# DUST MANAGEMENT PLAN

Moss Road, Lyon Road Industrial Estate, Kearsley, Bolton, Lancashire BL4 8NB

**Circle Recycling Ltd**

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# 1 Introduction

## 1.1 Site history / background

1.1.1 Oaktree Environmental Ltd have been instructed by Circle Recycling Ltd to prepare a Dust Management Plan (DMP) for their site situated at Moss Road, Lyon Road Industrial Estate, Kearsley, Bolton, Lancashire BL4 8NB.

1.1.2 All references to the site in this DMP shall mean the permitted boundary extracted from the EP.

1.1.3 This DMP will allow Circle Recycling Ltd to implement an action plan should the site operatives detect the presence of airbourne dust escaping beyond the site boundary, receive complaints from local business or residents and should the EA suspect dust emissions from the site during an inspection.

1.1.4 All references to the site in this DMP shall mean the permitted boundary extracted from the EP. The following references which shown throughout this DMP are defined as the following:

- **Prolonged rainfall** = 1 in 100-year flood event or 3 more wet days
- **High winds** = Where wind speed reaches 4 of the Beaufort Wind Scale or if dust is being emitted beyond the site boundary following routine site inspections
- **Dry weather** = three dry days or weather conditions exceeding $75^0$F for more than one day.
- **Severe weather conditions** = The above and including dense fog, hail or snow.
- **Significant levels of dust** = Activities with the potential to emit dust beyond the site boundary.

## 1.2 Site location

1.2.1 The site is located at Moss Road, Lyon Road Industrial Estate, Kearsley, Bolton, Lancashire BL4 8NB as shown on Drawing No. LRIE/2948/03. The national grid reference for the site is SD 74429 44360.

1.2.2 **AQMA** – The site is located within an AQMA area; however, not for PM10 particulates.

## 1.3 Facility overview

1.3.1 The site is currently operate under Environmental Permit (EP) EPR/FB3801TR which is a SR2015No.4 EP comprising the manual sorting and transfer of household, commercial and industrial (HCI) wastes. This DMP has been produced to accompany the following variations to the permit:

i) Vary to a Household, Commercial, Industrial (HCI) waste transfer station (WTS) with treatment activity comprising the acceptance, storage and **mechanical treatment** of HCI wastes.
ii) The throughput of the above activity will be <150,000 tonnes per annum.
iii) The proposed storage and transfer of non-specified wastes will take place externally and not inside a building.

1.3.2 On occasions the site may process hardcore by crushing but it must be noted that this would only take place approximately once per month.

1.3.3 The main issue of dust could arise from, but not limited to the following:

i) Waste reception and tipping areas (internal and external);
ii) Manoeuvring of vehicles tracking dust
iii) Operation of mechanical treatment plant
iv) Storage and loading areas comprising potentially 'dusty' wastes.

1.3.4 In addition to this document, the site will also operate in accordance with a number of site-specific documents; namely an Environmental Management System (EMS) which will make reference to this DMP.

1.3.5 All relevant operational staff will be suitably trained to ensure they understand the purpose of this DMP and understand what actions need to be taken in event of a complaint. Training will be taken by the site manager, technically competent manager/s (TCM/s) or third-party Dust / Air Monitoring Consultant.

# 2 Sensitive Receptors

## 2.1 Receptor Plan

2.1.1 A sensitive receptors plan (SRP) has been produced to accompany this DMP and is shown in Appendix I referenced as on Drawing No. LRIE/2948/04.

## 2.2 List of receptors

2.2.1 The receptors listed from the SRP are also shown in the table below with approximate distances to these properties.

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

| Boundary | Receptor | Approximate distance from centre of site (m) |
|---|---|---|
| *South-west* | Blackleach Country Park and Reservoir (LNR & LWS) | 200 |
| North-*east* | Residential Properties within 500m of the site | 250 - 300 |
| North, east & south | Surrounding users of the industrial estate | 0 - 500 |
| North-east, north-west and south-west | Schools/academy's | 320 - 800 |

2.2.2 Other receptors not shown in the above table are illustrated on Drawing No. LRIE/2948/04.

## 2.3 Other dust and emission sources

2.3.1 Other dust/particulate emitting operators are tabulated below in the table below.

**Table 2.2 – Other Dust/Particulate Emitting Operators**

| Company | Address | Type of Business | Approximate distance & location from site boundary (m) | Possible Dust Issue |
|---|---|---|---|---|
| Various | Units on Lyon Road Industrial estate | Industrial / Commercial | Adjacent | Visual soiling and airborne particulates including TSP |
| Highways | N/A | M*6 Motorway* | 20 - 50 / South-west | Airborne PM10 particulates |

# 3 Site Operations

## 3.1 Waste deliveries/removals

3.1.1 Waste will be delivered to the site via the existing access off Moss Lane from the Industrial Estate which is surfaced with concrete. Upon arrival, an operative will direct the driver to the relevant tipping area on site.

3.1.2 Waste will arrive and depart at/from the site primarily consisting of Circle Recycling Ltd's own vehicles/contracts and all loads are either sheeted or contained upon delivery and removal.

3.1.3 Any third-party deliveries to the site will be advised that all loads be suitably sheeted. If the customer has the capability to wet down loads, they will be asked to do this. If a customer is unable to place a dust sheet on a vehicle or wet a load they will be prohibited from loading/unloading until suitable containment has been provided. In the event of negligence or abusive behaviour occurring, customers may be asked to leave the site immediately and the EA will be contacted directly or the customer information will be logged in the site diary.

3.1.4 Following initial inspection of the load, if any loads are found to be containing high levels of powders, it will be rejected in accordance with the site's rejected waste procedure.

## 3.2 Site infrastructure

3.2.1 The site infrastructure is clearly detailed on Drawing No. LRIE/2948/03 which is shown in Appendix I of this DMP. The drawing illustrates the following areas on site:

i) Different surfaces i.e. concrete, tarmac etc.
ii) Location of buildings
iii) Height/type of perimeter fencing
iv) Reception and storage areas of waste
v) Location of fixed plant/equipment i.e. loading hoppers, screeners
vi) Existing dust mitigation techniques
vii) Locations of dust suppression equipment

## 3.3 Wastes with dust potential

3.3.1 The following common waste which will be present on the site have the potential to create dust will be:

- 17 01 07 - mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06
- 17 05 04 - soil and stones other than those mentioned in 17 05 03
- 17 08 02 – gypsum-based construction materials other than those mentioned in 17 08 01
- 17 09 04 - mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03
- 19 12 09 - minerals (for example sand, stones)
- 19 12 12 - other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11
- 20 02 02 - soil and stones

3.3.2 Reference should be made to the Risk Assessment Tables outlined in Section 5.7 and the control measures outlined in Section 4 for details of the handling procedures and mitigation measures in place for wastes stored at the site.

## 3.4 Overview of site operations

3.4.1 All mixed loads received on site will be deposited in the mixed waste reception area (AREA 1) where waste is subject to an initial sort either by hand or using a shovel/excavator. Bulky waste i.e. mattresses which can separated using the excavators and will be deposited into the residual waste bay inside the building and all remaining waste will be fed into the mechanical treatment plant.

3.4.2 The resultant material is then subject to mechanical sorting via the HCI treatment plant which will separate and further refine the waste to allow easier recovery.

3.4.3 Separated wastes to be reclaimed/recycled, are stored in dedicated bays. Wastes such as concrete and paper/cardboard may undergo further treatment i.e. crushing/baling prior to be removed from site.

3.4.4 The activities above will be regulated under the site EP.

## 3.5 Processed waste types/product

3.5.1 All processed wastes arising from the mechanical treatment plant are stored as shown on LRIE/2948/03.

## 3.6 Mobile plant and equipment

3.6.1 Mobile plant and equipment along with their preventative maintenance are clearly detailed in the site's Fire Prevention Plan (FPP) and not considered necessary to duplicate as part of this DMP.

3.6.2 A no idling policy is in place which ensures that engines are switched off when vehicles or plant are not in use. This policy will ensure that tail pipe emissions are significantly reduced.

# 4 Dust Management & Control Measures

## 4.1 Responsibility for implementation of the DMP

4.1.1 The site manager/s and TCM (site management) will be responsible for the implementation of the DMP. Deputy site managers, senior plant operatives will also be identified in order to support the site manager. Full job roles at the site are clearly shown in the table below.

**Table 4.1 - Staffing Levels**

| Position | Employees | Responsibilities |
|---|---|---|
| Site manager/s | 3 ***(1)*** | Overseeing and co-ordinating all activities which take place at the site |
| TCM (weekly) | 1 ***(1)*** | Ensuring that the site is being operated in accordance with the EP and Health & Safety Legislation |
| ***The above comprise site management who operatives will report to*** | | |
| Machine / Plant Operator's / | 2 ***(1)*** | Waste handling/processing, reception and plant operation |
| General operatives | 2 ***(1)*** | To conduct site patrols when the site is not manned / operational |
| Administration staff | 1 ***(1)*** | Office/administrative duties |

4.1.2 Site management will ensure the DMP is reviewed annually or sooner in the event of complaints/dust issues; whichever is the soonest, with any amendments or alterations put in place as soon as reasonably possible.

4.1.3 The above staff with the aid of Oaktree Environmental Ltd (if required) will be responsible in providing training to relevant operational staff to ensure they are deemed competent and understand the contents of this DMP. Staff will undergo re-fresher every 12 months or in the event of a dust complaint / issue or the implementation operational changes.

## 4.2 Sources of fugitive dust/ emissions

4.2.1 The main dust/emission sources which arise from site are detailed in the following table below:

**Table 4.2 – Dust emission source table**

| Source/Plan Ref | Description |
|---|---|
| Loading Area | The main tipping area or waste reception area (AREA 1) |
| Loading of waste into mechanical plant | Loading waste into the Treatment Plant (AREA 1) |
| Various sources | Output and storage of waste arising from treatment |
| Various sources | Vehicles accessing/aggressing the site tracking dust on to or off the site |
| Various sources | Dust being blown around from site surfaces or dusty wastes not contained |
| Various sources (sorted waste bays) | Loading waste materials back on to vehicles for export from site |
| Various sources | Particulate emissions from the exhaust of vehicles/plant/machinery on site (NO2). |
| Various sources | Where wind speed reaches 4 of the Beaufort Wind Scale. |

## 4.3 Control Measures (general/staff training/daily inspections)

4.3.1 Good housekeeping and site practices are vital to ensure that the impacts from fugitive dust and debris impacts are controlled. The site undertakes regular inspections throughout the day for the presence of dust/debris with corrective actions taking place upon discovery. Operational staff are suitably trained in procedures to keep the levels of dust /debris to a minimum including prevention and mitigation. The inspections will be once a day minimum and more frequent (three times daily) during dry weather conditions or when winds reach 4 or above on the Beaufort Wind Scale. All inspections will be visual and are recorded on the Dust Monitoring Forms shown in Appendix III. The inspections points may vary on site so are therefore not included on the drawing.

4.3.2 The areas listed in table 4.1 above i.e. where dusts arise or build up will be continuously monitored throughout the working day and cleaned on a daily basis; paying special attention to the machines where dust is more likely to build up.

4.3.3 The site will rely on weather updates for wind speed/gusts using live information from the Met Office or other suitable weather website (Refer to Section 6.3 which details how the site will operate under periods of winds exceeding 4 on the Beaufort Wind Scale). Site

management will train operational staff of the winds speeds in the Beaufort Wind Scale and by reviewing weather conditions in advance, site management can inform operatives of the type/no. of inspections required, whether continuous suppression is required, if stockpile heights need reducing or if some treatment operations i.e. shredding of waste needs to be suspended. A copy of the Beaufort Wind Scale is shown in Appendix V of this DMP for reference.

4.3.4 Site management will review all results/data at the end of the working day or immediately in the event of complaints, dust plumes on site or dust emanating off site causing pollution.

4.3.5 The operator will avoid fugitive dust emissions by committing to the following housekeeping:

- Maintain a clean, well-organised site
- Use suppression systems to dampen down potentially dusty wastes
- Jet spray and disinfect storage bays when emptied
- Clean equipment that has been in contact with dusty materials
- Carry out a deep clean of the reception / processing building and external areas once a quarter and record this in the site diary
- Concrete floors designed with a slope towards drainage system and designed in a way that allows easy cleaning.
- Floors sealed to prevent absorption and adsorption of dust producing residues.
- The operator has a maintenance team which carries out the cleaning and maintenance on a continual basis then a final check 1 hour at the end of each day or 1 hour before their shift ends.

## 4.4 Control measures (Boundary fencing /containment)

4.4.1 The waste reception area for mixed waste is located within a secure tipping bay which will act as a wind barrier and considered a suitable measure to reduce the potential for dust escaping from this area and beyond the site boundary. The area will also have a covered shelter to prevent any escape or airbourne dust.

4.4.2 The building is not operated under negative pressure and is not fitted with PVC strip curtains or fast-closing doors; the site has suitable alternative measures in place in place to ensure dust does not escape beyond the building or boundary which have been discussed in sections 4.3 – 4.13.

4.4.3 All other waste storage areas for potentially dusty wastes are either stored within dedicated storage bays with a suitable freeboard height to limit the amount of dust/debris escaping the bay or a free standing pile which benefits from water suppression.

4.4.4 Boundary treatments have been detailed on Drawing No. 2948/LRIE/03.

## 4.5 Control measures – site surfacing

4.5.1 The area of the site where potentially dusty wastes are stored consists of a concrete surface. This reduces the risk of airborne debris such as mud, stones being tracked around areas of the site from vehicle chassis. The whole operational area of the site is concreted and as the primary source of waste is a mixed skip and not soils or aggregates, the likelihood of mud/debris becoming present on the site surface is low.

4.5.2 The site has access to a road sweeper which is used to sweep the site surface twice a day. The road sweeper can be used more frequently if mud/dust occurs more frequently at the site. The operator will also dampen down the concrete surface with hosepipes, water bowser, a dust cannon and manually sweep the site daily with brushes.

4.5.3 The surface is relatively flat and any defects such as cracks, rivets will be repaired as soon as practically possible to ensure the site can be swept using a road-sweeper or similar.

## 4.6 Control Measures – site surfaces and vehicle movements

4.6.1 The control measures implemented by site management to minimise the risk of dust and debris emissions from dusty site surfaces and vehicle movements include:

- A permanent water supply will be made available on site during dry weather conditions to ensure that the dust suppression systems can function effectively.

- Vehicle speed on site is restricted to 10 miles per hour. Signs are erected at the relevant areas of the site. This reduces the re-suspension of dust and particulate matter.
- Exiting vehicles will leave the site and will avoid all areas where wastes are stored or stockpiled. All vehicles will be checked before they leave the site to ensure no mud/dust can stretch beyond the site access. All incoming/outgoing vehicle loads will be sheeted.
- Any mud/dust deposited onto the public highway will be treated as an emergency and cleaned by operatives or by way of a road sweeper. The road sweeper is readily available on site and is used twice a day to sweep the site surfaces and access haul road. It will be used to clear surrounding roads if it is deemed that the site operations have resulted in dust/mud being carried on to the road.
- Any dust/fluff cleared from mobile plant or other areas where dust/fluff could idle, the material will be deposited into one of various mobile wheelie bins which are located in several areas in the building which do not restrict vehicle movements.
- The operator will dampen down surfaces using a hose; paying special attention to the areas where dust/debris is likely to build-up i.e. near the waste reception area (AREA 1) and bays containing dusty wastes (AREAS 19 – 21).
- The operator will shutdown plant/machinery and hose them down to remove any dust/fluff that may have accumulated beneath them.

4.6.2 It must be noted the site is currently accepting the same waste as proposed; albeit on a smaller scale and have had no issues or complaints from third parties regarding tracking mud/debris off site.

## 4.7 Control Measures – site suppression

4.7.1 **Hosepipes** – There are hoses situated around the site which can be utilised to spray on bays and stockpiles; and for further dampening of the main 'dusty' stockpiles and the site surface. The hosepipes will be used daily to dampen down all wastes at the site to ensure dust does not escape beyond the boundary.

4.7.2 **Dust Cannon** – The benefits two no. mobile dust cannons at the site. The cannons will benefit from a 40m reach on an oscillating platform to ensure full coverage of all dusty waste stored at the site, including internal areas. As they are mobile, they can be used in all areas

of the site. The cannons and above hosepipes will not be in use continually but only during the following circumstances where site management will inform staff to implement them:

- If the weather has been dry for three days and waste stockpiles/surface are dry.
- During dry/warm conditions i.e. temperatures above $20^0$C/$70^0$F.
- During weather conditions when winds reach 4 or above on the Beaufort Wind Scale
- In the event of operational staff or site management are noticing dust plumes appearing on site or dust emanating off site from carrying out daily on/off site inspections.
- In the event the operator requires to load dusty waste which may cause airborne dust once being loaded.

4.7.3 The cannons will run continuously throughout the day during the above circumstances and will only stop if it is clear from inspections that dust is not being blown on site or emanating off site. This may occur if weather conditions change or one of the above suppression techniques have been successful.

4.7.4 The cannons are electrically powered and can operate by plugging in one water hose which would be connected to the water main. The cannon can orientate $320^0$ and has a -150 – 600 tilt. The cannon will have a 50m range and can provide suppression at up to 58 l/m. The cannons can be operated by remote control so would be initiated in the event staff detect any signs of dust appearing. The cannon will be maintained to the same standard as the mobile plant in terms of cleaning for dust and fluff and daily maintenance checks.

4.7.5 **Internal (manual) Suppression System** – The building will be fitted with a manual dust suppression which will be mains fed and consist of hose pipes placed in dusty areas i.e. by the trommel and plasterboard bay.

## 4.8 Control measures – wheel wash / wash down area

4.8.1 No wheel wash is proposed at the site however site drivers (trained by site management) will be told to inspect area their vehicle prior to leaving the site and inform an operative if required to use pressure washers, hosepipes, and brushes on the vehicle.

4.8.2 Before exiting the site, all vehicles will be stopped and visually inspected by trained staff to reduce the risk of mud/debris being tracked off-site. If the member of staff inspecting the vehicle is satisfied, the vehicle is suitable to egress and will be directed off site.

4.8.3 If the vehicle is not suitable to egress, the staff member will instruct the driver to go to the wash down area to clean the wheels and bodies of vehicles. These steps will be repeated until the vehicle is clear and the potential of mud being tracked onto roads is eliminated. Following this, a final inspection will be carried out by the trained staff member before any vehicle can leave the site.

4.8.4 In the unlikely event that the material is deposited on the access road or public highway it will be treated as an emergency and will be cleared immediately by the operator using either a hose, brush and shovel or vacuum tanker/road sweeper.

4.8.5 In the unlikely event that the material is deposited on the access road or public highway it will be treated as an emergency and will be cleared immediately by the operator using either a hose, brush and shovel or vacuum tanker/road sweeper.

## 4.9 Control measures – water supply

4.9.1 A permanent water supply will be made available on site during all weather conditions to ensure that the dust suppression can function effectively. All external water pipes will be lagged to prevent frost damage during winter months and the operator will set up a notification alert system with the Met Office in the event of a drought being imminent. This will enable the operator to source water in the short and long term and store in tanks prior to a potential water ban.

## 4.10 Control Measures – storage of waste

4.10.1 The control measures implemented by site management to minimise the risk of dust and debris emissions from the continuing storage of wastes and the loading/unloading of these include:

- Stockpiles of dusty waste will not be stored higher than 4m which is considered appropriate for this type of facility given the nature of surrounding receptors.
- If required, stockpiles will be sprayed with water during periods of dry/windy weather to prevent excessive drying and dust formation.
- In the event of dust plumes on site, dust emanating off site, dry weather conditions or when winds reach 4 on the Beaufort Wind Scale, the dust cannons will be deployed to all external waste piles.
- Drop heights will be kept to a minimum to prevent dust emissions where adjustment permits.
- All waste which has undergone waste sorting/separation are stored in dedicated bays with a suitable freeboard to prevent the waste exceeding the height of the bay and causing dust plume.

## 4.11 Control measures – vehicle movements and mobile plant

4.11.1 As discussed in Section 3.6.2, a no idling policy is in place which ensures that engines are switched off when vehicles or plant are not in use. This policy will ensure that tail pipe emissions are significantly reduced.

4.11.2 The site will follow the first in first our principle as detailed in the FPP to reduce additional movements inside the building. In summary, waste will be tipped from the HGV into waste reception areas, the oldest material will be extracted from the rear of the pile and scooped into the mobile processing plant and the same HGV will collect the processed material and remove off site. It is unlikely that vehicles will access/egress the site unladen.

## 4.12 Control Measures - Loading and Unloading Vehicles

4.12.1 The operator of the loading plant will direct vehicles to a position and location which reduces wind whipping of loaded material.

4.12.2 Drop heights will be kept to a minimum and tipped in a manner to ensure the pile does not exceed the height of the storage bay.

# 5 DUST MANAGEMENT RISK ASSESSMENT MODEL

## 5.1 Fundamental considerations

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

5.1.2 **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.

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

## 5.2 Pathway

5.2.1 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

## 5.3 Consequences

5.3.1 The following table highlights the consequences of the hazard(s) identified and the abbreviations for each as used in the Risk Assessment Table 5.5 in Section 5.7.

**Table 5.1 – Consequences**

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

## 5.4 Effects of consequences

5.4.1 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:

**Table 5.2 – Potential effects**

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

5.4.2 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.

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

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

**Table 5.3 – Likelihood**

| | 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 |

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

5.6.1 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.

**Table 5.4 – Risk assessment outcome**

| | | 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 |

5.6.2 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.

5.6.3 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.

5.6.4 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.

5.6.5 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.

## 5.7 Risk assessment table

5.7.1 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.

5.7.2 The table also contains references to the appropriate section(s) of the site's EMS for additional management procedures.

5.7.3 As discussed in the section 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.

5.7.4 Table 5.1, overleaf details the relevant pathways and receptors for each individual dust/emission source and relevant measures required to break these linkages. The control measures outlined in Section 4 will be included within these tables as well as additional specific measures.

***SEE TABLES OVERLEAF***

**Table 5.5 – Source, pathway, receptor, abatement tables**

| Source(s) | Pathway | Receptor(s) | Consequences | Effect | Probability | Assessment Outcome | Remedial Action/ Recommendations/ Comments | Assessment Outcome following action & recommendation |
|---|---|---|---|---|---|---|---|---|
| Dust / debris on site surfaces | Air | Site personnel/ visitors<br><br>Surrounding site users/occupiers<br><br>Surface water comprising watercourses to the east of the site and Blackleach Reservoir to the south-west<br><br>Flora & fauna<br><br>Residential receptors<br><br>Schools<br><br>Blackleach Country Park and Reservoir (LNR & LWS)<br><br>Protected species to the west of the site | Air Pollution<br><br>Water Pollution | Moderate | 3 | Low | Damp all external site surfaces down using a mixture of bowser, hose pipes or mobile dust cannons. The operator will pay special attention to the areas where dust/debris is likely to build-up i.e. near to treatment plant and stockpiles. All site operatives will be trained in these procedures, and it will be the responsibility of site management to ensure the measures have been carried out.<br><br>The site undergoes continuous housekeeping and has dedicated maintenance / housekeeping team who continue to inspect and clean the site daily.<br><br>Vehicle speed on site is restricted to 5 miles per hour. Signs are erected at the relevant areas of the site, including the main access gates, to advise drivers of the speed limit. This will reduce the re-suspension of dust and particulate matter.<br><br>Exiting vehicles leaving the site will avoid all areas where wastes are stored or stockpiled. All vehicles will be checked before they leave the site to ensure no mud/dust can stretch beyond the site access. All incoming/outgoing vehicle loads will be sheeted.<br><br>Any mud/dust deposited onto the public highway i.e. Moss Road will be treated as an emergency and cleaned by operatives or by way of a road sweeper to clean the external yard and surrounding roadways.<br><br>Continuous monitoring regime in place to identify any potential for dust leaving site boundary.<br><br>Formal complaints procedure in place.<br><br>Site is fully concreted to assist with sweeping up debris. Any cracks in the surface will be repaired as soon as practicable. | Very Low |

| Source(s) | Pathway | Receptor(s) | Consequences | Effect | Probability | Assessment Outcome | Remedial Action/ Recommendations/ Comments | Assessment Outcome following action & recommendation |
|---|---|---|---|---|---|---|---|---|
| Vehicles tipping into waste reception/storage areas | Air | As above | Air Pollution<br><br>Water Pollution | Moderate | 2 | Medium | Drop heights will be kept to a minimum to prevent dust emissions which will be no more than 1m – 2m above the plant. The loading of waste into the plant is undertaken by a $360^0$ excavator which can deposit directly into the hoppers, this is considered better method than a loading shovel.<br><br>The main waste reception area is located within a building which will reduce dust emissions.<br><br>The operator will avoid doubling handling of waste and may directly load from vehicle directly into the treatment plant if feasible.<br><br>If operations permit, the site may be able to directly tip into the treatment plant and the use of the dust cannon continually in dry, hot weather conditions can dampen waste during loading.<br><br>All waste is tipped inside a dedicated storage bay with a 1m freeboard height to ensure waste is contained within the bay.<br><br>Staff continue to monitor the waste to ensure it does not escape the confines of the building.<br><br>The mobile dust cannon can be targeted to this area in the event staff notice dust plumes. The site also has the use of a mobile water bowser and hosepipes. | Low |

| Source(s) | Pathway | Receptor(s) | Consequences | Effect | Probability | Assessment Outcome | Remedial Action/ Recommendations/ Comments | Assessment Outcome following action & recommendation |
|---|---|---|---|---|---|---|---|---|
| Loading of waste into treatment plant | Air | As above | Air Pollution<br><br>Water Pollution | Moderate | 2 | Medium | Drop heights will be kept to a minimum to prevent dust emissions.<br><br>The waste reception area is partially enclosed by the existing building which will reduce dust emissions<br><br>The onsite hosepipes and dust cannons can also offer additional suppression.<br><br>The operator will avoid doubling handling of waste and may directly load from vehicle directly into the treatment plant if feasible.<br><br>If operations permit, the site may be able to directly tip into the treatment plant and the use of the dust cannon continually in dry, hot weather conditions can dampen waste during loading.<br><br>All waste is tipped inside a dedicated storage bay with a 1m freeboard height to ensure waste is contained within the bay.<br><br>Staff continue to monitor the waste to ensure it does not escape the confines of the building.<br><br>The mobile dust cannon can be targeted to this area in the event staff notice dust is escaping from the building.<br><br>Suspension of operations during conditions where winds reach 7+ on the Beaufort Wind Scale, if dust plumes occur on site or if dust is emanating off site following on/off site inspections. | Low |

| Source(s) | Pathway | Receptor(s) | Consequences | Effect | Probability | Assessment Outcome | Remedial Action/ Recommendations/ Comments | Assessment Outcome following action & recommendation |
|---|---|---|---|---|---|---|---|---|
| Processing of waste as part of mechanical recycling facility comprising screens, trommel etc.. | Air | As above | Air Pollution<br><br>Water Pollution | Moderate | 2 | Medium | All aspects of the mechanical recycling facility are enclosed meaning waste will not escape from the relevant item of plant other than the discharge bay beneath or the ongoing conveyors which process in a clockwise direction.<br><br>Any defects to sheltering / housing on the plant will be repaired upon detection.<br><br>Operations will reduce or suspend if the site management detect noticing dust plumes appearing from the building.<br><br>The treatment process is ongoing (i.e. first load to be discharged from the first screen will be the first load to be handled and fed remaining recycling facility reducing storage times form wastes discharged and the associated dust source will be minimised.<br><br>All drops from the relevant items are done so into dedicated storage bays below meaning the waste is not dropped from height and therefore will not cause airbourne dust.<br><br>The stockpiles beneath the treatment bays are enclosed.<br><br>The storage area bays are located to ensure that vehicles leaving the site do not track through wastes.<br><br>All potentially dusty waste will be stored 1m below the height of the bay allowing for a freeboard. The mechanical recycling facility will be hindered if stockpiles of waste exceed the height of the bay.<br><br>The site undergoes continuous monitoring by operational staff who will continue to inspect and clean the site daily in addition to monitoring stockpile and freeboard heights.<br><br>The site has not received any direct reports of dust which means suitable measures are taking place currently. | Low |

| Source(s) | Pathway | Receptor(s) | Consequences | Effect | Probability | Assessment Outcome | Remedial Action/ Recommendations/ Comments | Assessment Outcome following action & recommendation |
|---|---|---|---|---|---|---|---|---|
| Use of mobile crusher, shredder and screener | Air | As above | Air Pollution<br><br>Water Pollution | Moderate | 2 | Medium | The site will not carry out any shredding during wind speeds reaching 7 or above on the Beaufort Wind Scale. The site will not shred any waste in summer months where there has been three successive dry days and temperatures of over $70^0$F.<br><br>External treatment operations will reduce or suspend if the site management detect dust plumes on site or dust emanating off site arising from dry/hot weather conditions.<br><br>All external treatment plant will be situated on the floor and the presence of surrounding infrastructure walls to the south of the location will prevent dust escaping from the site. The site will not situate any treatment plant on any stockpiles of waste.<br><br>Drop heights will be kept to a minimum to prevent dust emissions which will be no more than 1m – 2m above the plant. The loading of waste into the plant is undertaken by a $360^0$ excavator which can deposit directly into the hopper of the plant, this is considered better method than a loading shovel.<br><br>The operator will avoid doubling handling of waste, so any waste produced from the treatment plant is then directly deposited using the $360^0$ excavator into the plant.<br><br>The mobile dust cannon can be targeted to the specific treatment area in the event staff notice airborne dust arising (dust plumes). The site also has the use of a mobile water bowser and hosepipes if the dust cannon fails to mitigate the dust. | Low |

| Source(s) | Pathway | Receptor(s) | Consequences | Effect | Probability | Assessment Outcome | Remedial Action/ Recommendations/ Comments | Assessment Outcome following action & recommendation |
|---|---|---|---|---|---|---|---|---|
| Wastes dropping from conveyors into stockpiles | Air | As above | Air Pollution<br><br>Water Pollution | Moderate | 2 | Medium | Other than mobile treatment plants i.e. crusher, screener, shredder all aspects of the mechanical recycling facility are enclosed meaning waste will not escape from the relevant item of plant other than the discharge bay beneath or the ongoing conveyors which process in a clockwise direction.<br><br>Suspension of operations during conditions where winds reach 7+ on the Beaufort Wind Scale, if dust plumes occur on site or if dust is emanating off site following on/off site inspections. The stockpiles beneath the treatment bays can be sprayed using the dust cannons during the above weather conditions.<br><br>Any defects to sheltering / housing on the MRF conveyors will be repaired upon detection. Operations will reduce or suspend if the site management detect dust plumes on site or dust emanating off site from daily on/off site inspections.<br><br>All drops from the conveyors are done so into dedicated storage bays below meaning the waste is not dropped from height and therefore will not cause airbourne dust.<br><br>The storage area bays are located to ensure that vehicles leaving the site do not track through wastes.<br><br>All potentially dusty waste arising from conveyors will be stored 1m below the height of its storage bay allowing for a freeboard. The mechanical recycling facility will be hindered if stockpiles of waste exceed the height of the bay.<br><br>The presence of the surrounding infrastructure walls will also prevent dust escaping from the site. | Dust / Particulates |

| Source(s) | Pathway | Receptor(s) | Consequences | Effect | Probability | Assessment Outcome | Remedial Action/ Recommendations/ Comments | Assessment Outcome following action & recommendation |
|---|---|---|---|---|---|---|---|---|
| Waste storage bays including internal and loose outside piles | Air | As above | Air Pollution<br><br>Water Pollution | Moderate | 3 | Low | All internal and external stockpiles of waste can be sprayed using the dust cannons or hoses during conditions where winds reach 4 on the Beaufort Wind Scale or dry weather conditions. Stockpiles will also be suppressed if dust plumes occur on site or if dust is emanating off site following on/off site inspections.<br><br>The storage area bays are located to ensure that vehicles leaving the site do not track through wastes.<br><br>All stockpiles of dusty wastes will be stored inside buildings, concrete walls or secure containers. Where waste is stored inside concrete walls, the waste will be stored 1m below the height of the bay.<br><br>The presence of the high surrounding infrastructure walls beyond the main storage bays will also prevent dust escaping from the site.<br><br>The site undergoes continuous monitoring by operational staff who will continue to inspect and clean the site daily in addition to monitoring stockpile and freeboard heights. | Very Low - Negligible |
| Prolonged periods of dry/warm weather or conditions where winds reach 4+ on the Beaufort Wind Scale | Air | As above | Air Pollution<br><br>Water Pollution | Moderate | 2 | Medium | Additional (increased from one to three times) daily visual assessment / monitoring will be on and off site around the site perimeter in order to ensure dust is not escaping beyond the site.<br><br>Continual use of mobile dust suppression methods until weather conditions change/improve or inspections detail dust emanating on/off site is not occurring. | Low |

| Source(s) | Pathway | Receptor(s) | Consequences | Effect | Probability | Assessment Outcome | Remedial Action/ Recommendations/ Comments | Assessment Outcome following action & recommendation |
|---|---|---|---|---|---|---|---|---|
| Particulate emissions from the exhaust of vehicles / plant /generators and other non-road going machinery on site. | Air | As above | Air Pollution<br><br>Water Pollution | Moderate | 3 | Low | All vehicles are serviced annually to ensure they are fit for purpose to ensure emissions are below the acceptable level.<br><br>The MRF and other mobile plant used is serviced annually to as part of preventative and legislative maintenance so ensure the plant is suitable. The MRF does not emit and source emissions to the atmosphere.<br><br>All vehicles undergo daily inspections under the site's preventative maintenance schedule to ensure no visible faults are detected.<br><br>Ongoing inspections will note any faults with machinery and if a fault detected, the site/compliance manager or TCM will decommission the plant/vehicle until it is fit for purpose | Very Low - Negligible |

# 6 Monitoring and contingency measures

## 6.1 Monitoring and recording

6.1.1 **Visual assessment** – Site management will make a visual inspection of dust emissions using the Dust Monitoring Form in Appendix II. This will enable the person carrying out the assessment to inspect the presence of dust and whether it is present on site with a risk of escaping off site. It is not considered necessary to have a fixed monitoring point due to infrequent weather conditions. If there is an easterly or westerly wind, the staff member carrying out the monitoring will observe the area from the north or south so dust can be easily identified. The site staff member will complete the monitoring and form in Appendix II at least once every 12 hours or in the event of the circumstances shown in Section 4.7.2, additional monitoring i.e. every 3 hours. The monitoring will be carried out will while the site is operational and should it be observed if dust is being wind whipped or clouds of dust observed emanating from surfaces, the ground on site, stockpiles and activities on-site, the site will increase suppression methods. If the suppression methods are not suitable, operations will reduce or cease until the problem fully has been fully rectified. Site management will be responsible for investigating dust issues and provide additional training to staff to prevent any re-occurrences. Site management will record all findings in the dust monitoring form or site diary and also detail staff training using training forms provided in the EMS or the operator's own internal training records.

6.1.2 The monitoring can also take place in the evenings or during times when light is low as there is suitable flood lighting available covering all loading/unloading and processing areas. However, it is only proposed to operate the MRF during evening hours and the site will not be accepting or removing any waste material from the site.

6.1.3 In the event the site needs to shut down or is temporary closed, before closure, site management will ensure before the site closes that all dusty waste is stored internally, in secure containers or 1m below the height of containment walls. If weather conditions i.e. dry, hot, +4 on the Beaufort Wind Scale have led to an increased risk of dust escaping from the site, site management will ensure the site is wetted down prior to closure. Site

management will be responsible for signing the site off prior to closing using inspections forms.

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

6.1.5 The site supervisor will be suitably trained to carry out these duties. Further information regarding training and technical competence is provided within the site's EMS.

## 6.2 Monitoring

6.2.1 Site staff will continuously visually monitor dust emissions whilst external plant is in operation and will control dust emissions using the procedures shown throughout Sections 4.2 – 4.13 and asking the site manager, compliance manager, TCM or third party for advice as required. Work procedures will be stopped/adjusted should it be evident significant dust is being emitted which has the potential to migrate offsite.

6.2.2 Site management will also be required to make a note of any unavoidable events such as periods of dry weather or winds reaching 7 on the Beaufort Wind Scale in the site diary, rather than just actual complaints received. This will ensure that if complaints are received retrospectively from either the local authority 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 (or, at least, in part) to the cause of the complaint.

## 6.3 Staff shortages/human error

6.3.1 In the event of unforeseen staff shortages arising from illness, suspension or no shows, the operator will make a judgement whether to reduce the number of incoming loads, thus reducing processing frequency and divert material to an alternative site. The operator will then seek further employment within a timely manner to ensure the site can continue to operate at its required capacity.

6.3.2 All staff are trained and undergo toolbox talks every 6 months (or sooner if operations change) to reduce the impact of human error. In instances where a human error has caused to an on-site dust issue, the site may suspend operations until the issue has been rectified and the member of staff will be warned and re-trained accordingly.

## 6.4 Weather conditions

6.4.1 The site will subscribe to the Met Office to receive updated weather alerts for the following weather conditions which could cause a potential on or off-site dust complaint:

- Dust plumes occurring on site, potentially if winds reach 4 on the Beaufort Wind Scale
- Winds exceeding 7 on the Beaufort Wind Scale
- Dust escaping beyond the site boundary
- Droughts or periods of hot weather exceeding 3 major dry days which could lead to water shortages, hosepipe bans and excessive dust.

6.4.2 The site will install the following preventative measures to avoid serious dust pollution:

**WINDS EXCEEDING 7 ON THE BEAUFORT WIND SCALE**

- No sorting, processing or treatment of any wastes which are likely to be blown around during these wind conditions; operations would also be suspended where it is evident where dust is escaping beyond the site. Operations would only continue once the problem has been rectified i.e. by carrying out suppression or reducing stockpile heights.
- Vehicles leaving the site will be sheeted to comply with the requirements of the Duty of Care legislation.
- Stockpiles will be reduced to a suitable height to prevent the material escaping beyond the site boundary i.e. below the heights of boundary walls.
- Stockpiles may be covered with tarpaulin in the event the above procedures are not considered effective.
- In the event of extreme winds, the site will deploy the above measures and may be forced to close operations until conditions have improved.

**DROUGHTS/WARM, DRY WEATHER**

- In extreme cases such as a hosepipe ban or water shortage, the site will ensure there is additional water available i.e. tanks which can be used for filling the dust cannons to ensure suppression techniques can still function.
- The site will contact the water company in the event of an emergency to see if the water pressure can be increased.
- Where dust is becoming a major concern then the operator will stop processing the material and cover the piles using tarpaulin until conditions or dust suppression techniques are considered effective.

## 6.5 Operational/power failure

6.5.1 The site manager will be contacted by staff in the event of any operational failure such as the breakdown of plant, systems or equipment and will decide whether operations are to continue or be suspended prior to corrective action being taken. Serious operational failures will be recorded in the site diary and operations suspended if dust is apparent.

6.5.2 If there was a significant power failure or power cut, the site would not operate, doors would manually shut and no dust would be created. The site has direct contact with engineers who can be called out and attend site within a 48-hour period; the engineers also carry specific parts for mobile plant or any electrical items on their vehicle. If repairs cannot be undertaken within 48 hours, the local EA officer or department will be notified in the event of any serious operational failures to agree a suitable course of action.

6.5.3 If the site is closed and it is still evident dust is escaping from site following site inspections or a complaint, the operator would source a back-up generator as soon as practicable and advise the complainant if required of the action taken.

6.5.4 All details of defects, problems and repairs carried out will be recorded on a daily inspection form. Detailed comments may also be recorded in the site diary. All repairs will be carried out as soon as practicable.

6.5.5 All repairs to site security will be made on the discovery of the damage and the site will be made secure until the repair has been carried out.

6.5.6 Any major defects found during the daily site inspection which are likely to lead to a breach of permit conditions will be repaired by the end of the working day in which they are found, where possible. If a repair is not possible by the end of the working day and a potential breach of permit conditions may occur, the EA will be contacted to agree a suitable timescale for repair.

6.5.7 All defects and problems likely to give rise to pollution will be recorded on the form ETM/RF/4 or the operators own recording procedures with repairs/solutions being carried out immediately.

6.5.8 The operator would also be required to make a note of any unavoidable events plant/equipment malfunctions in the site diary, rather than just actual complaints received. 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 there are significant dust releases outside normal operations, the operator will cease operation, investigate and resolve the issue before continuing.

# 7 Actions when complaints are received

## 7.1 Complaints procedure

7.1.1 If any dust complaints are received, the relevant operator will complete a 'complaints and events log' and detailed individually on the complaints form (in Appendix II), both of which 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).

7.1.2 Dust complaints will be prioritised and investigated without delay or by end of working day only in extenuating circumstances. This will also apply to complaints received both directly and via other sources (e.g. EA or local authority). Where investigation substantiates the complaint, fully or partially, then remedial action should be taken immediately and if measures taken fail to stop the pollution then the activity must be stopped and not restarted unless and until additional measures have been implemented to prevent the emission causing pollution. The EA will be contacted in the event the complaint cannot be escalated. Following a complaint and if it is deemed correct following investigation, the appropriate action will be taken to prevent the issue from reoccurring i.e. evaluation of current abatement measures, site operations, additional abatement measures and re-training of staff via toolbox talks.

7.1.3 The operator would also be required to make a note of any unavoidable events plant/equipment malfunctions in the site diary, rather than just actual complaints received. 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.

7.1.4 If the source cannot be ascertained with 100% confidence, the site manager, compliance manager or TCM will either suspend or reduce the likely dust/particulate generating activities.

7.1.5 If the source is within the site's control, the site manager, compliance manager or TCM will take appropriate action in terms of dust/particulate abatement, to ensure that the alarm is not re-activated. This may take the form of the following:

a) Investigating the source of the dust/particulates to prevent a re-occurrence.
b) Suspending operations which are giving rise to excessive dust due to potential plant malfunction or failure of suppression techniques.
c) Additional use of the dust abatement measures.
d) Logging findings of a – c in the site diary / complaints form and also in the reporting template within the EP.

7.1.6 The EA will be notified by email of any third-party dust complaints received by the end of the working day including the complainant and the outcome of the investigation. Where complaints are substantiated as causing or likely to cause significant pollution, then the EA will be notified without delay, as required by conditions in the EP.

## 7.2 Complaints recording

7.2.1 Any complaints received in relation to dust will be recorded on the form shown in Appendix II by the person in receipt of the complaint:

7.2.2 The following details as a minimum will be completed on the form.

a) The name, address and telephone number of the caller will be requested.
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;
- is this the first time the problem has been noticed; and,
- what prompted them to complain.

d) 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 the installation at the time the noise, dust or odour was detected, particularly anything unusual.

e) The reason for the complaint will be investigated and a note of the findings added to the report.
f) 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.
g) 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.
h) 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.

## 7.3 Liaison with Neighbours

7.3.1 In the extreme event of significant but temporary dust releases outside normal operations, neighbours will be contacted to advise them of the situation and the action being taken. The EA will also be notified.

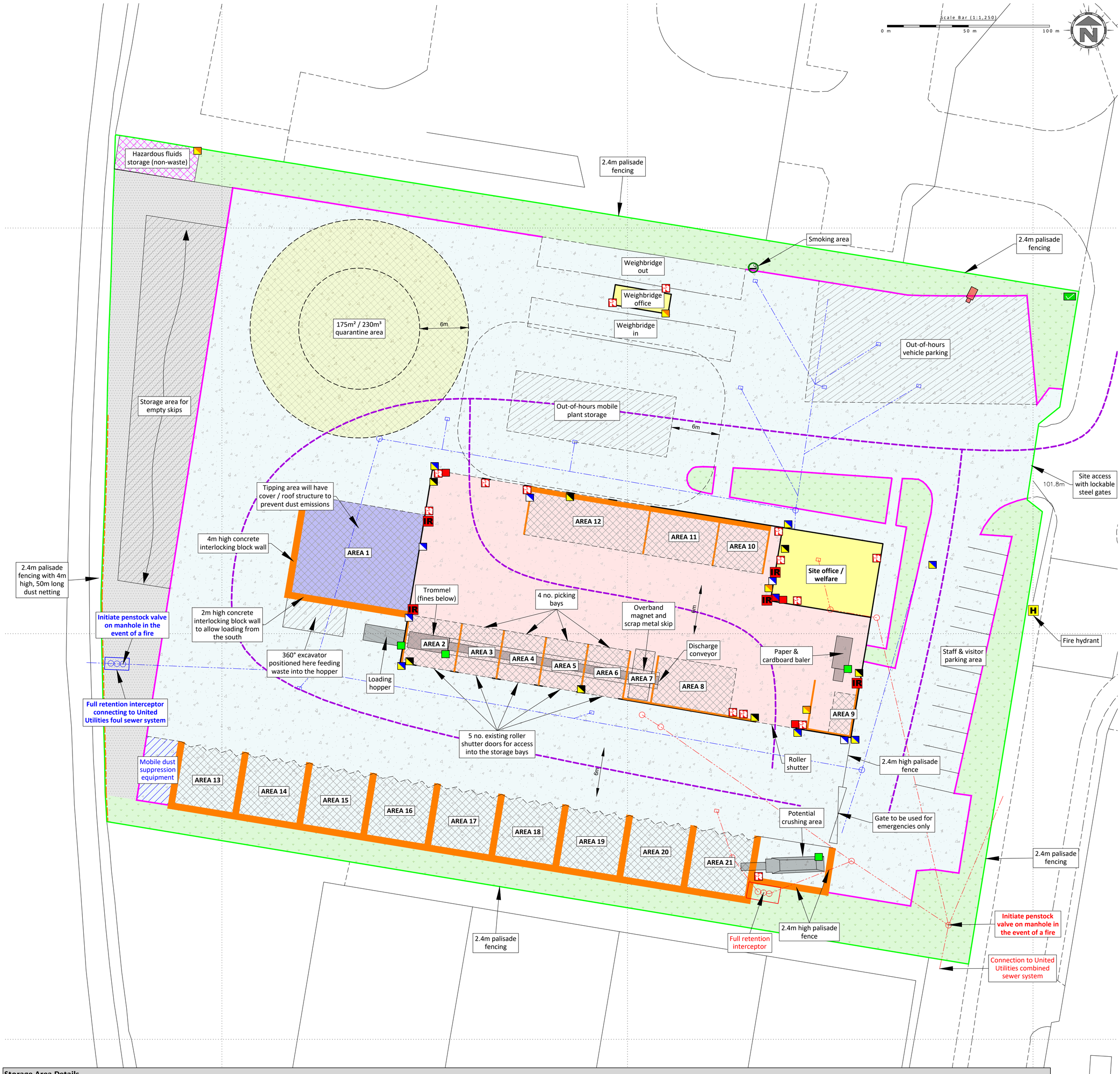
7.3.2 An open-door policy will be encouraged by the operator to enable any complaints from neighbouring premises (if received) to be dealt with immediately. The complainant will then be supplied with remedial actions taken and any procedures or measures put in place by the operator to reduce or ideally eradicate the likelihood of a subsequent complaint.

7.3.3 If any dust complaints are received, the complaint will be assigned to an operative familiar with the sites operation who will complete the form in Appendix II which will be kept for inspection on request by the LA and/or 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). Dust complaints will be investigated and responded to within 24 hours and suitably reviewed by the site manager who is ultimately responsible.

7.3.4 The operator will also make a note of any unavoidable events plant/equipment malfunctions in the site diary, rather than just actual complaints received. 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 there are significant dust releases outside normal operations, the operator will cease operation, investigate and resolve the issue before continuing.

# Appendix I

# Drawings




**Storage Area Details**

| Plan Ref | Description | Storage type | Containment / type | Height of firewall (m) | Max width of pile (m) | Max length of pile (m) | Max height of pile (m) | Approx. area (m2) | Conversion factor used | Approx. volume (m3) | Average storage time | Max storage time | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AREA 1 | Mixed waste reception area (HCI waste) | Unprocessed | Free standing pile / three-sided concrete interlocking block fire wall | 4 | 15 | 12.5 | 3 | 187.5 | 0.75 | 422 | <2 hours | <48 hours | 48 hours is based on Sat - Mon; storage time likely to be less as the pile will continually move throughout the day |
| AREA 2 | Trommel fines | Sorted by trommel screen | Free standing pile / two-sided concrete panel fire wall | 3 | 6.5 | 6 | 2 | 39 | 0.75 | 59 | <2 hours | <48 hours | As above |
| AREAS 3 -6 | Hand picked wastes from picking line comprising wood, residual, plastic, paper & cardboard | Processed (by hand) | As above | 3 | 6.5 | 6 | 2 | 39 | 0.75 | 59 | <2 hours | <48 hours | As above and volume is based on each storage bay. Once bays are full the waste will be transferred to the external overflow bays (AREAS 13 - 19) |
| AREA 7 | Scrap metal | Processed (magnet) | 40 cubic yard skip | 3 | 2.5 | 6.1 | 2.62 | 15.25 | 1 | 40 | <12 hours | 1 week | Skip removed when full and replaced with empty skip; timescale dependent on metal content in waste |
| AREA 8 | Hardcore / rubble | Sorted via treatment plant | Free standing pile / two-sided concrete panel fire wall | 3 | 10 | 6 | 2 | 60 | 0.75 | 90 | <2 hours | <48 hours | See AREA 1 comments |
| AREA 9 | Baled paper & cardboard | Processed, sorted & baled | Bales within three-sided concrete panel fire wall | 3 | 2.5 | 5 | 2 | 12.5 | 0.75 | 19 | <2 hours | <48 hours | See AREA 3 - 6 comments |
| AREA 10 | Miscellaneous bay i.e. non-conforming waste | Unprocessed (hand sorted) | Free standing pile / three-sided concrete panel & interlocking block fire wall | 3 | 6 | 6 | 2 | 36 | 0.75 | 54 | <48 hours | <48 hours | See AREA 1 comments |
| AREA 11 | Plasterboard | Unprocessed (hand sorted) | As above | 3 | 6 | 6 | 2 | 36 | 0.75 | 54 | <2 hours | <48 hours | See AREA 1 comments |
| AREA 12 | Residual waste | Processed, hand sorted by treatment plant | As above | N/A | 15 | 6 | 2 | 90 | 1 | 180 | <48 hours | <48 hours | Acting as overflow bay from AREAS 3 - 6; pile removed sooner if full |
| AREAs 13 - 18 | Overflow storage bays from wastes recycled inside the building | Processed, hand sorted by treatment plant | Free standing pile / three-sided concrete interlocking block fire wall | 4 | 8 | 8 | 3 | 64 | 0.75 | 144 | <48 hours | <1 week | As above and pile size based on each bay |
| AREA 19 | Soils & stone | As above | As above | 4 | 8 | 8 | 3 | 64 | 0.75 | 144 | <48 hours | <1 week | As above |
| AREAs 20 & 21 | Hardcore & crushed stone | As above and crushed | As above | 4 | 8 | 8 | 3 | 64 | 0.75 | 144 | <48 hours | <1 week | As above |

**CONVERSION FACTORS**

Conversion factors for waste piles are worked out using the following methods set out by The Environment Agency

The maximum length width pile is based on the largest dimension – the volume of the pile has been calculated using the area x height x relevant conversion factor

Conversion of 1 for materials stored within containers, area of storage in stackable containers and waste/bale stacks

Conversion of 0.75 for waste stored within a bay based on volume of pyramid x rectangle x height

Conversion of 0.333 for waste stored in a free-standing stockpile

For areas containing skips, conversion is calculated by volume of each skip x number of skips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**DRAWING TITLE**
SITE LAYOUT & FIRE PLAN

**CLIENT**
Circle Recycling Ltd

**PROJECT/SITE**
Lyon Road Industrial Estate, Kearsley, Bolton, Lancashire BL4 8NB

| SCALE @ A1 | CLIENT NO | JOB NO |
|---|---|---|
| 1:250 | 2948 | 001 |

| DRAWING NUMBER | REV | STATUS |
|---|---|---|
| LRIE/2498/03 | C | Issued |

| DRAWN BY | CHECKED | DATE |
|---|---|---|
| CP | -- | 18.04.23 |

**KEY:**

- Permit boundary
- Waste storage areas
- Non-waste hazardous fluid storage i.e. diesel, AdBlue etc..
- Waste recycling building (concrete floor with sealed drainage
- Other buildings i.e. workshops/offices
- Impermeable concrete with sealed drainage
- 0.15m high concrete kerb
- 0.6m - 0.8m thick concrete interlocking block firewall
- 0.15m wide concrete panel firewall
- Surface water gully's & manholes
- Foul water gully's & manholes
- Underground surface water drainage
- Underground foul water drainage
- Quarantine area
- Fire water containment equipment
- Fire extinguisher locations
- Plant shut off points
- Fire alarms
- Spill kits
- Water points
- Access route for emergency services Surface water gully's
- Fire hydrant
- Fire assembly point
- Flame/heat detection cameras
- CCTV cameras (internal & external)
- Pan, tilt & zoom camera (50m coverage)

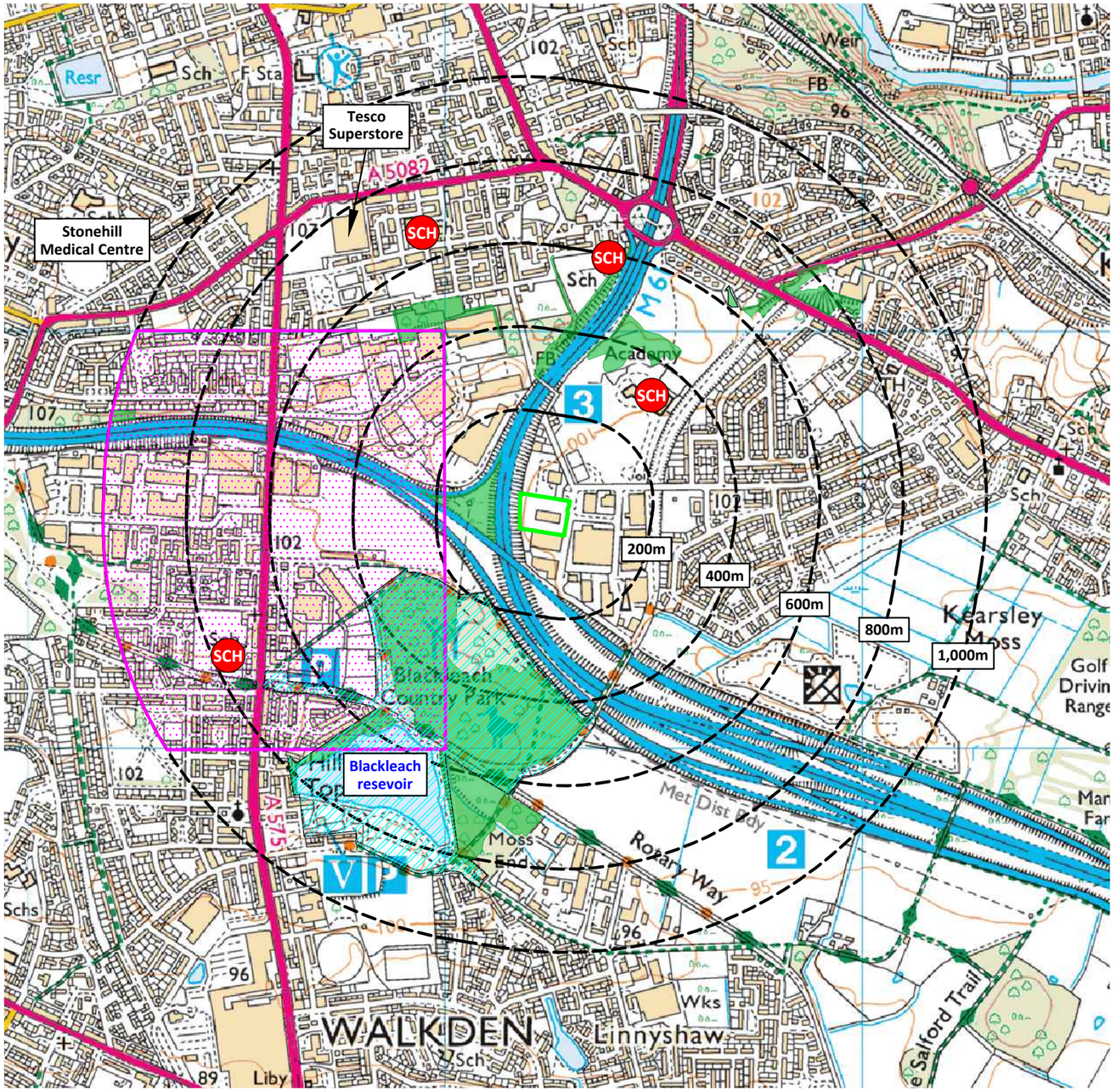
**NOTES**



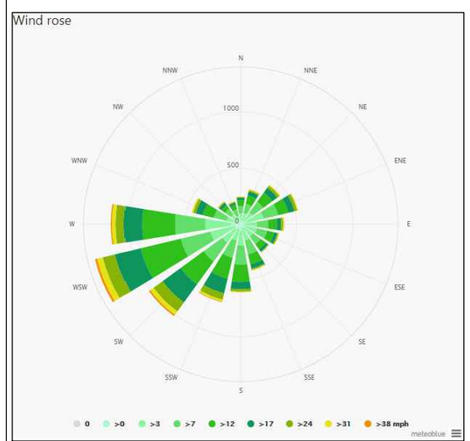
REVISION HISTORY

| Rev: | Date: | Init: | Description: |
|---|---|---|---|
| - | 06.10.21 | CP | Initial drawing |
| A | 07.10.21 | CP | Client comments |
| B | 12.10.21 | CP | Client comments |
| C | 18.04.23 | CP | Operator name change |

- Permit boundary
- Surface water body ( pond / pool / lake)
- Stream, river, beck
- Buildings includes Agricultural, industry, commerce and retail - could also include small houses)
- Residential blocks
- Class A roads
- Class B roads
- Class C roads
- Local nature reserve / local wildlife site
- Protected species
- Priority Habitat - Deciduous Woodland
- Other woodland areas (non-habitat)
- SCH — Schools including primary, high, colleges and Universities
- Care homes
- Places of worship
- H — Fire hydrants (indicative)




Wind rose




Compass Wind Rose for Bolton sourced on 21/09/2021
*- source: Meteoblue*

Scale Bar (1:12,500)

0 km 500 m 1 km

**NOTES**



REVISION HISTORY

| Rev: | Date: | Init: | Description: |
|---|---|---|---|
| - | 07.10.21 | CP | Initial drawing |
| A | 18.04.23 | CP | Operator name change |

Oaktree Environmental Ltd
Waste, Planning and Environmental Consultants

**DRAWING TITLE**
PERMIT BOUNDARY PLAN

**CLIENT**
Circle Recycling Ltd

**PROJECT/SITE**
Lyon Road Industrial Estate, Kearsley, Bolton, Lancashire BL4 8NB

| SCALE @ A3 | CLIENT NO | JOB NO |
|---|---|---|
| 1:12,500 | 2948 | 001 |

| DRAWING NUMBER | REV | STATUS |
|---|---|---|
| LRIE/2948/04 | A | Issued |

| DRAWN BY | CHECKED | DATE |
|---|---|---|
| CP | -- | 18.04.23 |

**Lime House, Road Two, Winsford, Cheshire, CW7 3QZ**
**t: 01606 558833 | e: sales@oaktree-environmental.co.uk**

# Appendix II

# Complaints recording form

| Complaints Report Form | |
|---|---|
| Date Recorded | Reference Number |
| Name and address of caller | |
| Telephone number of caller | |
| Time and Date of call | |
| Nature of complaint<br>(noise, odour, dust, other)<br>(date, time, duration) | |
| Weather at the time of complaint<br>(rain, snow, fog, etc.) | |
| Wind (strength, direction) | |
| Any other complaints relating to this report | |
| Any other relevant information | |
| Potential reasons for complaint | |
| The operations being carried out on site at the time of the complaint | |
| Follow Up | |
| Actions taken | |
| Date of call back to complainant | |
| Summary of call back conversation | |
| Recommendations | |
| Change in procedures | |
| Changes to Written Management System | |
| Date changes implemented | |
| Form completed by | |
| Signed | |
| Date completed | |

# Appendix III

# Dust Monitoring Form

## CIRCLE RECYCLING LTD
## DUST MONITORING FORM

| | | | | |
|---|---|---|---|---|
| **WEEK BEGINNING** | | | | |
| **DAY/DATE/TIME OF INSPECTION** | | | | |
| **SHEET 1 OF** | **COMMENTS BELOW (AS MUCH DETAIL AS POSSIBLE); IF COMMENT IS NO – ADD FURTHER COMMENTS** | | | |
| **DAILY RECORDING INFORMATION** | **DUST MONITORING POINT 1** | **DUST MONITORING POINT 2** | **DUST MONITORING POINT 3** | **OTHER AREA OF SITE - SPECIFY** |
| WEATHER CONDITIONS | | | | |
| WEATHER TEMPERATURE | | | | |
| WIND SPEED | | | | |
| WIND DIRECTION | | | | |
| PERIMETER INFRASTRUCTURE SUITABLE | | | | |
| FOAM INJECTION SYTEM FUNCTIONING | | | | |
| WATER JET SYSTEM FUNCTIONING | | | | |
| IS WASTE STORAGE BELOW HEIGHT OF BAY | | | | |
| DUSTY MATERIAL STORAGE VISIBLE FROM LOCATION | | | | |
| ANY NOTICEABLE DUST / PARTICULATES ON THE GROUND NEAR THE LOCATION | | | | |
| ANY DUST APPARENT OFF SITE | | | | |
| EMISSIONS FROM PLANT/EQUIPMENT VISIBLE | | | | |
| SMOKE FROM PLANT APPEAR TO BE SUITABLE | | | | |
| HAS SITE MANAGEMENT BEEN INFORED OF THE INSPECTION | | | | |
| DOES ACTION NEED TO BE TAKEN | | | | |
| INSPECTION CARRIED OUT BY | | | | |
| OTHER | | | | |

**NOTES/ACTION (CONTINUE ON A SEPARATE SHEET IF NECESSARY):**

| | | | |
|---|---|---|---|
| **CHECKED BY** | | **SIGNATURE** | |
| **POSITION** | | **DATE** | |

# Appendix IV

# Dust Cannon Information