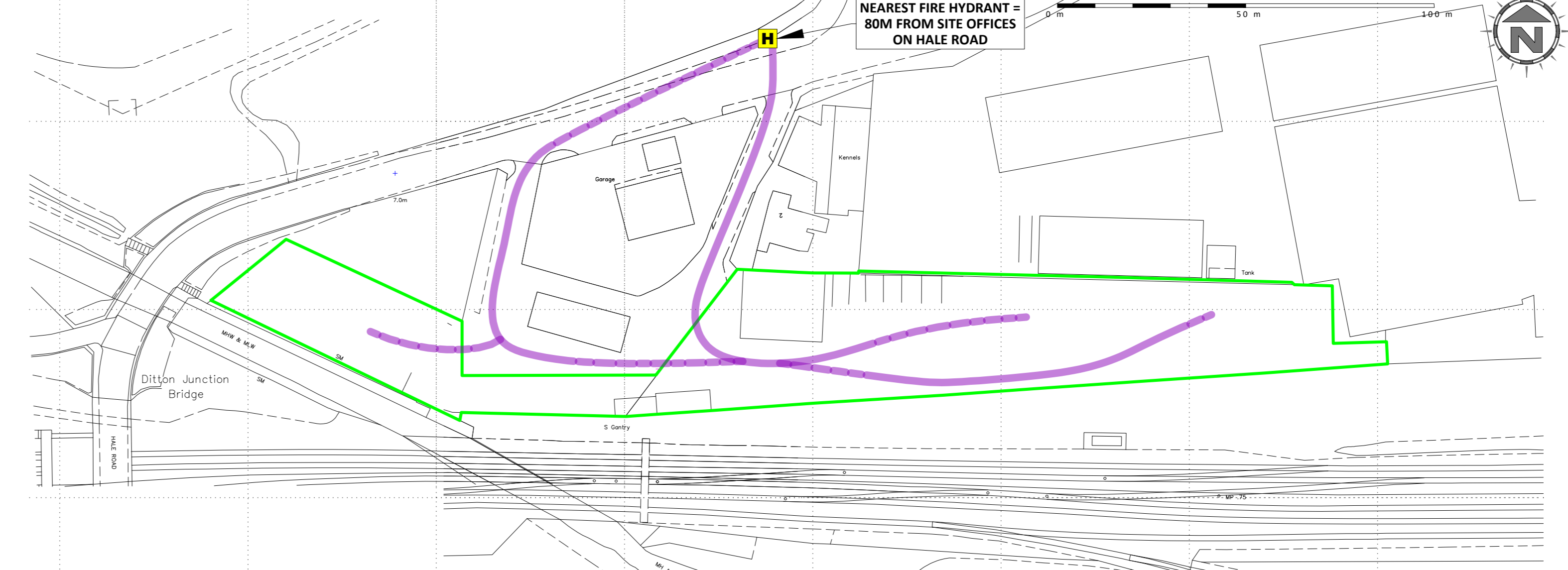
## Drawings



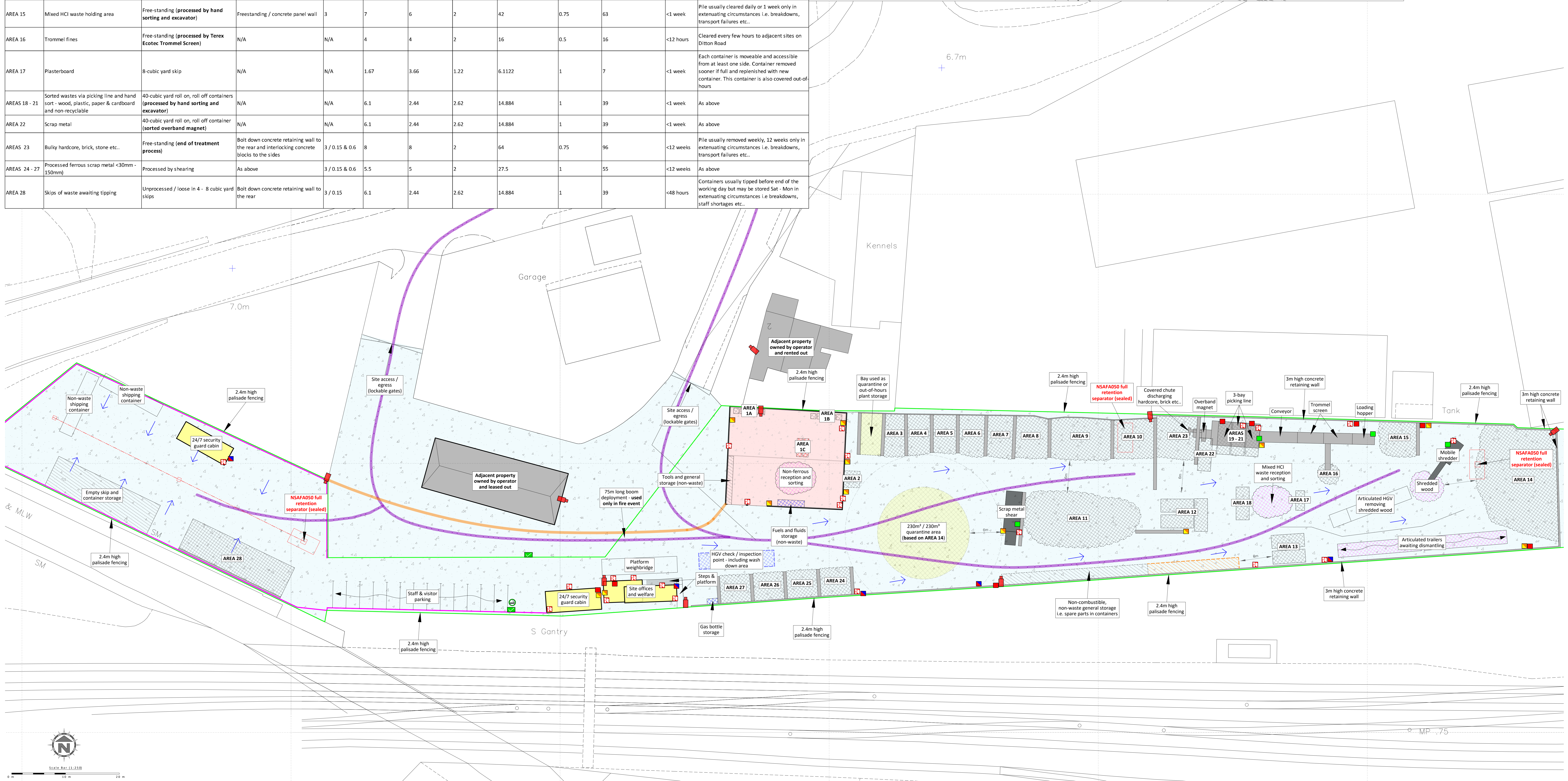
**Storage Area Details (Pile volume based on Area x Height)**

Plan Ref	Description	Storage type	Containment / type	Height / width of firewall (m)	Max Width (m)	Max Length (m)	Max storage height (m)	Approx. Area (m2)	Conversion factor used	Approx. volume (m3)	Max storage time	Comments
AREA 1A - 1C	Containers of loose non-ferrous metal and batteries / catalytic converters (locations may vary)	Manually sorted, contained in a mixture of pallet boxes, tonne bags and metal containers (processed by hand sorting)	Sealed containers / concrete panel wall of building	3 / 0.3	1 (per container)	1 (per container)	1 (per container)	1 (per container) - whole area size may vary	1	1 (per container) - whole volume size may vary	<1 week	Each container is moveable and accessible from at least one side. Container removed sooner if full and replenished with new container.
AREA 2	Containers of sorted loose ferrous and non-ferrous	Contained in mixture of pallet boxes and metal containers (processed by hand sorting)	As above	3 / 0.3	As above	As above	As above	As above	1	As above	<1 week	As above
AREAS 3 - 10	Sorted loose ferrous scrap metal storage bays (row based on maximum bay size)	Free-standing piles (processed by hand sorting)	Bolt down concrete retaining wall to the rear and interlocking concrete blocks to the sides	3 / 0.15 & 0.6	11	7.5	2	82.5	0.75	124	<12 weeks	Pile usually removed weekly, 12 weeks only in extenuating circumstances i.e. breakdowns, transport failures etc...
AREA 11	Loose scrap metal reception and storage area, also pre-shear pile	Free-standing (unprocessed)	Freestanding pile / none	N/A	20	10	4	200	0.5	400	12 weeks	As above
AREA 12	Sorted loose ferrous scrap metal (pile based on each container volume)	40-cubic yard roll on, roll off containers (processed by hand sorting and excavator)	Partly / interlocking concrete blocks	3 / 0.6	6.1	2.44	2.62	14.884	1	39	4 weeks	Each container is moveable and accessible from at least one side. Container removed sooner if full and replenished with new container.
AREA 13	Tyres from articulated trailers (pile based on each container volume)	As above	As above	3 / 0.6	6.1	2.44	2.62	14.884	1	39	4 weeks	As above
AREA 14	Articulated trailer (ELV) dismantling, crushing, compacting, sorting and separation area - mixture of wood and scrap metal	Free-standing (processed by hand sorting and excavator)	Partly within bolt down concrete retaining wall to the north and interlocking block wall to the east	3 / 0.15 & 0.6	15	20	2	300	0.75	450	<12 weeks	Pile usually removed weekly, 12 weeks only in extenuating circumstances i.e. breakdowns, transport failures etc...
AREA 15	Mixed HCl waste holding area	Free-standing (processed by hand sorting and excavator)	Freestanding / concrete panel wall	3	7	6	2	42	0.75	63	<1 week	Pile usually cleared daily or 1 week only in extenuating circumstances i.e. breakdowns, transport failures etc...
AREA 16	Trommel fines	Free-standing (processed by Terex Ecotec Trommel Screen)	N/A	N/A	4	4	2	16	0.5	16	<12 hours	Cleared every few hours to adjacent sites on Ditton Road
AREA 17	Plasterboard	8-cubic yard skip	N/A	N/A	1.67	3.66	1.22	6.1122	1	7	<1 week	Each container is moveable and accessible from at least one side. Container removed sooner if full and replenished with new container. This container is also covered out-of-hours
AREAS 18 - 21	Sorted wastes via picking line and hand sort - wood, plastic, paper & cardboard and non-recyclable	40-cubic yard roll on, roll off containers (processed by hand sorting and excavator)	N/A	N/A	6.1	2.44	2.62	14.884	1	39	<1 week	As above
AREA 22	Scrap metal	40-cubic yard roll on, roll off container (sorted overband magnet)	N/A	N/A	6.1	2.44	2.62	14.884	1	39	<1 week	As above
AREAS 23	Bulky hardcore, brick, stone etc...	Free-standing (end of treatment process)	Bolt down concrete retaining wall to the rear and interlocking concrete blocks to the sides	3 / 0.15 & 0.6	8	8	2	64	0.75	96	<12 weeks	Pile usually removed weekly, 12 weeks only in extenuating circumstances i.e. breakdowns, transport failures etc...
AREAS 24 - 27	Processed ferrous scrap metal <30mm - 150mm	Processed by shearing	As above	3 / 0.15 & 0.6	5.5	5	2	27.5	1	55	<12 weeks	As above
AREA 28	Skips of waste awaiting tipping	Unprocessed / loose in 4 - 8 cubic yard skips	Bolt down concrete retaining wall to the rear	3 / 0.15	6.1	2.44	2.62	14.884	1	39	<48 hours	Containers usually tipped before end of the working day but may be stored Sat - Mon in extenuating circumstances i.e. breakdowns, staff shortages etc...

**INSET PLAN SHOWING WIDER SITE, ACCESS ROUTES AND NEAREST FIRE HYDRANT**



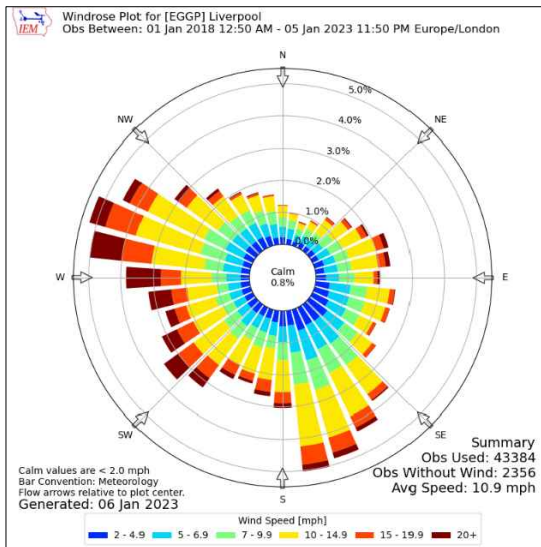
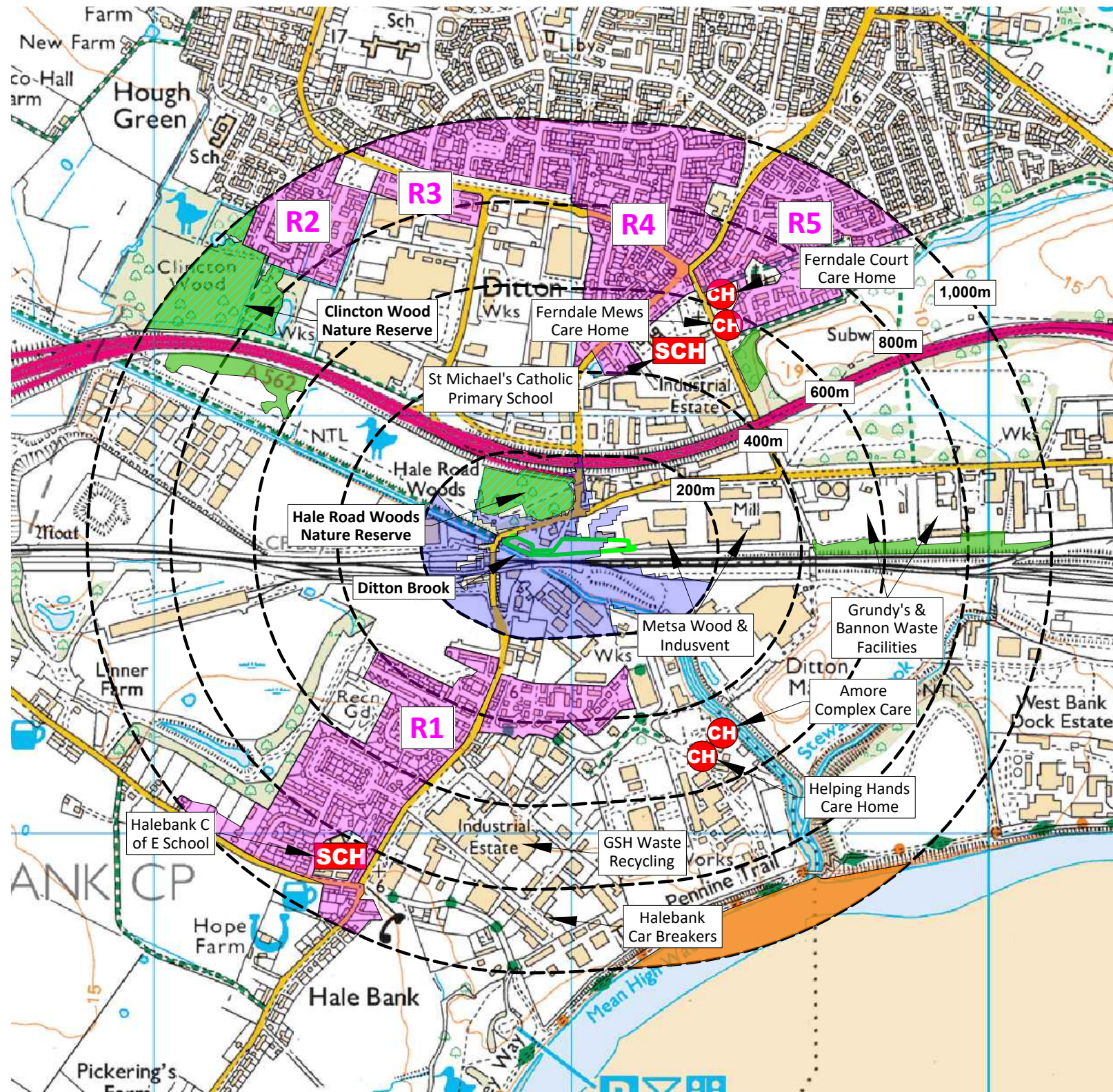
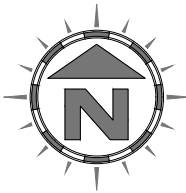
- KEY:**
- Proposed permit boundary
  - Waste storage areas
  - Non-waste storage areas
  - Hazardous waste storage areas
  - Non-waste fuels, oils and other liquids storage
  - Temporary waste storage areas (clear prior to shutdown)
  - Waste recycling / storage buildings (impermeable concrete floor)
  - Other buildings i.e. workshops/offices
  - Impervious concrete surfaces with sealed drainage
  - Contaminated surface water drainage
  - Surface water drainage fall direction
  - Gully's
  - Manholes
  - Quarantine area (with 6m buffer zone) based on AREA 18
  - Hose reels (indicative location)
  - Fire fighting equipment / extinguishers (indicative locations)
  - Plant shut-off (indicative location)
  - Manual fire alarms (break glass / horns) - indicative location
  - Spill kits (indicative location)
  - Designated smoking area
  - Access route for emergency services
  - Fire hydrants
  - Fire assembly points
  - Out-of-hours plant storage
  - Pan, tilt and zone camera with 50m coverage
  - 0.25m high fire water boom deployment (used only in fire event)



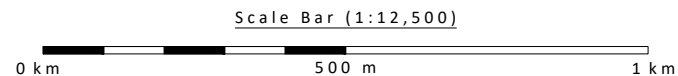


**KEY:**

-  Permit boundary
-  Surface water body (river / stream / pond / pool / lake)
-  Residential receptor blocks (may include small retail/leisure also)
-  Workplaces (includes waste, agriculture industry, commerce and retail)
-  Class A roads
-  Class B roads
-  Class C roads
-  Railway line
-  School
-  Care homes
-  Woodland areas (not protected)
-  Priority Habitat (deciduous woodland)
-  Flood zone 3 boundary (within 200m of permit boundary only)
-  Local nature reserves
-  Mersey Estuary Ramsar & SSSI



Compass Wind Rose for Liverpool (EGGP)  
 Period 2018-2023- source: Iowa State University



**NOTES**

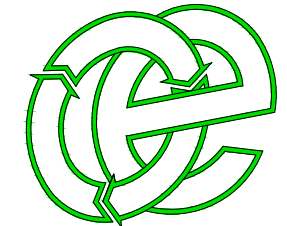
1. Boundaries are shown indicatively.
2. Wind rose data shows the prevailing wind direction to be Westerly.

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**REVISION HISTORY**

Rev:	Date:	Init:	Description:
-	27.12.23	CP	Initial drawing

**Oaktree Environmental Ltd**  
 Waste, Planning and Environmental Consultants



**DRAWING TITLE**  
 RECEPTOR PLAN

**CLIENT**  
 Global Metal Recycling Ltd

**PROJECT/SITE**  
 Land Adjacent to Millhouse Garage, Hale Road, Widnes WA8 0TL

<b>SCALE @ A3</b> 1:12,500	<b>CLIENT NO</b> 3344	<b>JOB NO</b> 003
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<b>DRAWING NUMBER</b> MILL/3344/04	<b>REV</b> -	<b>STATUS</b> Issued
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<b>DRAWN BY</b> CP	<b>CHECKED</b> --	<b>DATE</b> 27.12.23
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