DUST & EMISSIONS MANAGEMENT PLAN

Unit 8, Broadway Industrial Estate, Broadway Lane, South Cerney, Cirencester, Gloucestershire, GL7 5UH

Highworth Skip Hire Ltd

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1 Introduction

1.1 General

- 1.1.1 Oaktree Environmental Ltd have been instructed by Highworth Skip Hire Ltd (the Operator) to prepare this Dust & Emissions Management Plan (DEMP).
- 1.1.2 This DEMP assesses the risk of dust associated with the storage and treatment of waste at Unit 8, Broadway Industrial Estate, Broadway Lane, South Cerney, Cirencester, Gloucestershire, GL7 5UH.
- 1.1.3 This DEMP has been prepared to support an Environmental Permit application for a Household, commercial and industrial (HCI) waste transfer station. Operations undertaken on site consist of:
 - Sorting (with loading shovels / 3600 excavator or by hand only).
 - Storage (prior to removal).
- 1.1.4 The permit boundary is illustrated in green on Drawing No. BIE/3309/02 Permit Boundary Plan. All reference to 'the site' in this DEMP refers to the associated operations, infrastructure, plant, and equipment within this boundary.
- 1.1.5 A copy of this DEMP must be kept in the site office at all times and be readily available to all members of staff.

1.2 **Hours of Operation**

1.2.1 The site is operated according to the hours specified below:

Monday to Friday 07:00 – 17:00

Saturday 08:00 – 12:00

Sundays & Bank/Public holidays Closed

- 1.2.2 The only activities on site which will be permitted outside of these hours are onsite maintenance works, emergency deliveries of waste/plant/machinery and general office use.
- 1.2.3 During times where the site is closed or not in operation, the site will be locked and secured to prevent unauthorised access.

1.3 Content of the Dust & Emissions Management Plan

- 1.3.1 This DEMP provides detailed information on the sources, risks, and mitigation measures relating to the potential of dust emissions from operations undertaken on site. This DEMP has been prepared in accordance with Environment Agency guidance "Control and monitor emissions for your environmental permit" last updated 24 November 2022.
- 1.3.2 This DEMP will allow the Operator to implement an action plan should the site operatives detect the presence of airborne dust escaping beyond the site boundary, receive complaints from receptors.
- 1.3.3 In addition to this DEMP the site is managed and operated in accordance with a fully comprehensive Environmental Management System (EMS).

1.4 Relevant Legislation

Air Quality Management Area (AQMA)

- 1.4.1 The system of local air quality management (LAQM) was introduced under the Environment Act 1995. LAQM requires local authorities to periodically review and assess the current and future quality of air in their areas. Where it is determined that an air quality objective is not likely to be met within the relevant time period, the authority must designate an AQMA.
- 1.4.2 The site is not located within an AQMA.

Low Emission Zone (LEZ)

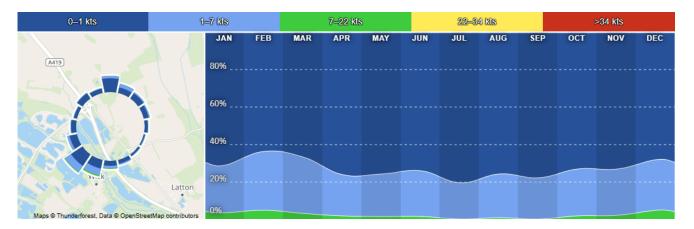
- 1.4.3 A LEZ is an area that has restrictions on the type and age of vehicles permitted in it, this prevents high level of pollution emitting vehicles from entering and operating within the zone with the aim of improving air quality. High polluting vehicles are required to pay a charge to enter the zone.
- 1.4.4 The site is not located within a low emission zone.

2 <u>Sensitive Receptors</u>

2.1 <u>Meteorological Conditions</u>

- 2.1.1 Unlike many other atmospheric pollutants, the generation of dust is particularly dependent upon weather conditions i.e. increased temperatures and wind.
- 2.1.2 The prevailing meteorological conditions at any site will be dependent upon many factors, including its location in relation to macroclimatic conditions as well as more site-specific microclimatic conditions. The most significant meteorological factor for dust being emitted beyond the permit boundary is the predominant wind direction and speed.
- 2.1.3 It is considered receptors downwind of the site will be particularly sensitive to dust as the transfer of dust off-site occurs through the release of dust to air and subsequent atmospheric dispersal of the dust. As mentioned above dust is likely to be affected by the local microclimatic conditions, in particular wind direction. dust will be transported in the direction of the prevailing winds at the time of the dust being produced
- 2.1.4 Wind speed and direction data has been obtained from Latton weather station which is considered to be representative of the typical conditions at the site. Daily data recorded between February 2012 and September 2024 indicates that the predominant wind direction is from the southwest blowing northeast, see Figure 2.1. Therefore, the predominant wind direction is likely to blow towards receptors northeast of the site comprising of the Cotswold Water Park SSSI.

Figure 2.1 – Windrose from Latton weather station



2.1.5 The predominant wind blows towards receptors northeast of the site, this includes Cotswold Water Park. A full list of sensitive receptors within 1km of the site is shown in Table 2.1.

2.2 <u>Sensitive Receptors</u>

- 2.2.1 A Receptor Plan has been prepared to illustrate the location of receptors within 1km of the site, see Appendix I, Drawing No. BIE/3309/04 Receptor Plan. As mentioned above the predominant wind direction is towards the northeast, therefore, receptors northeast of the site is most likely to be impacted if dust emissions were to escape the site boundary.
- 2.2.2 Table 2.1 details the direction and distance from the boundary of the site to the boundary of receptors within 1km of the site.

Table 2.1 - Sensitive Receptors

Receptor	Direction from Site	Approx distance from the site boundary to the receptor boundary (m)		
Commercial / Industrial				
Broadway Industrial Estate	North, east, south and west	0		
BMI Group UK Ltd	South	0		
Bison Plant Hire	East	20		
Lakeside Business Park	North	40		
Aggregate Industries	Southwest	600		
Residential				
Residential dwellings (Beverstone Road)	North	205		
Care homes (residential)		·		
n/a	n/a	n/a		
Schools				
Ann Edwards C of E Primary School	Northwest	565		
Watercourses				
Ham Pool Lake (SSSI)	East	100		
Infrastructure (major roads and transport links)				
Broadway Lane	East	65		
Ecological Sites				
Cotswold Waterpark (SSSI)	South / northeast	100		
Recreational				
Hoburne Cotswold Holiday Park	Southeast	320		

2.3 Other Dust and Emission Sources

- 2.3.1 There is potential for dust and emissions to be produced from neighbouring businesses including A U Grab Hire who provide plant and machinery hire and supply aggregate products to consumers. Aggregates products are stored in the yard of the adjacent site and have the potential to be considerably dusty if not managed with appropriate mitigation measures. It is therefore considered operations from the adjacent A U Grab Hire have the potential to produce dust emissions.
- 2.3.2 T Barry Haulage Ltd also have the potential to produce dust emissions from similar operations to the above A U Grab Hire as they also store and supply aggregates.
- 2.3.3 It is also considered there will be a natural production of dust from surrounding agricultural activities and farms. In particular the 'Fen Blows' which is the incidence of very strong winds, when it is not uncommon for soils from agricultural fields to be blown onto adjacent land.
- 2.3.4 Surrounding roads have the potential to produce dust from vehicles and maintenance issues i.e. potholes.

Site Operations

3.1 <u>Waste Deliveries & Acceptance</u>

- 3.1.1 Strict Waste acceptance procedures will be implemented on site to ensure that only suitable waste is accepted. Only those waste codes detailed in the Environmental Permit will be accepted onto the site. Waste acceptance procedures will ensure that waste will not comprise solely or mainly of dust, powders, or loose fibres.
- 3.1.2 Waste will be delivered onto / depart from site primarily by the Operators own vehicles (skip lorries). The movement of vehicles on site has the potential to cause dust emissions, particularly in dry and windy conditions. A 5mph speed limit and the minimisation of vehicle movements will be enforced on site to reduce the amount of dust generated by vehicle wheels.
- 3.1.3 All vehicles entering / exiting the site will be sheeted to minimise the likelihood of dust emissions. Loaded vehicles that are not sheeted will not be allowed to enter the site. Vehicles delivering waste will predominantly comprise skip wagons collected from householders or builders/other tradesman on behalf of householders.
- 3.1.4 Any third-party deliveries to the site will be advised that all loads must be suitably sheeted.

 All third-parties proof of wase carrier registration will be checked prior to acceptance of a load. Further information regarding this can be found in the EMS.
- 3.1.5 All vehicles entering the site will be visually inspected prior to unloading to ensure that loads comprising solely dust, powders, or loose fibres are not accepted.

3.2 <u>Potential Dust Emissions</u>

Waste Codes

3.2.1 The most common waste types which will be present on site that have the potential to produce dust are included in Table 3.1 below.

Table 3.1 - Wastes with Dust Potential

EWC Code	Description
01 04 08	Waste gravel and crushed rocks other than those mentioned in 01
	04 07
01 04 09	Waste sand and clays
17 01 07	mixture 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 waste other than those
	mentioned in 17 09 01, 17 09 02 and 17 09 03
19 12 09	minerals (for example sands, stones)
20 02 02	soil and stones

- 3.2.2 Other wastes with the potential to cause dust may be accepted and are subject to the same management, mitigation and control measures included in section 4 of this DEMP.
- 3.2.3 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.

3.3 Overview of Site Operations

- 3.3.1 Loads of mixed skip waste from HCI sources i.e. local builders, householders, and other tradesman in the surrounding area and construction and demolition waste will be accepted at the site. Once waste has been accepted at the site, it will be subject to the following depending on the nature / source of the waste type:
 - a) Mixed HCI loads will be tipped into the waste reception bay (AREA 1) for sorting into waste types which are transferred to the appropriate skips / bays. Any waste found to

- be non-conforming during this initial sorting will be stored in the quarantine area prior to removal from the site to a suitably permitted facility.
- b) Waste will be separated by type and stored in the appropriate storage areas which are illustrated on Drawing No. BIE/3309/03 Site Layout & Fire Plan. Asbestos waste will be stored double bagged in clearly identifiable secure lockable containers within a building.
- c) Scrap metal will be stored in an interlocking bay (AREA 7).
- d) Hardcore / rubble will be stored in an interlocking bay (AREA 8).
- e) All other wastes will be stored in secure skips before removal from site for disposal or further recovery at a suitably permitted facility. All wastes will be subject to dust suppression and mitigation measures outlined in the following sections.

3.4 Mobile Plant and Equipment

3.4.1 Table 3.2 details the plant and equipment available on site, only trained operators will be permitted to drive / operate the plant / equipment listed below.

Table 3.2 - Plant & Equipment

Item	Number	Function
360° excavator / crane grab	1	Loading/unloading/movement/sorting
Loading shovels	1	Loading/unloading/movement/sorting

- 3.4.2 All plant and equipment used on site will be subject to preventative maintenance checks to ensure effectiveness and no excess smoke from exhausts is being produced.
- 3.4.3 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 <u>Dust Management & Mitigation</u>

4.1 Responsibility for Implementation of the DMP

- 4.1.1 The site manager is responsible for the implementation of this DEMP and for ensuring the mitigation strategies in place are adhered to. Where the site manager is unavailable to oversee the implementation of dust suppression and mitigation strategies, a suitably experienced site operative or the Technically Competent Manager (TCM) is delegated responsible.
- 4.1.2 This DEMP will be reviewed on a biannual basis (every two years) or in the event of any of the following:
 - a) Complaints of dust received.
 - b) A change in operation that is deemed to have a potential effect on increasing dust emissions.
 - c) Changes to the surrounding area e.g., a new residential development within 1km of the site.
- 4.1.3 All staff members have received the necessary training to deliver dust suppression measures and understand the contents and requirements detailed within this DEMP. Staff will undergo refresher training every 12 months or in the event of a dust complaint / issue or the implementation of operational changes.

4.2 Sources of Fugitive Dust / Emissions

4.2.1 The main dust/emission sources which arise from site are detailed in Table 4.1 below:

Table 4.1 - Dust emission source table

Source/Plan Ref	Description
Loading Area	The main tipping area / waste reception area.
Various sources	Output and storage of waste.
Various sources	Vehicles accessing/aggressing the site tracking dust on to or off the site.
Various sources	Dust being emanated around from site from surfaces or wastes with dust
	potential not being properly contained.

Various sources	Loading waste materials on to vehicles for removal off site.
(sorted waste bays)	
Various sources	Particulate emissions from the exhaust of vehicles/plant/machinery on site (NO2).
Various sources	Where wind speed reaches excess of 4 of the Beaufort Wind Scale.

4.3 <u>Control Measures (general/staff training/daily inspections)</u>

- 4.3.1 Good housekeeping and site practices are vital to ensure that the impacts from fugitive dust and debris impacts are controlled.
- 4.3.2 Daily inspections are undertaken on site in relation to the presence of dust / debris with corrective actions implemented upon discovery. Operational staff are suitably trained in procedures to keep the levels of dust /debris to a minimum including prevention and mitigation.
- 4.3.3 In dry and windy weather conditions recorded inspections will take place more frequently (up to three times a day). All inspections are visual and recorded on the Inspection Checklist, see Appendix II
- 4.3.4 Areas where dusts are likely to arise or build up will be continuously monitored throughout the working day and cleaned on a daily basis; paying special attention to plant and equipment where dust is more likely to build up.
- 4.3.5 The weather conditions at the site will be considered and recorded at the start of each working day so that the days operations may be planned to consider any potential increase in dust emissions from climatic conditions. If wind conditions between 4-6 on the Beaufort Wind Scale are experienced the site manager will decide whether to implement more frequent visual monitoring i.e. three times daily or periodically (every hour) or if continuous suppression is required.
- 4.3.6 If excessive windy conditions are expected (winds exceeding 6 on the Beaufort Wind Scale) the site manager can decide if stockpile heights need reducing or if treatment operations need to be temporarily suspended.

4.4 Control Measures (boundary fencing / containment)

- 4.4.1 Construction and demolition waste (soil, stones, hardcore etc) are stored on hardstanding in an interlocking concrete storage bay with a freeboard of at least 1m. Maintaining a freeboard of 1m will provide a protective barrier from material at the top of the stockpile becoming windblown. Behind the waste storage bay is a small earth bund and cluster of trees which will provide a degree of protection from the wind.
- 4.4.2 On the adjacent site to the west of the site there is a large building that will provide a screen for winds blowing from the southwest.
- 4.4.3 As previously mentioned in paragraph 3.3.1-point b, asbestos waste will be stored double bagged in clearly identifiable secure lockable containers within a building. This secure containment will significantly reduce the risk of potentially hazardous fibres being released into the atmosphere.

4.5 <u>Control Measures – site surfacing</u>

- 4.5.1 All wastes are stored on areas of hardstanding. Wastes considered to have the highest dust potential are stored in interlocking concrete bays with a minimum freeboard of 1m.
- 4.5.2 There is access to mains water on site, therefore, the operator has the capability to dampen down surfaces and stockpiles using hosepipes and a water bowser.
- 4.5.3 Areas of impermeable concrete will be manually swept at the end of each working day to prevent litter or dust becoming windblown outside of operational hours.

4.6 Control Measures - 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) There is access to a permanent mains water supply on site which will be available at all times and will be particularly utilised during hot and dry weather conditions to ensure that the dust suppression can function effectively.
 - b) Vehicle speed on site is restricted to 5mph. Signs are erected at the relevant areas of the site. This reduces the potential for re-suspension of dust and particulate matter.
 - c) Exiting vehicles leaving the site 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.
 - d) Due to the site being impermeable surfacing it is considered the resuspension of dust / mud is unlikely, however, should dust or mud be found on vehicle wheels upon inspection prior to leaving the site, a hose will be used to dampen wheels and remove mud.
 - e) Any mud/dust deposited off site will be treated as an emergency and cleaned by operatives using manual techniques or the Operator will organise for a road sweeper to be deployed if required.
 - f) Any dust/fluff cleared from mobile plant or other areas where dust/fluff could idle will be deposited into one of the mobile wheelie bins located near the site office.
 - g) 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. where wastes with dust potential are stored. These will be behind and on top of storage bays which are not readily accessible when operations are taking place.
 - h) The operator will shut down plant/machinery and hose them down to remove any dust/fluff that may have accumulated beneath them.

4.7 <u>Control Measures – site suppression</u>

- 4.7.1 **Hosepipes** There are hoses situated around the site which can be utilised to spray bays and stockpiles, and for further dampening of 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 **Mobile Water Bowser** -There is a mobile water bowser situated on site that can be utilised to aid in suppression such as dampening stockpiles and site surfaces. The mobile water bowser can be filled using the main water supply and transported anywhere on site.
- 4.7.3 The mobile water bowser will remain filled at all times to be readily available to aid in dust suppression.
- 4.7.4 The above suppression techniques will not be in use continuously but only during the following circumstances where site management will inform staff to implement them:
 - a) If the weather has been dry for three days and waste stockpiles/surface are dry.
 - b) During dry/warm conditions i.e. temperatures above 75°F.
 - c) During weather conditions when winds reach 4 or above on the Beaufort Wind Scale
 - d) 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.
 - e) In the event the operator requires to load dusty waste which may cause airborne dust once being loaded.

4.8 <u>Control Measures – wheel wash / wash down area</u>

- 4.8.1 Site operatives will inspect vehicles prior to leaving the site and clean vehicles before exiting to reduce the risk of mud/debris being tracked off-site using a hose pipe.
- 4.8.2 In the unlikely event that the material is deposited on the public highway it will be treated as an emergency and will be cleared immediately by the operator using manual techniques (brush, hoses) or if required a road sweeper will be organised by the site manager.

4.9 <u>Control Measures – water supply</u>

4.9.1 A permanent mains water supply is available on site to ensure that dust suppression can function effectively. Any 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 or hot weather 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 <u>Control Measures – processing of waste</u>

- 4.10.1 No mechanical processing of waste is undertaken on site. Loads are manually sorted by hand or grab into the appropriate storage areas.
- 4.10.2 Waste will be stored in its largest form significantly reducing the risk of dust developing.

4.11 Control Measures – storage of waste

- 4.11.1 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:
 - a) Stockpiles will be sprayed with water during periods of dry/windy weather to prevent excessive drying and dust formation.
 - b) 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 mobile water bowser will be deployed to waste stockpiles.
 - c) The handling / drop heights of material will be kept to a minimum at all times to reduce the opportunity for dust emissions to be created and dispersed by winds.
 - d) Wastes with the highest potential to produce dust emissions are stored in dedicated bays with a minimum 1m freeboard to prevent the waste exceeding the height of the bay and causing dust plumes.
 - e) In the event of high winds outside of operational hours (the likelihood of which will be checked daily via Met Office notifications) stockpile heights of potentially dusty wastes

e.g., hardcore / rubble will be reduced even further if possible and covered with tarpaulin overnight to prevent wind whipping of material.

4.12 Control Measures – vehicle movements and mobile plant

- 4.12.1 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.
- 4.12.2 The site will follow the first in first out principle to reduce additional movements by mobile plant. In summary, waste will be tipped from the HGVs / delivery vehicles into the tipping area, the oldest material will be extracted from one side of the pile and sorted into the appropriate storage area. The same HGV will collect any processed / sorted material and remove off site. It is unlikely that vehicles will access/egress the site unladen.

4.13 Control Measures - loading and unloading vehicles

- 4.13.1 The operator of the loading plant will direct vehicles to a position and location which reduces wind whipping of loaded material.
- 4.13.2 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 <u>Dust Management Risk Assessment Model</u>

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 <u>Consequences</u>

5.3.1 Table 5.1 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
Α	MINOR INJURY
В	MAJOR INJURY
С	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 Table 5.2 below:

Table 5.2 - Potential effects

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

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

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

5.5.1 Table 5.3 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)

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	Мо	Mi	N			
_	1	High	High	Medium	Low			
bility		High	Medium	Low	Negligible			
Probab	3	Medium	Low	Negligible	N/A			
ا ا	4	Low	Negligible	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 5.5, 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 Routes

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	See Table 2.1	Harm to human health – respiratory irritation and illness. Air Pollution Water Pollution	Moderate	3	Low	Site surfaces will be dampened using a mobile water bowser or hose pipes. The operator will pay special attention to the areas where dust/debris is likely to build-up i.e. near to the hardcore / rubble storage bay. 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. Daily housekeeping inspections are undertaken on site to clear debris and litter and prevent it from leaving the permit boundary. Vehicle speed on site is restricted to 5mph. 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 resuspension of dust and particulate matter. 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. Vehicles will be cleaned using the hose pipes available on site if required. Any mud/dust deposited onto the public highway will be treated as an emergency and cleaned by site operatives. If required, the site manager will arrange for a road sweeper to be deployed on the public highway. There is a continuous monitoring regime in place to identify any potential for dust leaving site boundary.	Negligible
Vehicles tipping into waste reception/storage areas	Air	As above	Harm to human health – respiratory irritation and illness. Air Pollution 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 bay. The loading / sorting of waste is undertaken by a 360° excavator which can deposit directly into the storage areas / containers, this is considered better method than a loading shovel. The operator will avoid double handling of waste. Staff continue to monitor the waste to ensure it does not escape the confines of storage bays and skips. The operator 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	Harm to human health – respiratory irritation and illness. Air Pollution Water Pollution	N/A	N/A	N/A	There are no treatment operations undertaken on site other than sorting via hand or mobile plant.	N/A
Prolonged periods of dry/warm weather or conditions where winds reach 4+ on the Beaufort Wind Scale	Air	As above	Harm to human health – respiratory irritation and illness. Air Pollution 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. Continual use of mobile dust suppression methods until weather conditions change/improve or inspections detail dust emanating on/off site is not occurring.	Low
Particulate emissions from the exhaust of vehicles / plant /generators and other non-road going machinery on site.	Air	As above	Harm to human health – respiratory irritation and illness. Air Pollution Water Pollution	Moderate	3	Low	All vehicles, plant and equipment are serviced in line with manufacturer recommendations to ensure they are fit for purpose and ensure emissions are below the acceptable level. All vehicles, plant and equipment undergo daily inspections under the site's preventative maintenance schedule to ensure no visible faults are detected. 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

Visual Dust Monitoring

- 6.1.1 Dust emissions at the site will be monitored by visual observation and recorded on the Dust Monitoring Form. There are no fixed locations for dust monitoring as this will change dependent on weather conditions and the direction of wind. Monitoring will take place anywhere within and around the site boundary. Monitoring results will be recorded on the Dust Monitoring Form, see Appendix IV.
- Oust monitoring will be carried out during operational hours. Recorded visual monitoring will be undertaken at least twice a day, for a minimum of five minutes each time by appropriately trained site operatives. Visual monitoring will take place at the beginning of the working day and when operations with the highest potential to produce dust are taking place. This is considered to be the most beneficial method to ensure that mitigation measures being implemented on site are effective. It is expected that staff members will also check for dust emissions as they approach or leave the site.
- 6.1.3 If excessive dust emissions (dust clouds) are observed, the site manager will establish what is causing the excessive dust emission to be generated and take remedial action. The results of the investigation and what action was taken will be recorded.
- 6.1.4 If the operator increases suppression methods and the suppression methods are still not considered suitable, operations will reduce or cease until the problem has been fully rectified. Site management will be responsible for investigating dust issues and provide additional training to staff to prevent any re-occurrences.
- 6.1.5 Extra and unplanned monitoring will be carried out on site when conditions are particularly windy (4 or above on the Beaufort scale) or dry, new activities are being undertaken, new machinery is being used or following the receipt of a complaint or incident related to dust emissions.

6.1.6 Site operatives will continuously visually monitor dust emissions whilst plant is in operation and will control dust emissions using the procedures outlined in sections 4.2 – 4.11 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 Staff Shortages / Human Error

- 6.2.1 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.
- 6.2.2 All staff are trained and undergo toolbox talks every 12 months (or sooner if operations change or complaints are received) 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.

6.3 Weather Conditions

- 6.3.1 The operator will receive Met Office weather alerts for conditions which could cause a potential on or off-site dust complaint:
 - a) Dust plumes occurring on site, potentially if winds reach 4 on the Beaufort Wind Scale
 - b) Winds exceeding 7 on the Beaufort Wind Scale
 - c) Dust escaping beyond the site boundary.
 - d) Droughts or periods of hot weather exceeding 3 major dry days which could lead to water shortages, hosepipe bans and excessive dust.

6.3.2 The operator will install the following preventative measures to avoid serious dust pollution:

WINDS EXCEEDING 7 ON THE BEAUFORT WIND SCALE

- No sorting or processing 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 or if weather
 conditions improve.
- Stockpiles will be reduced further such as a 2m freeboard, if possible, to prevent the tops of stockpiled material escaping beyond the site boundary.
- Bays may be covered with tarpaulin in the event the above procedures are not considered effective.
- If higher winds i,e. amber/red alert on Met Office are present, the site will deploy the above measures and may be forced to close operations until conditions have improved.

DROUGHTS/WARM, DRY WEATHER

- In cases such as a hosepipe ban or water shortage, the site will ensure there is additional
 water available i.e. more mobile water bowsers or IBC containers filled with water which
 can be utilised to ensure suppression techniques can still function.
- The site will contact the water company daily to see when water supply is available,
 operations would reduce in these instances.
- Where dust is becoming a major concern then the operator will stop processing waste and cover bays using tarpaulin until conditions or dust suppression techniques are considered effective.

6.4 **Operational/Power failure**

6.4.1 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.

- 6.4.2 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.
- 6.4.3 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.
- 6.4.4 Any major defects found during site inspections 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.
- 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.

Reporting and Complaints Response

7.1 Reporting of Complaints

- 7.1.1 Should a complaint regarding dust be received by the site, the complaint will be recorded on the complaints form and investigated in accordance with the complaint's procedure.

 Details of information to be recorded as a minimum are:
 - a) Who made the complaint.
 - b) Date & time of the complaint.
 - c) The nature of the complaint.
 - d) Action taken.
 - e) Signature.
- 7.1.2 The person completing the form will then, if possible, make a note of:
 - a) the weather conditions at the time of the problem (rain snow fog etc.)
 - b) strength and direction of the wind; and,
 - c) the activities being undertaken at the time of the complaint, particularly anything unusual.
- 7.1.3 The site manager will identify what caused the excessive dust emissions to be generated. If the excessive dust emissions have been caused by a procedure not being carried out properly, then staff will receive further training on the dust procedures and this DEMP. If the excessive dust emission has been caused by plant failure, then the plant will be repaired as soon as possible.
- 7.1.4 All complaints will be acknowledged and investigated, with resultant actions reported to the complainant. Any complaints received by the Environment Agency relating to dust emissions from the site are dealt with on the same day.
- 7.1.5 If three or more complaints are received on the same working day, the TCM will escalate the complaints, review site operations taking place and commit to stop operations until the

cause has been identified. The known cause will not commence until the issue has resolved i.e. targeted suppression or plant malfunction and repair.

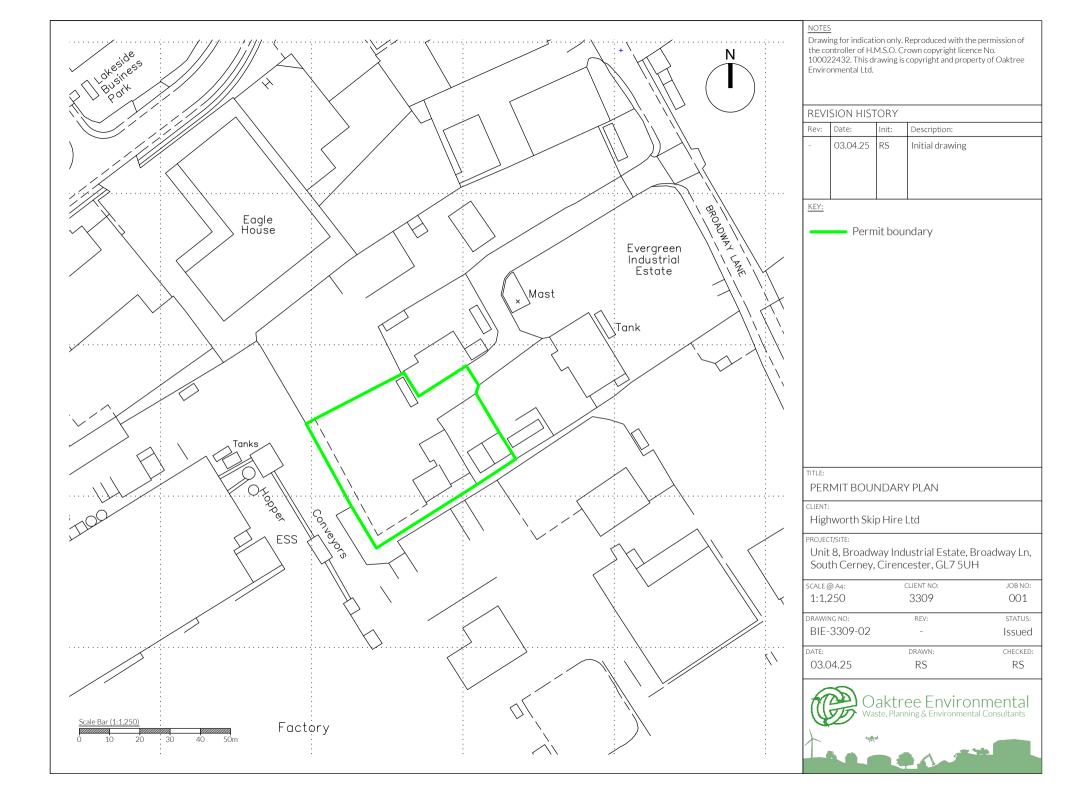
- 7.1.6 The operator would also be required to make a note of any unavoidable events plant/equipment malfunctions in the site diary, rather than just actual complaints received. This will ensure that if complaints are received retrospectively from either the Council/EA or directly, any circumstances 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.
- 7.1.7 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.
- 7.1.8 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.

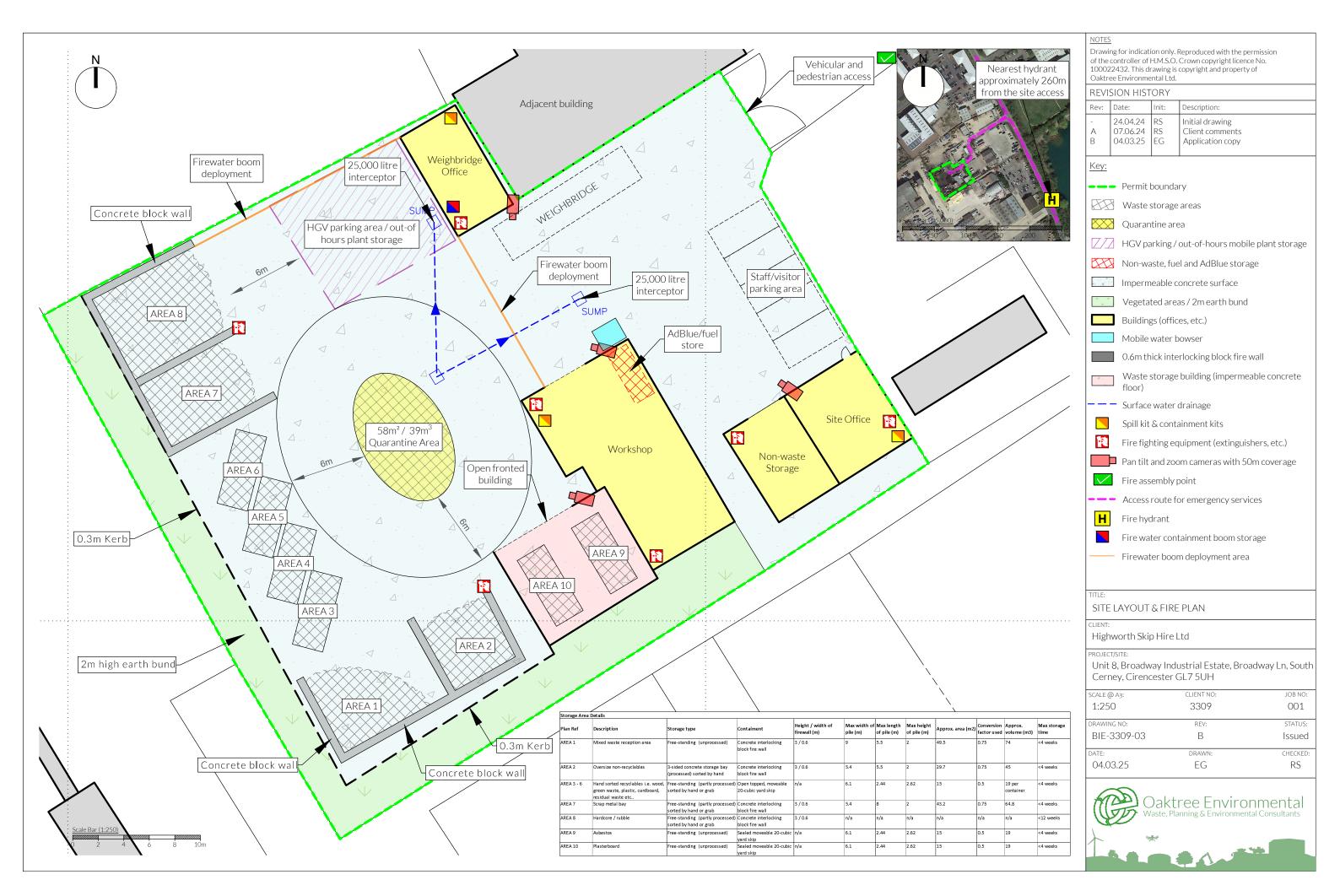
7.2 <u>Liaison with Neighbours</u>

- 7.2.1 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.
- 7.2.2 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.
- 7.2.3 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 III 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

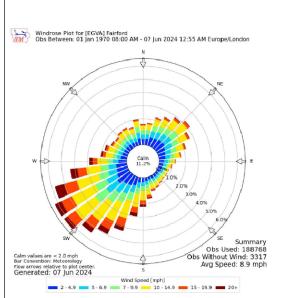
responded to within 24 hours and suitably reviewed by the site manager who is ultimately responsible.

Appendix I Drawings

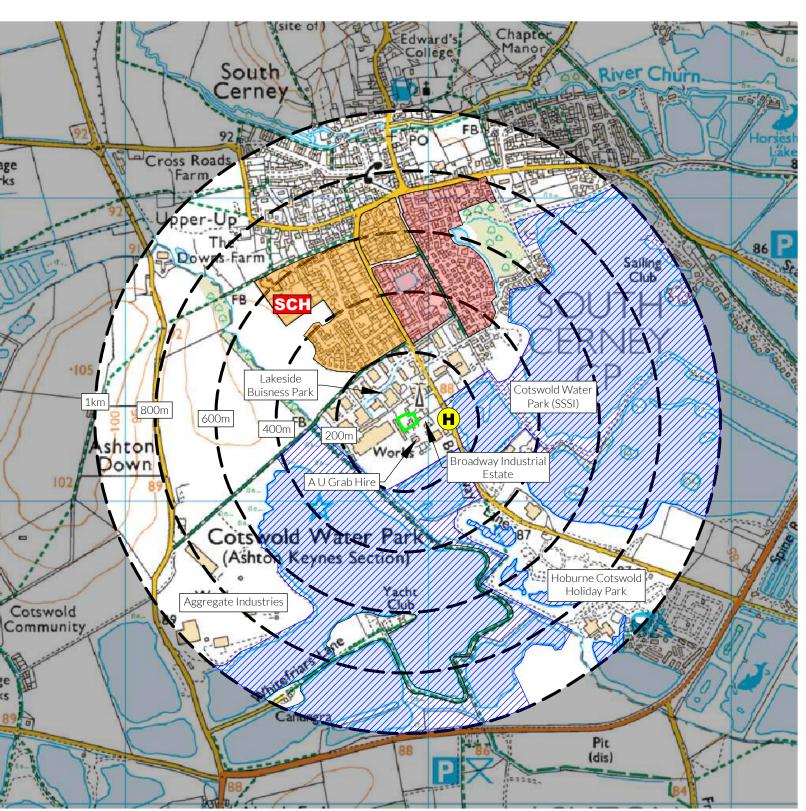




KEY: Permit boundary Main River Surface water body (river / stream / pond / pool / lake) Workplaces (includes agriculture industry, commerce and retail) Areas with mix of residential, retail and commercial properties Residential blocks Class A roads Class B roads Class C roads Nearest fire hydrant HHHHHH Railway line SCH School Woodland areas Protected sites (Ramsar, SSSI, SPA, SAC)



Compass Wind Rose for Fairford (EGVA) Period 1970-2024 - source: Iowa State University



NOTES

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REVISION HISTOR	/

		-	
Rev:	Date:	Init:	Description:
-	04.03.25	EG	Initial drawing

RECEPTOR PLAN

Highworth Skip Hire Ltd

Scale Bar (1:12,500)

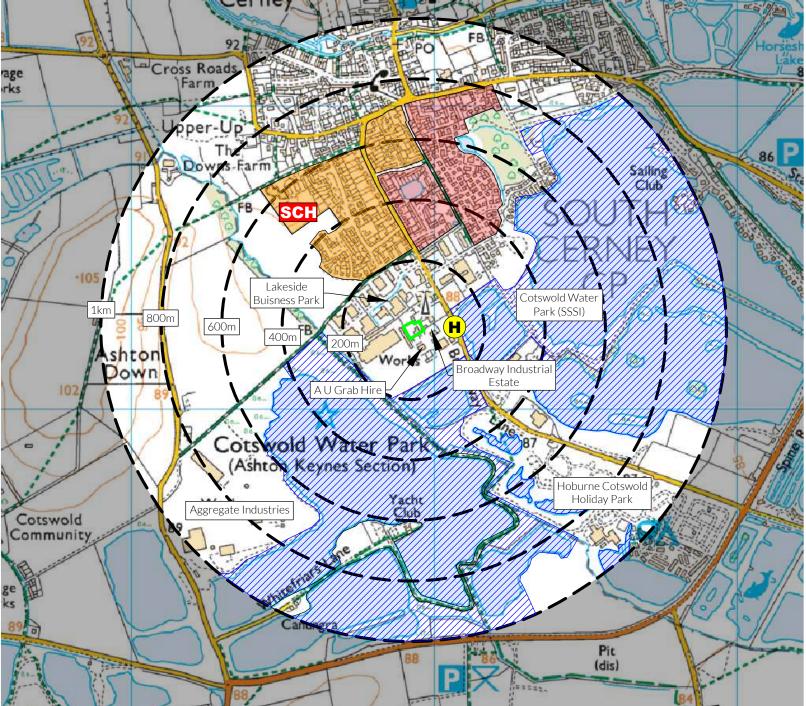
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Unit 8, Broadway Industrial Estate, Broadway Lane, South Cerney, Cirencester, GL7 5UH

SCALE @ A3:	CLIENT NO:	JOB NO:
1:12,500	3309	001
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DRAWING NO:	REV:	STATUS:
BIE-3309-04	-	Issued
DATE:	DRAWN:	CHECKED:
04.03.25	EG	-





Appendix II Inspection Checklist

HIGHWORTH SI DAILY INSPECTI			
DATE			
ITEM FOR VISUAL INSPECTION	TIME OF INSPECTION (START)	CHECKED Y/N	REMEDIAL ACTION REQUIRED
\	TIME OF INSPECTION (FINISH)		
EMERGENCY ACCES	S (FREE FROM BLOCKAGES)		
COMBUSTIBLE WAS POTENTIAL IGNITION	TE STORAGE (AWAY FROM N SOURCES)		
FIRE WATCH AT THE	END OF THE WORKING DAY		
TO INSPECT FOR SIG	INS OF SELF-HEATING, SMOKE		
OR FIRE AND ENSUR COOL ETC	RE EXHUASTS ON PLANT ARE		
DUST/FLUFF AROUN	ID UNIT CHECK		
LITTER (I.E. LOOSE C MATERIALS)	OMBUSTIBLE WASTE		
PLANT/EQUIPMENT	MAINTENANCE CHECKS		
FIRE QUARANTINE A	AREA IS CLEAR OF WASTE		
	NG (CHECK FOR ODOUR BEING HE PERMIT BOUNDARY)		
OTHER (SEE NOTES	•	1	1
INSPECTION CARRIE	D OUT BY		
NOTES/ACTION (C	CONTINUE ON A SEPARATE SE	HEET IF NECESSA	ARY):
CHECKED BY		SIGNATURE	
POSITION		DATE	
Sheet		of	

HIGHWORTH SKIP HIRE LTD WEEKLY INSPECTION CHECKLIST WEEK COMMENCING ITEM FOR VISUAL TIME OF INSPECTION (START) CHECKED REMEDIAL ACTION REQUIRED **INSPECTION** Y/N TIME OF INSPECTION (FINISH) SITE SECURITY (CCTV SYSTEM IS WORKING, FENCING AROUND SITE PERIMETER IS IN GOOD CONDITION, LOCK ON GATED ENTRANCE IS WORKING) WASTE STORAGE AREA (NOT EXCEEDING THE DIMENSIONS INCLUDED IN THE FIRE PREVENTION PLAN) WEATHER FORECAST (CHECK FOR UPCOMING WEEK TO DETERMINE IF WASTE OPERATIONS ARE LIKELY TO BE IMPACTED) FIRE FIGHTING EQUIPMENT AND SPILL KITS E.G. FIRE EXTINGUISHERS ARE IN PLACE AND FULLY STOCKED INTEGRITY OF BAY WALLS (NO CRACKS ETC) INTEGRITY OF IMPERMEABLE PAD (NO CRACKS ETC) INTEGRITY OF KERBING AROUND IMPERMEABLE CONCRETE PAD (FREE FROM CRACKS ETC) **OTHER (SEE NOTES BELOW) INSPECTION CARRIED OUT BY** NOTES/ACTION (CONTINUE ON A SEPARATE SHEET IF NECESSARY): **CHECKED BY SIGNATURE POSITION** DATE SHEET OF

HIGHWORTH SKIP HIRE LTD MONTHLY INSPECTION CHECKLIST - BIE/RF/4 WEEK COMMENCING ITEM FOR VISUAL TIME OF INSPECTION (START) CHECKED REMEDIAL ACTION REQUIRED **INSPECTION** Y/N TIME OF INSPECTION (FINISH) HOSES AVAILABLE ON SITE AND FREE FROM HOLES (IN GOOD WORKING CONDIITON) INTEGRITY OF WATER TANKS (FREE FROM CRACKS / **IMPERFECTIONS AND SECURE)** ELECTRICALS (WIRES SHOULD NOT BE FRAYED / DAMAGED AND SOCKETS NOT OVERLOADED) **OTHER (SEE NOTES BELOW) INSPECTION CARRIED OUT BY** NOTES/ACTION (CONTINUE ON A SEPARATE SHEET IF NECESSARY): **CHECKED BY SIGNATURE POSITION** DATE SHEET OF

Appendix III Complaints 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 (noise, odour, dust, other) (date, time, duration)	
Weather at the time of complaint (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 IV Dust Monitoring Form

HIGHWORTH SKIP HIRE 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 CONDITION	NS							
WEATHER TEMPERAT	URE							
WIND SPEED								
WIND DIRECTION								
PERIMETER INFRASTRUCTURE SU	ITABLE							
WATER JET SYSTEM FUNCTIONING								
ARE WASTE STORAGE								
STOCKPILES BELOW 5m DUSTY MATERIAL STORAGE								
VISIBLE FROM LOCATION								
ANY NOTICEABLE DUS PARTICULATES ON TH GROUND NEAR THE LOCATION								
ANY DUST APPARENT SITE	OFF							
EMISSIONS FROM PLANT/EQUIPMENT V	/ISIBLE							
SMOKE FROM PLANT TO BE SUITABLE								
HAS SITE MANAGEME BEEN INFORED OF TH INSPECTION								
DOES ACTION NEED T	O BE							
INSPECTION CARRIED	OUT BY							
OTHER								
NOTES/ACTION (CON	NOTES/ACTION (CONTINUE ON A SEPARATE SHEET IF NECESSARY):							
CHECKED BY			SIGNATURE					
POSITION			DATE					