CROW METALS LTD

DUST EMISSIONS MANAGEMENT PLAN

V1 NOVEMBER 2025

CROW/DEMP01

Issue and Revision Record

Revision	Date	Originator	Company Approver	Description of Changes
1	Nov 2025	E Campbell		Application for Bespoke Permit.
2				
3				

Contents

1. Introduction

The purpose of this document is to identify the operations at the site which may have the potential to have an impact on air quality as a result of emissions of particulate matter, to present the details of the operational controls which are implemented to minimise emissions and to describe the monitoring which is carried out to confirm the effectiveness of the management controls.

The Dust Emission Management Plan (DEMP) forms part of the environmental management system (EMS) under which the site is operated.

The DEMP has been prepared based on the guidance presented in the relevant sections of the Environment Agency (EA) - Control and monitor emissions for your environmental permit[1].

The activities with the potential to generate and/or release dust and particulate matter are identified within this document. A list of key receptors are shown in Appendix G and maps of key receptors within both 1km and 2km are shown in Appendix H and I respectively.

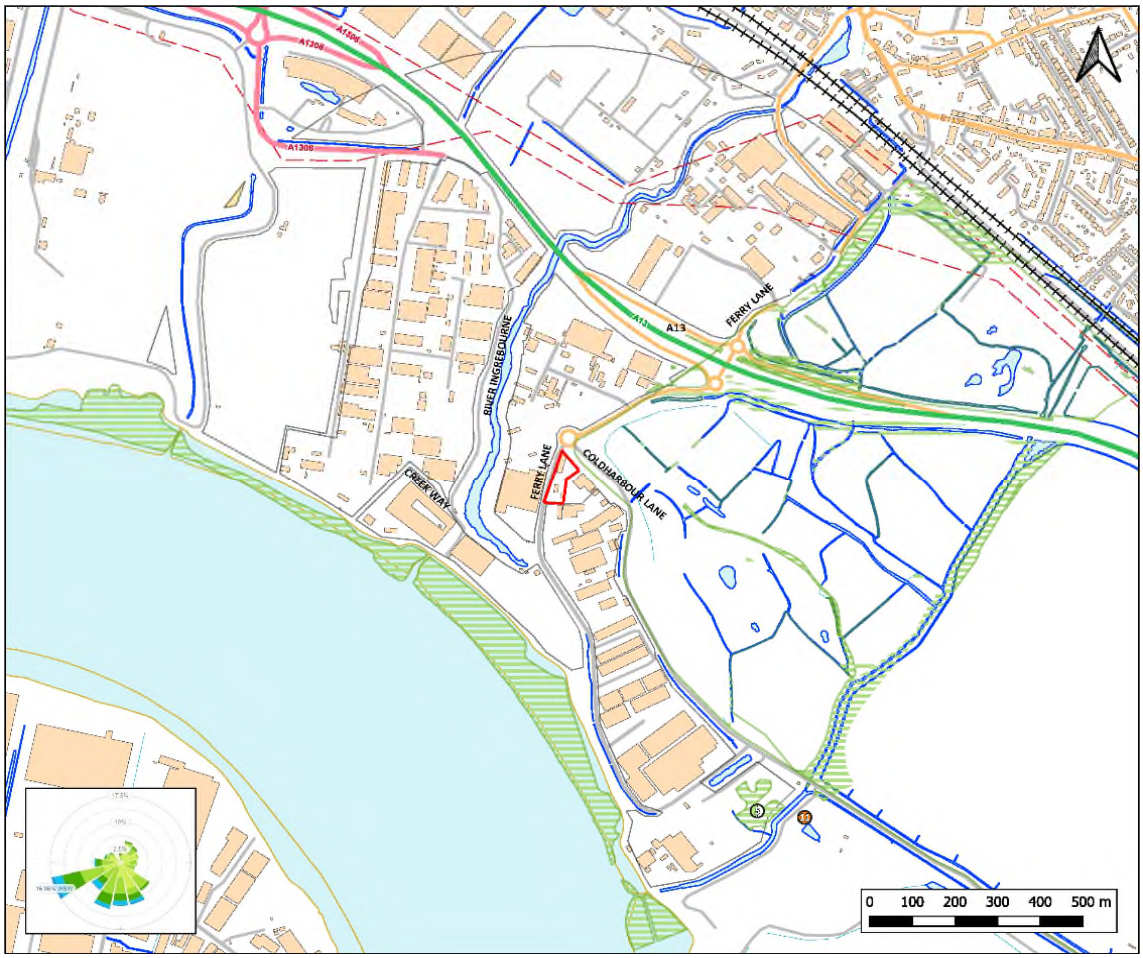
An action plan (in section 4) which will be implemented in the unlikely event that there is the potential for a significant emission of dust or particulate matter from the site. If a complaint regarding dust or particulate matter is received a Complaints Form is completed see Appendix A.

The DEMP comprises a living document and will be reviewed on an annual basis as required by the action plan or any major changes to site process or as a part of a permit variation. The review will include consideration of the results of dust and particulate matter monitoring and progress with any improvements identified as necessary. A review of the effectiveness of dust and particulate matter monitoring techniques will be undertaken and changes made to monitoring techniques as necessary.

[1] Available at https://www.gov.uk/guidance/control-and-monitor-emissions-for-your-environmental-permit

1.1 Site Details

The specified site is a metal recycling facility at 71 Ferry Lane, Rainham, Essex, RM13 9DB which is situated in an industrial estate, as outlined in red in the picture below.



The activities at the site are keeping and treating of scrap metal for the purpose of recycling and the transfer of any resulting waste to a licensed disposal facility. The annual tonnage is 75,000 tonnes

AQMA's were introduced via European and UK legislation and aim to improve air quality by lowering atmospheric pollutants. Crow Metals is situated within the London Borough of Havering which is an Air Quality Management Area (AQMA) with both Nitrogen dioxide NO_2 and Particulate Matter PM_{10} declared. The London Borough of Havering Air Quality Annual Status Report for 2024 (date of publication: 22 May 2025) shows that there have not been any exceedances of the PM_{10} annual mean AQO of 40 µg m^{-3} or any exceedances of the NO_2 annual mean AQO of 40 µg m^{-3} in the past eight years.

The main cause of PM10 in Rainham, Essex, as is the case for most of the London Borough of Havering, is road traffic emissions.

Other significant local sources of PM10 pollution in the area include:
- Construction sites: These contribute a high volume of dust and emissions from machinery.
- Industrial processes.
- Fires and waste burning, including accidental fires and the burning of waste at sites like Launders Lane.
- Domestic heating, particularly the burning of wood and other solid fuels in homes.

A large proportion of PM10 can also originate as background concentrations from outside the borough and even from natural sources like Saharan dust, which can travel long distances.

Without any abatement controls the site has the potential for dust and other emissions to be generated. However with the dust suppression that is on site any issue will be alleviated.

The purpose of this document is to explain all the controls in place that will stop dust firstly being generated and secondly escaping from site.

This DEMP will form part of the management system of the site, and will be available to all Staff, a copy will be kept in the Site Office along with the Environmental Management System (EMS ref CROWEMS01) and Fire Prevention Plan (FPP ref CROWFPP01).

The activities with the potential to generate and/or release dust and particulate matter include the following:

- Vehicles entering and/or leaving the site with mud or debris on their wheels.
- The release of dust, particulate matter and debris from waste loads as they are delivered to the site.
- The resuspension of dust and particulate matter on roads and site surfacing by vehicles.
- The release of particulate matter when waste loads are deposited or set down in stockpiles on the site.
- Loading of stockpiled material on to lorries for transfer off site.
- Particulate emissions from the exhausts of vehicles and plant on site.
- Processing of waste.

Dust and particulate matter has the potential to be dispersed from the source to potential receptors by the wind. A wind rose for London City Airport for the period 2010 to 2014 is presented on Figure 1.1.

The site is located approximately 8km east of London City Airport. Based on the wind rose the prevailing wind direction is from the south west this would indicate that sensitive receptors located towards the northeast and east are potentially at greatest risk of windblown fugitive emissions.

Particle size is the key parameter when considering the transportation of particulate matter in air. Coarse particles have much faster settling rates than finer particles and will therefore settle out as deposited dust generally close to the source, whereas fine particulate matter may remain airborne for longer periods and travel greater distances.

Based on information published by DETR[2] large particles (>30µm) mostly are deposited within 100m of the source, intermediate-sized particles (10µm to 30µm) are likely to travel up to 200m to 500m and smaller particles (<10µm) can travel up to 1km from the source, although very small particles can travel much further. TGN M17 states that:

'PM10 emissions from industrial combustion processes and road transport are considered to contain more fine material (i.e. PM2.5) than, for example, mechanically-generated particulates from quarries and construction sites'

'Waste management operations that involve mechanical generation of PM rather than combustion, are also likely to release predominantly coarse particles.'

TGN M17 was withdrawn in 2024 and replaced with https://www.gov.uk/guidance/monitoring-ambient-air-particulate-matter

2 Department of the Environment, Transport and the Regions (DETR) (2000a) Controlling and mitigating the environmental effects of minerals extraction in England. Mineral Planning Guidance Note 11, consultation paper. DETR, London. Cited in Technical Guidance Document (Monitoring) M17 – Environment Agency March 2004.

1.2 Site Location

The site is located at 71 Ferry Lane, Rainham, Essex, RM13 9DB.

The site is situated within an industrial/commercial estate.

The site has one entrance at the northern end of the site, all vehicles will enter and leave the site from Ferry Lane.

The site is surrounded by other industrial/commercial premises to North, West and South and there is a Site of Special Scientific Interest, Local Nature Reserve and Local Wildlife site to the East.

The Rainham Creek is to the west of the site and it flow to the Thames River, both of these waters are home to protected species and are protected migratory routes.

A list of key receptors are shown in Appendix G and maps of key receptors within both 1km and 2km are shown in Appendix H and I respectively.

1.3 Summary of Operation

The site's main activity is metal recycling consisting mainly of various grades of Non-ferrous and Ferrous materials.

All metal processing is conducted through the shredder. Material is separated physically and mechanically into separate recyclable grades, for onward transportation to suitably authorised sites.

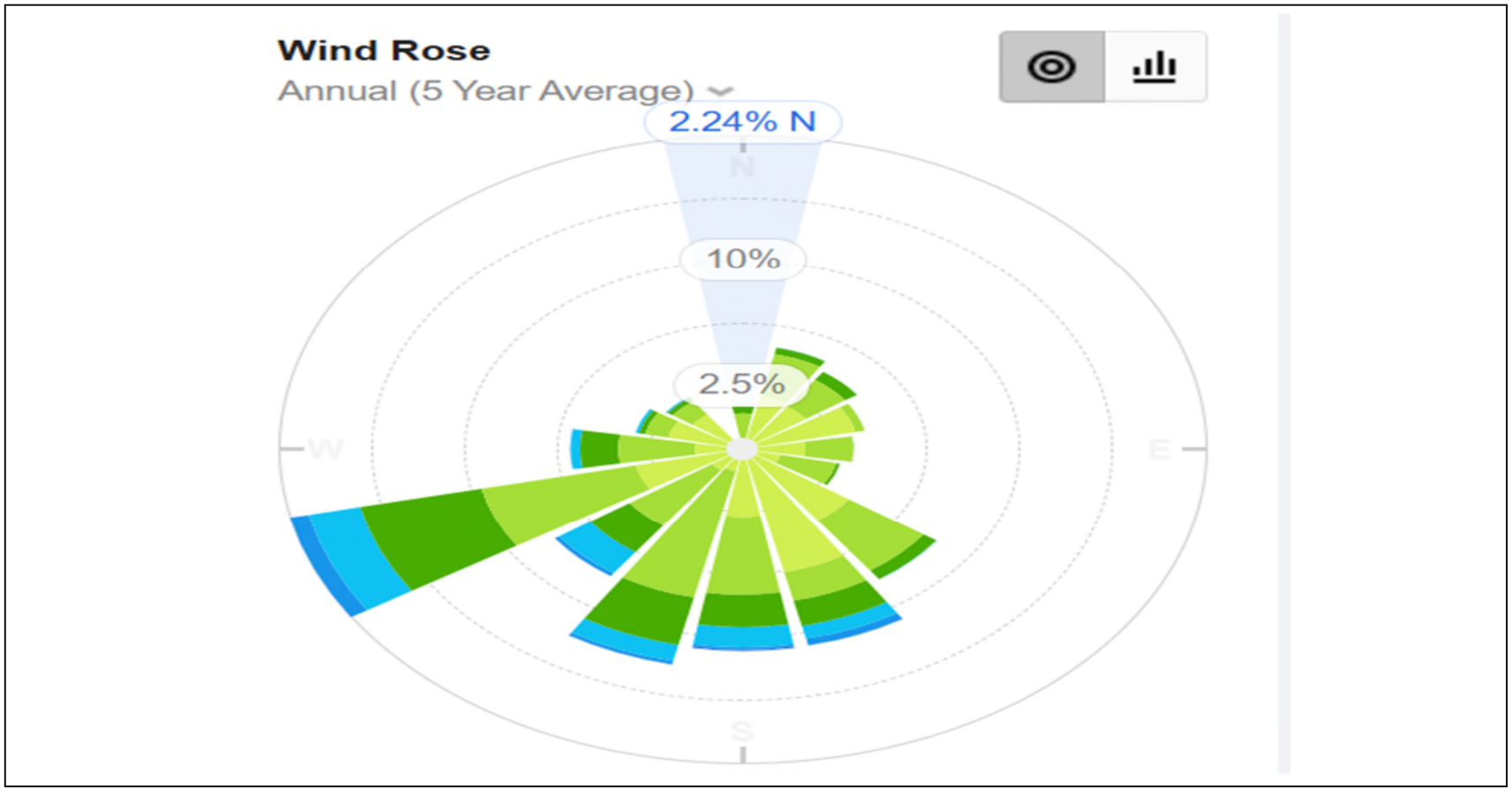


Figure 1.1: https://wind.willyweather.co.uk/se/greater-london/rainham.html. This data is collated from the Met Office, United Kingdom Hydrographic Office (UKHO) EUMETSAT and National Oceanic and Atmospheric Administration (NOAA) Wind Rose shows the average wind direction and strength in Rainham, Essex where the site is located. The data is taken from the weather station at London City Airport which is 7.8km to the west of Crow Metals.

2. Risk Assessment

The risk assessment identified the risk of dust generated by our activities onsite as low. Control of any potential dust and particulates emissions will initially be the responsibility of the site manager / supervisor. The primary concern being the control of potential dust emissions leaving site due to the closeness of the SSSI (northeast), and the LNR (east-northeast). Thought must also be given to Rainham Creek and Thames River as they are home to protected species and are protected migratory routes.

The following methods will be used to prevent and suppress dust should it occur:

- The site manager will monitor activities in the yard, together with the unloading and loading of vehicles and operation of the shredder to identify dust particles being generated and in the atmosphere. The wind direction will be monitored to ensure neighbouring sites are not affected, particular attention will be given to wind towards the northeast (SSSI) and east-northeast (LNR). The predominant wind direction is west-south-west so therefore mainly blowing towards east-northeast.

- Instructions have been given to the site manager / supervisor with regards to action to be taken under various atmospheric conditions regarding dust. In the event of raised visible dust levels, water hoses will be used to damp down the waste and prevent dust particles from being airborne.

- Site surface will be maintained free of material and will be cleaned using a forklift mounted brush on a daily basis and left clean at the end of each day.

- During non-working hours, the site will be left in a condition that will prevent dust from being generated, wherever possible.

3. Operations

3.1 Waste deliveries and processing

Waste is delivered to the site by road. The waste arrives in netted skips and or containerised lorries and is removed from site in netted roll on roll off lorries or containers. All vehicles are either enclosed or covered with sheeting. The sheeting is high quality 270gsm close mesh sheet which is breathable and weatherproof.

Some of the most common materials currently processed at our site cover a wide range of Ferrous and Non-ferrous metals including:

- Iron & Steel
- Stainless Steel
- Aluminium
- Copper & Brass
- Alloys and Special Metals
- Electric Motors

Customers and vehicle drivers are advised that dusty wastes are not accepted at the site. They are also advised of the sites 5mph speed limit and no idling policy. If a load is thought to be slightly dusty it will be damped down during tipping and loading

The weighbridge operator will determine the waste stream being delivered to site by a visual inspection and ensure that the documents provided correspond with the description of the load detailed on the waste transfer note.

The Driver will be instructed where to take the load to deposit it, a member of Staff will be on hand to help and guide the Driver to the correct bay or area.

Ferrous material – is inspected and unloaded from customer or contractors' vehicles and stored in appropriate bays to await processing by the shredder.

Non-ferrous material - is inspected and unloaded from customer or contractors' vehicles, weighed and stored in the non-ferrous building (Bay 9 on Site Plan RES/1242A).

However should the weighbridge operator have any doubts as to the contents of a vehicle's load the vehicle will not be permitted beyond the weighbridge area. The weighbridge operator will inform the site manager who will arrange a detailed inspection of the load at the weighbridge.

During each waste delivery, the plant driver will, so far as is practicable, inspect the load for a detailed visual inspection to ensure compliance with the permitted waste streams in accordance with the sites permit. The driver of the plant will have been trained on waste handling and minimising dust production.

The paperwork for training which includes training on dust emissions is kept in the office and refresher courses are given as and when necessary (new starters, breaches of permit, change to processes on site etc) and as a minimum every six months. The staff supervising will also have been trained in-house on waste handling, dust minimisation and suppression. See Appendix F Training.

3.2 Site infrastructure and waste storage

The site has a sealed drainage system with no gullies or drainage outlets to surface water. The site surface is kept clear of dust and debris by regular sweeping using a forklift with a brush and manual sweeping.

The site plan (Site plan ref: RES/1242A) shows the individual bay sizes and the table shows the dimensions, cubic capacity and approximate tonnage per bay and maximum duration each grade group will remain onsite.

BAY	MATERIAL	NC/ LC	DIMENSIONS D x W x H	M^3	TONS *	STORAGE TIME **
1	Aluminium	NC	11.6 x 18 x 2.5	522	193	1 Week
2	Ali & Iron Pre-processed	NC	12 x 12 x 2.5	360	133	1 Week
3	Ali & Iron Processed	NC	12 x 5.8 x 2.5	174	64	1 Week
4	Spare	NC	4 x 6 x 2	40	15	1 Week
5	Spare	NC	4 x 6 x 2	40	15	1 Week
6	Cable	LC	4 x 10 x 2	80	30	1 Week
7	UPVC Bin	LC	2.75 x 2.4 x 6.1	40	15	1 Week
8	Aluminium	NC	6 x 6 x 2	72	27	1 Week
9	Ali Shavings	LC	6 x 10 x 2	120	45	1 Week
10	Electric Motors	LC	9.6 x 4.8 x 2	92	34	1 Week
11	Mixed Metals	LC	6.5 x 11.6 x 2	150	56	1 Week
12	Quarantine	LC	6 x 10 x 2	120	45	ASAP
13	Ali Wheels	NC	11 x 10.5 x 2	231	85	1 Week
14	Non-Ferrous	LC	1.2 x 1 x 0.76 per bin Approx 10 to 20 bins	0.91	0.33	1 Week
14	Batteries	C	1.2 x 1 x 0.76 per bin Approx 3 to 4 bins	0.91	0.60	1 Week
14	Catalysts	NC	1.2 x 1 x 0.76 per bin Approx 1 to 2 bins	0.91	0.60	1 Week

Waste metal stored in bays at the site are mainly non-ferrous scrap materials which are non-combustible materials and clean metals.

On occasion there will be aluminium shavings which can sometimes omit a small amount of dust. There are also electric motors, cable and UPVC frames which are not considered dusty materials. Lastly there will be batteries stored within a building.

The material stored in the external bays will be stored in a manner that will leave 0.5m freeboard space at the top and sides of the wall so materials are not subjected to wind which could blow any dust that might be present.

3.3 Mobile Plant and Equipment.

The following table lists the type, number and function of plant and equipment used on site:

Item	Number	Function
Weighbridge	2	Determine load weights in/out
Wheeled excavator	1	Loading/unloading/movement
Shredder	1	Pre treatment
Material Handler	1	Loading/unloading/movement/sorting
Forklift with mounted brush	2	To keep site surface clear of dust and debris.

The site has a Planned Preventative Maintenance Programme to ensure all machinery and components continue to remain effective. There is a programme of routine planned maintenance for each item of plant and machinery to manufacturers specifications, as well as the processing equipment in order to prevent breakdown and faults which may pose a fire risk or give rise to emission issues.

To reduce emissions there is an anti-Idling policy, all Drivers and visitors to site are informed of this.

4. Dust and Particulate (PM_{10}) Management

4.1 Responsibility for Implementation of the DEMP

The Site Manager and will be responsible for the DEMP. It will be reviewed yearly or more frequent if the need arises such as a process being changed and/or alterations are made that may affect the risk of dust. Also if an issue or complaint arises at the site regarding dust the DEMP will be reviewed. Any reviews or updates made will also be checked by the sites Environmental Consultant/TCP.

The training will be delivered by the Site Manager and refresher training will be given every six months, or if a new member of staff starts, if a process has been changed and/or alterations are made that may affect the risk of dust. Also if a complaint is received regarding dust or a breach occurs in monitoring refresher training will be given. Regular Toolbox Talks will be given to staff.

4.2 Sources/Control of Fugitive Dust/Particulate Emissions

Operations at the site that have the potential to produce dust and particulates are listed below:

- Vehicles entering and/or leaving the site with mud on wheels and tracking dust on to or off the site.
- Vehicles and plant moving around the site kicking up dust
- Road vehicles tipping waste
- Plant sorting and moving waste
- Waste stored in bays
- Site surfaces
- Loading waste materials back on to vehicles.
- Particulate emissions from the exhaust of vehicles/plant/machinery on site.
- Generators, plant and other non-road going mobile machinery.
- Shredding waste

Vehicles will be jet washed if found to be dirty, muddy or dusty to remove mud, litter or dust from the tyres or under carriage. The jet wash is situated in the north of the yard and runs off the mains water supply. After cleaning the vehicles are inspected thoroughly both underneath the vehicle and the tyres.

Table 4.2: Source-Pathway-Receptor Routes Risk Assessment

Source	Pathway	Receptor	Type of impact	Where relationship can be interrupted
Mud	tracking dust on wheels and vehicles, then mud dropping off wheels/vehicles when dry	Local highway and local business	Visual soiling, also consequent resuspension as airborne particulates	Mud will be removed from vehicles before leaving site with the use of a hose or jet wash. Handheld hoses are used on site to keep the site surface damped down to avoid resuspension of any dust. A forklift brush is used to sweep the site and keep it clear of mud, dust and litter.
Debris	falling off lorries	Local highway and local business	Visual soiling, also consequent resuspension as airborne particulates	Lorries are covered with netting before leaving site. The site is regularly swept using the forklift brush to keep the site surface clear of mud, dust and litter. Litter picking will be carried out when necessary.
Tipping, storage and sorting of wastes in the open	Atmospheric dispersion	Local highway and local business	Visual soiling and airborne particulates	Amy loads that might contain dust when tipped are covered using a handheld hose. Source strength is minimised by means of low drop heights.
Vehicle exhaust emissions	Atmospheric dispersion	Local business	Airborne particulates	Regulatory controls, meaning that the vehicles meet the required emissions limits and best-practice measures meaning vehicles are not left idling this will help minimise emissions and fuel consumption monitored to help detect any issues early on.
Non road going machinery exhaust emissions	Atmospheric dispersion	Site Operatives & Local business	Airborne particulates	Regulatory controls meaning that the vehicles meet the required emissions limits and best-practice measures meaning vehicles are not left idling this will help minimise emissions and fuel consumption monitored to help detect any issues early on.

Table 4.2: Measures that will be used on site to control dust/particulates (PM_{10}) and other emissions

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
Preventative Measures			
Site / process layout in relation to receptors	Locating particulate emitting activities at a greater distance and downwind from receptors may reduce receptor exposure, provided that emissions from the source are not dispersed over significant distances.	All particulate emitting operations will be covered by dust suppression in the form of handheld hoses. Non-sensitive Receptors are adjacent to the site on all sides except the northeast where there is a SSSI'.	All operations are carried out on the west side of the site (furthest from the SSSI) and the area where shredding is carried out is at the most northern part of the site this means that the adjacent building will act as a barrier to dust being blown off site.
Site speed limit, 'no idling' policy and minimisation of vehicle movements on site	Reducing vehicle movements and idling should reduce emissions from vehicles. Procurement policy to only purchase clean burn road vehicles and non-road going mobile machinery. Enforcement of a speed limit may reduce re-suspension of particulates by vehicle wheels.	Easy to implement as part of good practice. Should be identified clearly in the site management system and implemented as appropriate measures.	Vehicle movements, speed and idling will be reduced as far as possible. The speed limit on site is 5mph and there is a no idling policy for vehicles on site. This is written in the Management System and all Drivers and visitors to site are informed of this.
Good house-keeping	Having a consistent, regular housekeeping regime that is supported by management, will ensure site is regularly checked and issues remedied to prevent and remove dust and particulate build up.	The site is regularly cleared of debris and dust by Staff members on a daily basis.	Cleaning, clearing and checking are constantly carried out by site operatives throughout the day. A thorough check is made at the end of every working day by the Foreman to ensure there is no particulate build up. Staff will be instructed to clear any particulate build up found by either manual sweeping, hosing down or using plant depending on the size of the build-up and the area in question.
Sheeting of vehicles	Prevents the escape of debris, dust and particulates from vehicles as they travel.	Relatively easy to implement at many sites. Should be identified clearly in the site management system and implemented as appropriate measures.	Vehicles are sheeted (with 270GSM netting) entering and exiting the site all the time the site is operational.

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
Hosing of vehicles on exit	May remove some dirt, dust and particulates from the lower parts of vehicles although likely to be less effective than a more powerful wheel wash.	May be worthwhile where wheel wash installation is not feasible, or where the wheel wash does not achieve the desired outcome. This should be in the site procedures and training.	Vehicles are hosed down by the drivers with the jet wash when they are dirty, muddy or dusty prior to leaving the site. A site banksman checks all vehicles leaving the site and will instruct the driver to use the jet wash if mud or dust is present.
Ceasing operation during high winds and/or prevailing wind direction	Mobilisation of dust and particulates is likely to be greater during periods of strong winds and hence ceasing operation at these times may reduce peak pollution events.	Likely to reduce dust and particulate emissions, however, not a long-term solution. Procedures should be in place to identify when operations will cease.	The site will follow an Action Plan for windy weather conditions. Please see Action Plan 3.5.
Easy to clean concrete impermeable surfaces	Creating an easy to clean impermeable surface, using materials such as concrete as opposed to unmade (rocky or muddy) ground within the site and on site haul roads. This should reduce the amount of dust and particulate generated at ground level by vehicles and site activities.	Considered good overall based on dust and particulate reduction but potentially costly and disruptive to retrofit. For sites that have concrete surfaces ensure there are maintenance and cleaning procedures in the management system and they are implemented.	The site surface is made entirely of impermeable concrete which is maintained and cleaned on a regular daily basis.
Minimisation of waste storage heights and volumes on site	Minimising the height at which metal is handled should reduce the distance over which debris, dust and particulates could be blown and dispersed by winds. Reducing storage volumes should reduce the surface area over which particulates can be mobilised.	The amount of waste that can be managed on site without causing dust and particulate pollution should be identified in the management system and may have to be reduced if it is considered an appropriate measure.	The waste is stored below 2 metres in the bays. There is a minimum of 0.5m freeboard in all bays (top and sides) and containers, once bays are full the material is loaded onto a lorry and taken off site, as are full containers of material.

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
Reduction in operations (waste throughput, vehicle size, operational hours)	Reducing the amount of activity on site, including no tipping, shredding, of high risk loads during windy weather as well as associated traffic movements should result in reduced emissions and re-suspension of dust and particulates from a site.	Effective in terms of dust and particulate reduction but unlikely to be popular/ implemented by operators. It may be the only option when other steps fail. Ensure the site has procedures to reduce activity on site if required through complaints or known issues, or adverse weather conditions.	If adverse weather conditions dictate traffic movements will be kept to a minimum to prevent resuspension of dust from the site surface. Collections and deliveries can be delayed if necessary and third party lorries turned away. Weather alerts are received and aid with wind direction so steps can be taken (See Action Plan 3.5).
Remedial Measures			
On-site sweeping	Sweeping could be effective in managing larger debris, dust and particulates but may also cause the mobilisation of smaller particles.	Easy to apply but less effective than other measures. Should be covered in the management system and procedures and implemented thoroughly.	A brush mounted on a forklift is used to keep the site clean and clear of dust and debris as part of general housekeeping. This is done throughout the day.
Water suppression with hoses & water jets	Damping down of site areas using hoses can reduce dust and particulate re-suspension and may assist in the cleaning of the site if combined with sweeping.	Quite water intensive.	Water suppression with hoses/jet wash may be used occasionally in the external yard i.e. in dry or windy weather to help prevent resuspension of dust, however this will generally kept clean by sweeping.
Application of CMA / chemical suppressant	Diluted Calcium Magnesium Acetate (CMA) or other chemical based dust suppressant is regularly applied by spraying using a back-pack applicator for small areas or by road sweeper to cover larger areas. CMA acts as a suppressant with the aim of reducing dust and particulate re-suspension and hence ambient concentrations.		Use of CMA will be considered during a drought if necessary. It could be sprayed on the site surface to help stop dust being re-dispersed by vehicle movement, however this is generally kept clean by the road sweeper. This DEMP will be reviewed within 12 months of operating under the proposed changes (or sooner if required). The outcome of this review will identify any new measures required.

4.3 Other considerations

Water usage/ availability:

There are three water hoses from the mains water supply which is the standard industrial 1,200 litres per minute, these are located strategically about the yard as shown on the FPP Site Plan (Crows FPPSP01). This is sufficient to cover the entire yard with dust suppression.

In the event of a drought:

In the event of an upcoming drought, the use of Calcium Magnesium Acetate (CMA) dust binding agent will be considered for use on the site, which has been proven in test to be as effective as water in suppressing dust.

It could be sprayed on the site surface to help stop dust being re-dispersed by vehicle movement. It would not be sprayed on the stockpiles as it would be unlikely to be of any benefit.

The overriding management principle of the site with respect to dust control is to operate the site in a manner which prevents or minimises the release of dust. If it is considered that the waste stored on the site or the site surfacing itself is in a condition that has the potential to release a significant quantity of particulate matter such that there is a potential for off site dust emissions, dust suppression will be employed in a manner proportionate to the risk.

4.4 Visual Dust Monitoring

Routine dust monitoring will be carried out twice a day more if necessary (for instance on a windy day or particularly dry day).

There are set locations around the perimeter of the site for dust monitoring see Appendix C for onsite and Appendix D for offsite monitoring locations (up wind and downwind).

At the end of every working day the site is tidied and dust and particulate are swept up using the forklift brush. The site does not carry out any crushing or chipping but does carry out shredding of the metals so particular attention will be given to this area.

Visual monitoring is constantly carried out on site by the Site Manager and all staff have been trained with regards to dust generation, monitoring and suppression. Site management will make visual inspections of dust emissions around the entire site and perimeter throughout the day. See Appendix B Checklist.

Additional monitoring may be carried out during times of severe weather conditions or should operatives observe significant levels of dust. The monitoring will be carried out at intervals while the site is operational, should it be observed that dust is being emitted from the site a Checklist (Appendix B) will be completed and notes will made as to; the amount, direction and source of the dust. In the event of dust being visible off site steps will be taken to suppress the dust, reduce operations or cease operations depending on the source of the dust. Additional dust monitoring will be carried out if necessary.

The site has a subscription with the Met Office in order to obtain the weather forecast, wind speed and direction to see whether the dust suppression techniques need to be enhanced to reduce the likelihood of complaints

The results of monitoring exercises and any remedial action taken will be entered into the site's diary which is available for the EA to inspect upon request. The name of the person carrying out the monitoring will be stated in the site's diary / inspection form for each day of operation.

Should the monitoring conclude that a certain activity is giving rise to dust which is migrating offsite, steps will be made to reduce the impact of this activity, which may include, but is not limited to; increase in height of bay walls/enclosure, reduction of stockpile size, increased dust suppression, consider moving operation or activity to a less open area of the site.

4.5 Table Wind Action Plan

Beaufort Description	Wind Speed (Mph)		Dust Suppression required
0 Calm	Less than 1		Dust suppression. Consider sweeping & damping down site surface
1 Light Air	1-3		Dust suppression. Consider sweeping & damping down site surface
2 Light Breeze	4-7	Felt on face	Dust suppression. Consider sweeping & damping down site surface
3 Gentle Breeze	8-12	Leaves, twigs in motion	Dust suppression. Consider sweeping & damping down site surface
4 Moderate Breeze	13-18	Dust & loose material blown about	Dust suppression. Consider sweeping & damping down site surface
5 Fresh Breeze	19-24	Small trees begin to sway	Dust suppression. Consider sweeping & damping down site surface
6 Strong Breeze	25-31	Large branches begin to sway	Dust suppression. Consider sweeping & damping down site surface if safe to do so.
7 Moderate Gale	32-38	Resistance felt in walking	Dust suppression. Consider sweeping & damping down site surface if safe to do so.
8 Fresh Gale	39-46	Small branches broken off trees, very difficult to walk in	Cease some activities if the wind is having a detrimental effect (i.e recycling destination may not be accepting materials or driving is hazardous))
9 Strong Gale	47-54	Slight structural damage	Cease activities
10 Whole Gale	55-63	Rare on land	Cease activities

5. Actions for dust issues.

If it is established that the emissions are attributable to activities being undertaken at Crow Metals site action will be taken to control the emissions including where relevant:

- If emissions are attributable to stockpiled material, employing dust suppression immediately using the sprinklers and/or handheld hoses to dampen the stockpiles.

- If emissions are attributable to unloading or loading of waste further dust suppression will be applied to control the particulate matter emission from the activity being undertaken.

- Carry out additional road sweeping or cleaning of the site surface if necessary.

- Checks to confirm that vehicles are obeying the site speed limits.

If the origin of the dust is not obvious then off-site monitoring will be carried out to check for any off-site activity that could be potentially attributable to the dust source other than Crow Metals.

If the origin for the dust is still not obvious after checking on-site and off-site, the London Air Quality Network website for monitoring stations in the area will be checked for any unusual regional weather events occurring.

In all cases, any new “lessons learnt” from the Site Managers investigations are considered by Management and implemented into dust & particulate emission management plan (if not already included), to prevent a re-occurrence of the issue.

6. Reporting and Complaints Response

Should a dust complaint be received a Complaints Form will be completed see Appendix A, these will be kept for inspection on request by the EA. Details of information to be completed are dates, nature of complaint, weather conditions at the time of the complaint, investigation details, action taken and a signature (as a minimum).

Any unavoidable events such as plant/equipment malfunctions will be recorded in the site diary, this will ensure that if complaints are received retrospectively from either the Council/EA or directly, any circumstances which led to that complaint as a result of elements outside of the operator's control would be able to be attributed to the cause of the complaint.

If the source cannot be ascertained with 100% confidence, the site manager or TCP will either suspend or reduce the likely dust/particulate generating activities, i.e. waste processing. If the complaint is considered valid, an investigation into the complaint will take place immediately by site management to ensure the problem can be rectified as soon as possible. The operator would then contact the complainant to advise on the issue and how this has been rectified.

If the source is within the site's control, the site manager or TCP will take appropriate action in terms of dust/particulate abatement.

Complaints of dust and particulate will be dealt with by the Management. Details will be taken from the complainant and logged on a Complaint Form. Investigations will be made into the complaint to verify the issue. If the complaint is verified then the activity giving rise to the dust will cease until such time as the it can be carried out with causing a dust nuisance. The complainant will be informed of the findings and of the actions taken to rectify the issue. A record will be made in the Site Diary and the Complaint Form kept in the Site Office. This will generally be completed within two working days or less of the initial complaint.

6.1 Engagement with the Community

If the site is causing an impact on local businesses steps will be taken to reassure them that issue is being dealt with and they will be informed of progress and outcome. The management will be responsible for engagement with the community, this will be carried out either by phone or in person, contact details will be left with the individual businesses so an open line of direct communication is available to them.

6.2 Reporting of Complaints

A complaints form will be used to log complaints, feed back will be given either in person to the complainant or over the phone. Complaints will be reviewed to ensure that the cause of the problem does not occur again.

Any complaints received in relation to dust will be recorded on the form shown in Appendix A by the person in receipt of the complaint. Complaints will be handled by the Site management or TCP.

The following details will be completed on the form.

a) The name, address and telephone number of the caller will be requested (however the complainant will have the option to remain anonymous).

b) Each complaint will be given a reference number.

c) The caller will be asked to give details of

- the nature of the complaint;
- the time
- how long it lasted
- how often it occurs
- See form below for more details

The person completing the form will then, if possible, make a note of the weather conditions at the time of the problem (rain snow fog etc.), strength and direction of the wind and the activity on site at the time the dust was detected.

d) The reason for the complaint will be investigated and a note of the findings added to the report.

e) The caller will then be contacted with an explanation of the source of the complaint if identified and the action taken to prevent a recurrence of the problem in future.

f) If the caller is unhappy about the outcome or unwilling to identify themselves the caller will be referred to the appropriate department of the EA or Local Council.

g) Following any complaint the complaints procedure will be reviewed to see if any changes are required or if new procedures need to be put in place.

Appendix A - Dust Complaint Form

Crow Metals Ltd	
Name (if given) Can remain anonymous-	
Address – (If given) Postcode -	
Contact Details -	
(If given)Tel -	
Email -	
Date -	
Complaint Ref Number -	
Complaint Details -	

Investigation Details	
Investigation carried out by -	
Position -	
Date & time investigation carried out -	
Weather conditions -	
Wind direction and speed -	
Investigation findings -	
Feedback given to Environment Agency and/or local authority -	
Date feedback given -	
Feedback given to public -	
Date feedback given -	

Review and Improve	
Improvements needed to prevent a reoccurrence -	
Proposed date for completion of the improvements -	
Actual date for completion -	
If different insert reason for delay -	
Does the dust management plan need to be updated -	
Date that the dust management plan was updated -	

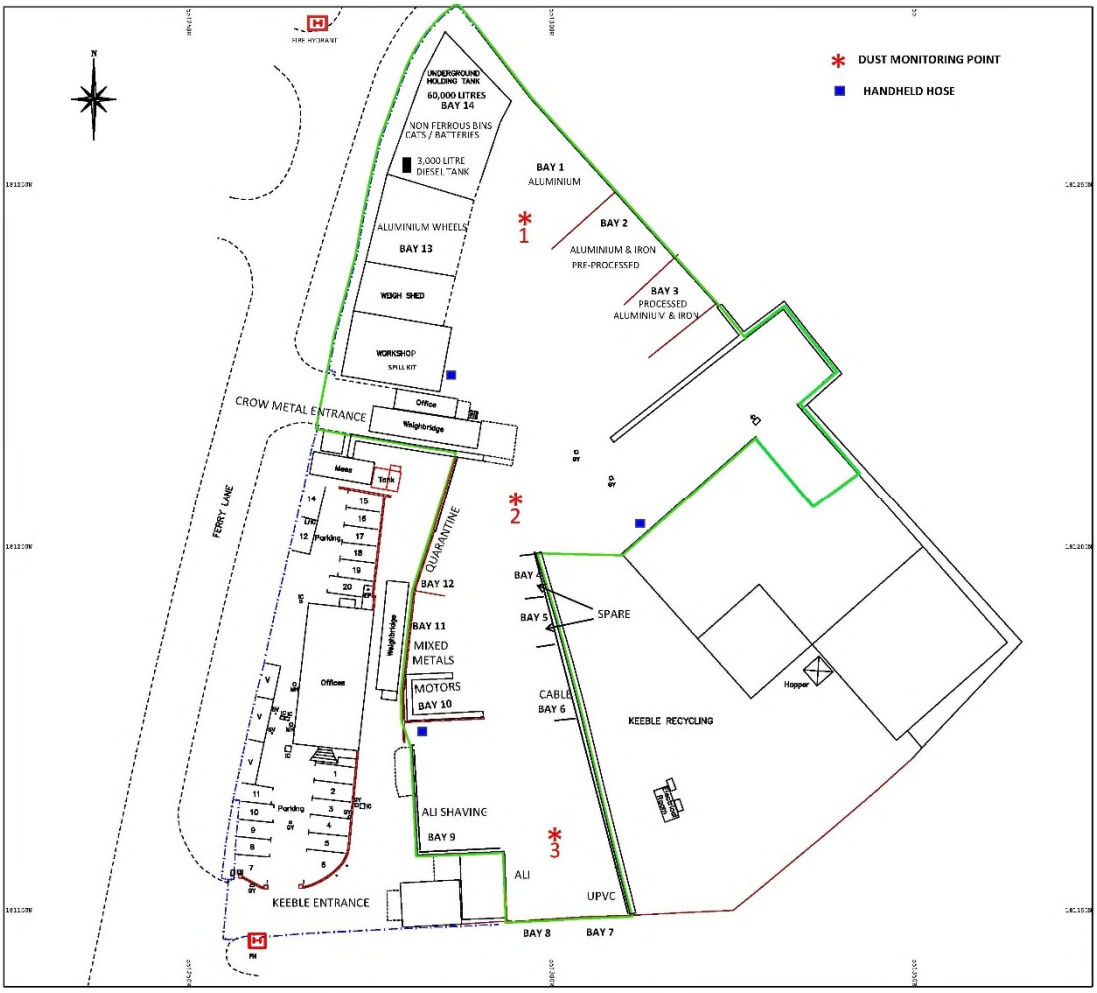
Closure	
Site manager review date	
Site manager signature to confirm no further action required	

Appendix B Checklist

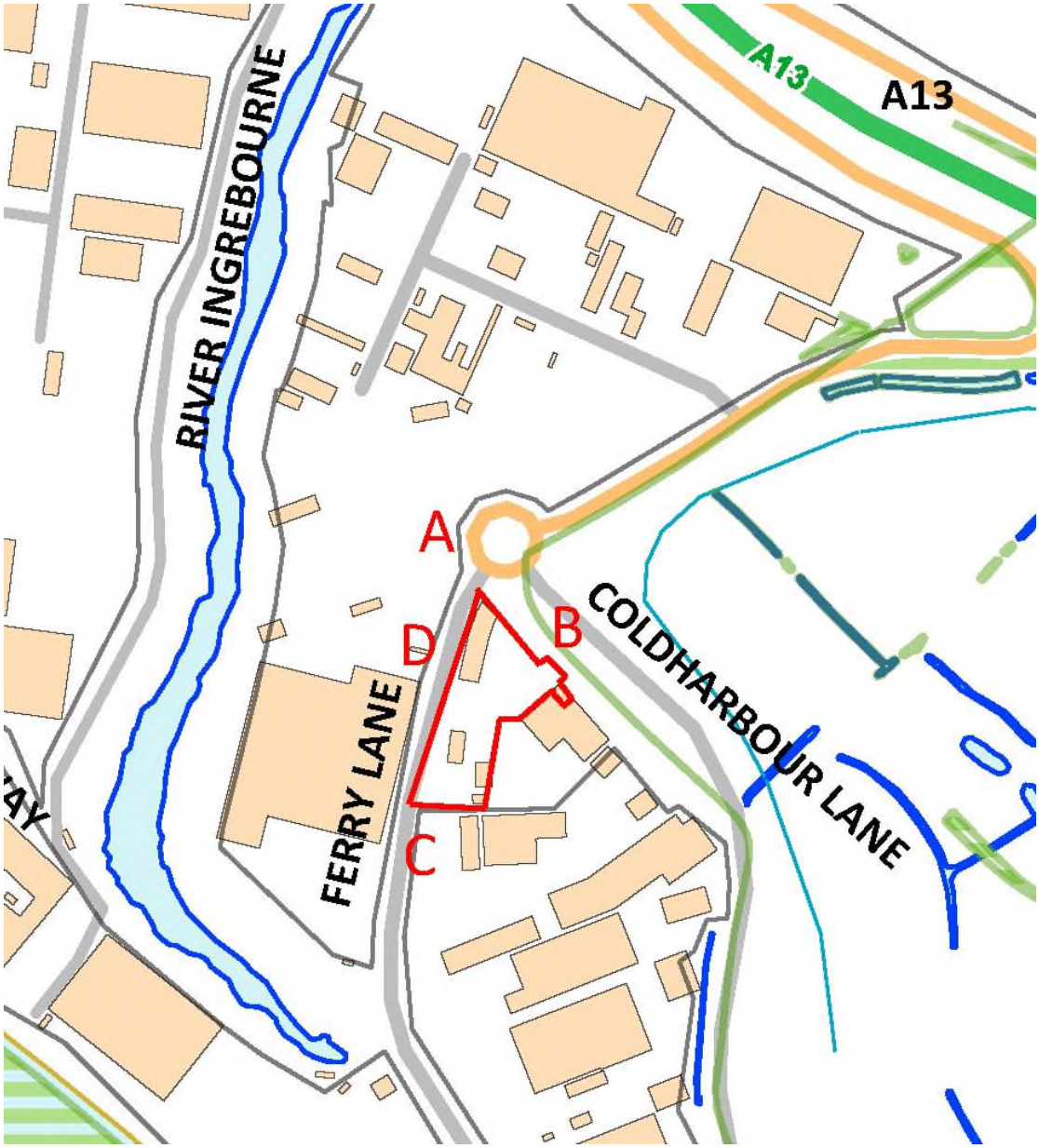
DATE	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
CHECKED BY (INITIALS)						
ARE DUST DISCHARGES FROM STOCKPILES CONTROLLED?						
ARE DUST DISCHARGES FROM SITE SURFACE CONTROLLED?						
IS ANY VISIBLE DUST OBSERVED AT THE SITE DOWNWIND BOUNDARY?						
ARE THE HOSES ON REGULARLY ENOUGH?						
ARE THE HOSES ON WHEN METAL IS BEING TIPPED/LOADED/PUSHED UP?						
IS PLANT DRIVER BEING MINDFUL OF DUST WHEN MOVING THE WASTE?						
ARE DRIVERS KEEPING TO THE 5MPH / NO IDLING RULE?						
IS VISIBLE DUST BEING PRODUCED THAT IS NOT BEING SUPRESSED?						
IS VISIBLE DUST LEAVING SITE BOUNDARY?						

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
CAN YOU IDENTIFY THE ACTIVITY GIVING RISE TO THE DUST?						
WHAT ACTION CAN BE TAKEN TO PREVENT DUST PRODUCTION						
REPORT ANY ISSUES TO TCP WRITE IN THE SITE DIARY WRITE ANY COMMENTS HERE						

Appendix C Dust Monitoring Points On site



Appendix D Dust Monitoring Points Off site



Appendix E Dust Survey Form

Dust Survey Recording Form		Reason for Dust Survey	*Dust detected at boundary? Y/N* *Complaint Y/N* *Other*
Name of Surveyor		Job Title	
Date		Time of Survey Start/Finish	
Air Temp. ^{o}C		Wind Direction	

Location	**Is dust evident**	**Is origin of dust evident? Run through checklist.**	**Actions Taken**
1 On site			
2 On site			
3 On site			
A Off site			
B Off site			
C Off site			
D Off site			

Notes:

Appendix F Training Form

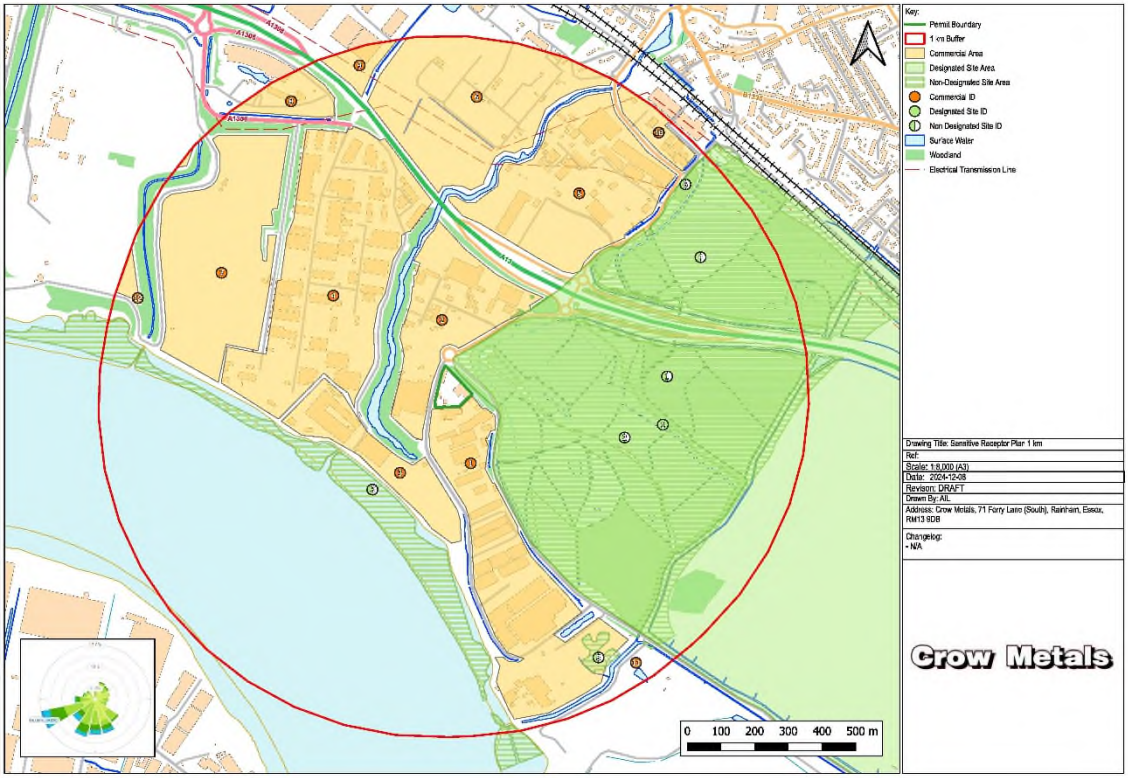
CROW METALS LIMITED
EMPLOYEE TRAINING NEEDS ASSESSMENT / REVIEW

EMPLOYEE NAME				**DATE COMPLETED**			
POSITION				**REVIEW DUE**			
TRAINER				**OUTCOME**	**PASSED**		
POSITION					**FURTHER TRAINING REQUIRED**		
CARRIED OUT /SIGN OFF >	**Y/N**	**SIGNED BY EMPLOYEE**	**SIGNED BY TRAINER**		**Y/N**	**SIGNED BY EMPLOYEE**	**SIGNED BY TRAINER**
ENVIRONMENTAL PERMIT				**FIRE PREVENTION PLAN**			
MANAGEMENT SYSTEM				**FIRE SAFETY**			
SITE RULES				**EMERGENCY PROCEDURES**			
RECORD KEEPING / TRANSFER NOTES				**STORAGE /PILE SIZE LIMITS**			
RECOGNITION OF WASTE TYPES				**STORAGE DURATION**			
SECURITY				**FIRE DETECTION**			
VEHICLE CHECKS				**FIRE ALARMS**			
PLANT OPERATION				**FIRE FIGHTING EQUIPMENT**			
PLANT CHECKS				**FIRE WATER CONTAINMENT MEASURES**			
AMENITY - LITTER, ODOUR, PESTS etc.				**SPILL CLEARANCE**			
DUST MONITORING							
NOTES AND ACTIONS:							

Appendix G Receptors within 2km

TYPE OF RECEPTOR	ID #	DESCRIPTION	DISTANCE FROM BOUNDARY (M)	DIRECTION
		SITE		
HUMANS AND PROPERTY	-	Site Workers	On site	-
	-	Site Visitors	On site	-
		COMMERCIAL		
	1	Multiple Industrial Units off Coldharbour Lane	0 m	S
	2	Multiple Industrial Units off Ferry Lane	26 m	W
	3	Depot off Creek Way (Renewi)	183 m	SW
	4	Multiple Industrial Units off Marsh Way	212 m	W
	5	Multiple Depots & Industrial Units off Lansom Road	432 m	NNE
	6	Sewage Works off A13	531 m	N
	7	Vehicle Compound off Creek Way	558 m	W
	8	Science Park off Marsh Way	836 m	NNW
	9	Multiple Industrial Units	867 m	NNW
	10	Multiple Commercial Units at Rainham Railway Station	875 m	NE
	11	Rainham Landfill	945 m	SSE
	12	Vehicle Compound off A13 (Ford Motors)	963 m	WNW
	13	Multiple Industrial Units south of the River Thames	1048 m	SW
	14	Multiple Distribution Centres south of the River Thames	1108 m	WSW
	15	Multiple Retail Units off Viking Way	1334 m	NE
	16	Depot off Consul Way (Tesco)	1376 m	NW
	17	Car Factory off A13 (Ford Dagenham Engine Plant)	1462 n	WNW
	18	Energy Recovery Facility off Norman Road	1545 m	WSW
	19	Public House off Rainham Road (The Albion)	1570 m	NE
	20	Erith Oil Works	1587 m	SSW
	21	Distribution Centre off Mulberry Way (Ocado)	1691 m	SSW
	22	Depot off Lake Road (Ford Motors)	1733 m	NW
	23	Multiple Retail Units off Cyldesdale Way	1939 m	SW
		AGRICULTUAL		
	1	Multiple Packets of Arable Land between A13 & B1335)	1671 m	E
		RESIDENTIAL		
	1	Residents of Rainham	1171 m	NE
	2	Residents of Dagenham south of A1306	1330 m	N
	3	Residents of Dagenham north of A1306	1490 m	N
		ROADS & RAILWAYS		
	-	Ferry Lane	0 m	W
	-	A13	378 m	NE
	-	A1306	793 m	NNW
	-	London, Tilbury & Southend Railway Line	1079 m	NE
	-	A125	1556 m	NNE
	-	A2016	1923 m	SW
		PUBLIC USE		
	1	Riverside Car Park	1018 m	ENE
	2	Havering College Rainham	1191 m	SSE
	3	Rainham Village Primary School & Nursery	1437 m	NNE
	4	Our Lady of La Salette Roman Cathlic Church School	1465 m	NE
	5	Brady Primary School & Harris Academy (Rainham)	1774 m	NNE
	6	Newtons Primary School	1862 m	NNW
		RECREATIONAL		
	1	Ingrebourne Hill Country Park	1839 m	NE
	2	Lessa Park	1844 m	NNE
WATER		**SURFACE WATER**		
	-	Multiple Streams, Ponds & Features within the Rainham Marshes	93 m	ESE
	-	River Ingrebourne	148 m	W
	-	River Thames	298 m	SW
	-	Rainham Creek	497 m	NNE
	-	Beam River	1397 m	WNW
	-	Multiple Lakes at Ingrebourne Hill Country Park	1649 m	NNE
	-	Lagoon off Church Manor Way	1765 m	SSW
	-	Lagoon at Ford Dagenham Engine Plant	1823 m	NW
		GROUNDWATER		
	-	Bedrock Aquifer - Unproductive	On site	-
	-	Superficial Layer - Secondary Aquifer	On site	-
		DESIGNATED SITES		
	-	Air Quality Management Area - London Borough of Havering	On site	-
	1	SSSI - Inner Thames Marshes	9 m	NE
	-	Air Quality Management Area - London Borough of Bexley	813 m	SW
	-	Air Quality Management Area - London Borough of Barking & Dagenham	1635 m	WNW
ENVIRONMENTALLY SENSITIVE	2	SSSI - Ingrebourne Marshes	1667 m	NE
		NON-DESIGNATED SITES		
	1	Local Nature Reserve - Rainham Marshes south of A13	46 m	ENE
	2	BAP - Coastal & Floodplain Grazing Marshes north and south of A13	52 m	E
	3	BAP - Mudflats on northern shore of the River Thames	274 m	SW
	4	Local Nature Reserve - Rainham Marshes north of A13	558 m	ENE
	5	BAP - Deciduous Woodland off Coldharbour Lane	817 m	SSE
	6	BAP - Good Quality Semi-Improved Grassland off Ferry Lane	855 m	NE
	7	BAP - Mudflats on southern shore of the River Thames	1001 m	SW
	8	BAP - Deciduous Woodland off Anderson Way	1693 m	SW
	9	Local Nature Reserve - Crossness	1702 m	WSW
	10	Local Nature Reserve - Ingrebourne Valley	1757 m	NE
	11	BAP - Coastal Saltmarsh off Thames Path	1879 m	WSW
		HERITAGE SITES		
	1	Multiple Grade II Listed Buildings & Features at Rainham Hall Estate	1227 m	NE
	2	Grade II Listed Building - South Hall Farmhouse	1887 m	ENE

Appendix H Sensitive Receptors within 1km



Appendix I Sensitive Receptors within 2km