Dust Management Plan

Small Waste Incineration Plant and Dryer Plant
Calder Valley Skip Hire Limited

JER1902
Dust Management Plan
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1
1 May 2020

Quality Management					
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1 INTRODUCTION

1.1.1 This dust management plan (DMP) relates to the operation of a small waste incineration plant (SWIP) and drying plant by Calder Valley Skip Hire Ltd (CVSH). The SWIP and drying plant will be located within an existing waste management site at Belmont Industrial Estate, Rochdale Road, Sowerby Bridge, West Yorkshire, HX6 3BL.

1.1.2 This document has been written to discharge planning condition 14 of the Planning appeal decision ref: APP/A4710/W/18/3205776, dated 4th February 2020. This planning condition states:

'Before the first operation of the SWIP hereby approved a dust management scheme for the operation of the SWIP and Drying Plant shall be submitted to and approved in writing by the Local Planning Authority. The scheme shall include management of dust arising from: Loading of the SWIP; Removal of Bottom Ash from the SWIP; Transportation of Bottom Ash from the site; as well as, loading and unloading of the Drying Plant and storage of the associated dried material.'

1.1.3 The purpose of this is to identify those activities associated with the SWIP and drying plant that potentially could give rise to dust and particulates, the management controls that will be in place, monitoring plans and corrective actions to be put in place should there be an excess in dust at the site.

1.1.4 This DMP will be implemented throughout the operational life of the SWIP and drying plant and it will form part of CVSH's Environmental Management System (EMS) which is operated and audited under the ISO 14001 environmental standard.

1.1.5 The SWIP will process 1-2 tonnes per hour of refuse derived fuel (RDF) produced from the treatment of primarily construction and demolition waste at the waste transfer station (WTS) located on the same site. There is the potential for between 100 and 500 kWe electrical energy being exported to the National Grid.

1.1.6 Heat produced by the SWIP will be used within the drying plant to be installed as part of the WTS activities. The drying plant will be used to dry inert soils and aggregates and will be located next to the recycling centre on the CVSH site. The use of the drying plant will reduce the volume and weight of inert soils and aggregate stored on site and thereby reduce the overall volumes transported from site.

1.2 Site Setting and Sensitive Receptors

1.2.1 The SWIP and drying plant site is located within the administrative area of Calderdale Metropolitan Borough Council.

1.2.2 The Site is located off Rochdale Road (A58) and is surrounded by;

- To the north; the River Ryburn, woodland and Rochdale Road (A58), there are a number of residential dwellings along Rochdale Road and Haugh End Lane.
- To the east; Spring Bank Industrial Estate containing a number of small light industrial properties.
- To the south/ south east: Dismantled railway and embankment beyond which lie residential properties; Hullen Edge Farm, Long lane and Goose West Lane.
- To the west; the River Ryburn, woodland and small-scale industrial units along Mill House Lane.

1.2.3 The receptors within 1 km of the site are:

- Various residential properties including Rochdale Road and Parkfield Drive
- Spring Bank Industrial Estate
- Sacred Heart Catholic Primary School

- Sowerbys Bridge Day Nursery
- Ryburn Valley High School
- Norland Moor Local Nature Reserve
- Rochdale Canal Local Wildlife Site
- Rough Hey Wood Ancient Woodland

1.2.4 Table 1-1 show the locations with the most sensitive receptors

Table 1-1: Summary of Sensitive Receptors with 1 km of the Calder Valley Site

Distance and Direction from Site	Receptor	Sensitive Receptor
100 m N	Residential housing; Rochdale Road and Parkfield Drive	Residents
200 m S	Residential housing; Long Lane	Residents
300 m N	Sacred Heart Catholic Primary School	School children
550 m NE	New Road Primary School	School children
675 m NW	Ryburn Valley High School	School children
780 m NE	Sowerbys Bridge Day Nursery	Nursery children

1.2.5 The site is not located in a DEFRA Air Quality Management Area (AQMA). The nearest AQMA is in Sowerby Bridge, 670 m from the proposed facility, this area, according to Calderdale Council, has been designated under Section 83 Environment Act 995 due in part to a known exceedance of the annual mean air quality objective for Nitrogen Dioxide (NO_2) as specified in the Air Quality Regulations 2000. It was also part due to modelled evidence of a likely exceedance of that value.

1.2.6 The prevailing wind direction is to the north-east.

1.3 Other Dust/ Particulate Emitting Operators

1.3.1 Table 1-2 shows locations surrounding the site which have the potential to emit dust and particulates

Table 1-2: Other Dust/Particulate Emitting Operators

Company	Address	Type of Business	Distance from site boundary (m)
-	Rochdale Road	Road	100
Sowerby Bridge Readmix Ltd	Unit 1 Holby Business park, West St, Sowerby Bridge HX6 3BT	Ready-Mix Concrete Supplier	450

2 OPERATIONS AT CALDER VALLEY

2.1 Waste Transfers to the SWIP and Drying Plant

2.1.1 No waste will be delivered directly to the SWIP or drying plant. Waste deliveries to the site are initially all managed via the existing WTS. The waste processed within the SWIP and dryer unit is transferred from the WTS.

2.2 Operation of the SWIP

2.2.1 The SWIP will receive and thermally treat approximately 8,000 to 10,000 tonnes per annum (tpa) of residual non-recyclable waste processed into refuse derived fuel (RDF), arising from the existing waste management and recycling operations carried out by CVSH on the same site.

2.2.2 The SWIP includes a waste reception and storage area and is all housed within the thermal treatment building. RDF is transferred from the WTS to the SWIP using front loaders. The front loaders will enter the thermal treatment building through the vehicular access door. The vehicular access door is a fast acting internally mounted rapid-closing heavy-duty polyethylene roller shutter variety and will only open to permit access in and out of the building by vehicles during normal daytime working hours. At all other times the door will remain closed.

2.2.3 No further processing of the RDF feedstock will take place in or as part of the SWIP activities. RDF will be either placed directly into the infeed hopper of the SWIP or temporarily stored within a dedicated buffer storage area. At any one time, there will be no more than 20 tonnes of RDF stored within the buffer store or within the infeed hopper within the thermal treatment building.

2.2.4 The interior of the thermal treatment building has been purpose designed and is operated under slight negative pressure in order to mitigate potential dust and odour dispersion impacts. Air from within the building will be extracted and combusted through the SWIP. The furnace unit is designed to use gas oil as a start-up fuel until the primary and secondary chambers meet the required inner wall temperature of 850°C.

2.2.5 Once the furnace unit is at temperature, waste is loaded into the primary chamber via an enclosed loading hopper and combusted. At this stage the unit becomes self-sustaining and autothermic.

2.2.6 The primary chamber is equipped with a variable grate upon which the combustion of waste occurs.

2.2.7 All hot gases arising from the combustion of the waste materials within the primary furnace chamber are subsequently combusted under oxygen rich [complete combustion] conditions within the secondary chamber.

2.2.8 The design of the secondary combustion chamber is such that the flue gases achieve a residence time of 2 seconds after the last secondary air inlet at a minimum temperature of 850°C.

2.2.9 Bottom ash that remains at the end of the grate is collected in an underfloor ash container and manually raked from the plant into sealed ash containers. The frequency of bottom ash removal is dependent on the ash content of the residual waste materials and will typically be 5-10%.

2.2.10 All emissions from the SWIP will be exhausted through a ceramic filtration plant. Effective filtration and abatement are achieved through the injection of a lime sorbent and activated carbon powder to achieve acid gas neutralisation, metals removal and particulate emissions control.

2.2.11 In time, on the surface of the filter elements collected particulates increase in thickness, this creates a higher differential pressure across the filter elements. The pressure is recovered by reverse pulse cleaning, at a pre-set time compressed air is automatically blown back through the filter elements to discharge the collected particles as a filter cake. The removed material falls to the bottom of the filtration housing and is removed manually.

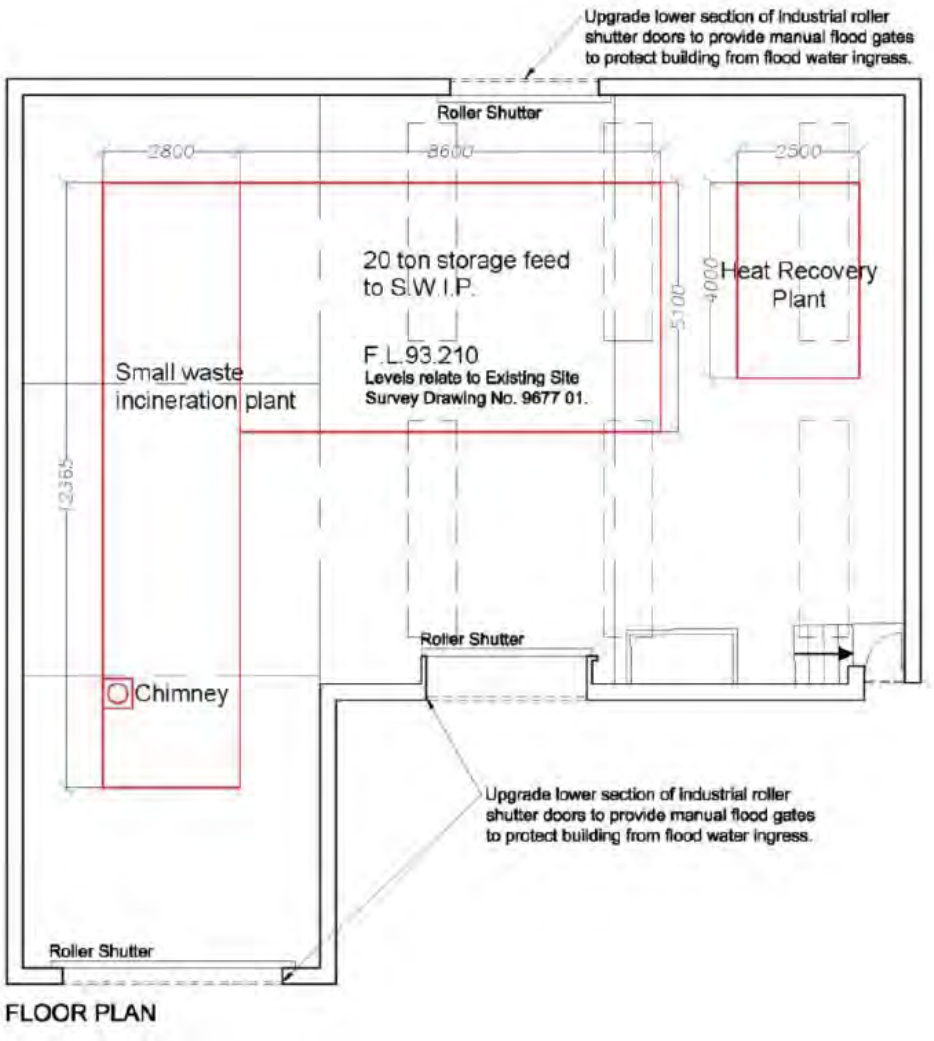

Figure 2-1: SWIP site Layout Plan**.**

2.3 Operation of the Drying Plant

2.3.1 Approximately 8,000 tpa of inert soils and aggregates will be processed through the drying plant.

2.3.2 The inert waste to be processed in the drying plant will be stored in the existing WTS building. This waste will then be brought to the drying plant using a front-loading shovel and placed directly into the infeed hopper. All material to be processed within the dryer is delivered as required and no additional waste storage of soils or aggregates prior to drying is provided locally to the drying unit.

2.3.3 The drying plant is a covered moving belt drier unit. Heat for drying generated by the SWIP will be transferred to the drying unit via underground pipework. There are no point source emissions from the drying plant.

2.4 Dust Controls

2.4.1 Key measures to prevent and control dust and particulate emissions includes:

- All activities associated with the SWIP will be within the thermal treatment building which will contain airborne dust dispersion.
- Air from the thermal treatment building will be extracted as combustion air within the SWIP.

- An air-tight loading hopper will be used to load RDF brought into the SWIP.
- An access door in the thermal building which is a rapid-closing heavy duty polyethylene roller shutter which will only permit vehicle access in and out of the building during normal daytime working hours. It will be closed at and throughout the night.
- A ceramic filtration plant will be used as particulate emission control for the SWIP.
- The drying plant is a covered unit with no exhaust therefore there will be limited dust or particulate emissions arising from the process.
- Waste to be processed within the drying plant will be stored within the existing WTS building.
- Dried soils will leave the drying plant by an enclosed conveyor belt will discharge into a nearby storage bay.
- Dried soils and aggregates will be collected in an 8 Wheeled Tipper vehicle which will be sheeted prior to removal from site.
- Site housekeeping measures will minimise dust build-up and spillage procedures will ensure any spillage of dry or dusty material is cleared up immediately.

Table 2-1: Type of Waste and Typical Amounts to be Treated within the SWIP and Drying Plant

European Waste Catalogue (EWC) Code	Product Description	Tonnes per annum	Destination within facility			Process
			SWIP	Storage	Thermal	
			Hopper	Bay	Drier	
17 01 01, 17 01 02, 17 01 03, 17 01 07., 17 05 04, 19 12 09, 20 02 02	Soil and aggregate made up of: Concrete Brick Tiles and Ceramics Mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06 Soil and stones other than those mentioned in 17 05 03 Minerals (for example sand, stones) soil and stones	8,000			Main destination	Drying
19 12 10	Combustible waste (refuse derived fuel)	8,000-10,000	Main destination	Max 20 tonne capacity		Thermal treatment
Total		16,000-18,000				

Table 2-2: Typical Amounts of Recovered Materials and Residual Wastes from the SWIP and Drying Plant

EWC	Product Description	Expected Tonnes Per Annum	Material End Use
19 01 07*	Air Pollution Control (APC) residue / Filter cake Solid wastes from gas treatment	240-300	Landfill
19 01 12	Bottom ash and slag other than those mentioned in 19 01 11	Circa 800-1,000	Preferentially recycling, landfill only where this is not possible
19 12 12	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	6,400-8,000	Recycling
Total		**7,440-9,300**	

3 POTENTIAL DUST HAZARDS AND RISK ASSESSMENT

3.1.1 To assess the potential risk of dust from the SWIP and drying plant, a six-stage process has been followed:

- identify and consider risks for the site, and the sources of the risks;
- identify the receptors at risk;
- identify the possible pathways from the sources of the risks to the receptors;
- assess risks relevant to the activity;
- choose appropriate further measures to control these risks (if required); and
- submit the assessment of overall risk.

3.1.2 Activities associated with the SWIP and drying plant that have the potential to give rise to dust include:

- transfer of RDF to the thermal treatment building
- storage of RDF within the thermal treatment building
- loading of the SWIP;
- operation of the SWIP;
- removal of bottom ash from the SWIP;
- removal of Air Pollution Control (APC) residues;
- transportation of bottom ash residue from the site;
- transportation of APC residue from the site;
- storage of aggregate and soils prior to drying;
- loading and unloading of the drying plant;
- dust from operation of the drying plant;
- storage of the associated dried material; and
- transportation of dried material from the site.

3.1.3 Sensitive receptors to dust and particulates are detailed in Section 1.2 of this report.

3.1.4 The main pathway for dust is air dispersion, dust can also be spread off site through vehicle tracking.

3.1.5 The risk assessment methodology has used a scoring mechanism whereby scores are assigned to:

- the probability of exposure; and
- the consequence of the hazard to the environment or human health.

3.1.6 The risk assessment has been completed by scoring the hazard areas outlined above using a risk matrix as shown in Table 3-1 below:

Table 3-1: Risk Matrix

Consequence	Probability of Exposure			
	High	Medium	Low	Very Low
High	High	Medium	Low	Low
Medium	Medium	Medium	Low	Insignificant
Low	Low	Low	Low	Insignificant
Insignificant	Low	Insignificant	Insignificant	Insignificant

3.1.7 In completing the assessment, the proposed prevention and control measures are assumed to be in place. Where relevant, details of these measures are identified within the assessment.

3.1.8 The dust risk assessment is presented in Table 3-2.

Table 3-2: Dust Risk Assessment and Management Plan

Hazard What has the potential to cause harm?	**Receptor** What is at risk? What do I wish to protect?	**Pathway** How can the hazard get to the receptor?	**Risk management** What measures will you take to reduce the risk? If it occurs – who is responsible for what?	**Probability of exposure** How likely is this contact?	**Consequence** What is the harm that can be caused?	**What is the overall risk?** What is the risk that still remains? The balance of probability and consequence.
Dust generated during transfer of RDF to the thermal treatment building	Neighbouring residents (100 m N) and children attending Sacred Heart Primary School (300 m N)	Air/ Wind dispersion	The front-loaded shovels will only be travelling short distances between the recycling centre and the SWIP building. The front - loaded shovel drivers will not overload their shovels or exceed speed limit of 5mph, to minimise the potential of fugitive emissions. Any accidental spillages of any part of the load will be cleaned up immediately. The Site Manager will inspect the site for litter and dust, as part of the site inspection, this will be recorded on the site inspection form (CV07, from the CVSH EMS) and any litter identified will be picked.	Low – there is only a short distance within which the RDF is transported outside of a building.	Low	Low
Dust generated from storage of RDF in thermal treatment building	Neighbouring residents (100 m N) and children attending Sacred Heart Primary School (300 m N)	Air/ Wind dispersion	There is to be no more than 20 tonnes of residual waste stored within the buffer store or within the infeed hopper and this will be within the thermal treatment building. The doors to the thermal building will be kept closed except for vehicular access during normal daytime working hours. Air from within the thermal treatment building is extracted as combustion air. The thermal building will be kept clean and tidy to prevent dust build up, this will be regularly inspected by the Site Manager.	Very Low – there is a limited quantity of waste held in storage for a limited time period and this will be within the building.	Low	Insignificant

Hazard What has the potential to cause harm?	**Receptor** What is at risk? What do I wish to protect?	**Pathway** How can the hazard get to the receptor?	**Risk management** What measures will you take to reduce the risk? If it occurs – who is responsible for what?	**Probability of exposure** How likely is this contact?	**Consequence** What is the harm that can be caused?	**What is the overall risk?** What is the risk that still remains? The balance of probability and consequence.
Dust generated during loading of SWIP	Neighbouring residents (100 m N and 200 m S) and children attending Sacred Heart Primary School (300 m N)	Air/ Wind dispersion	RDF will be loaded by front loaded shovel and placed directly into the infeed hopper of the SWIP. All loading activities are carried out through the use of an enclosed, air-tight loading hopper, this will be within the building. The doors to the thermal building will be kept closed except for vehicular access during normal daytime working hours. In the event of a spillage during loading the SWIP, the RDF material will be cleaned up as soon as possible. Drop heights will be restricted for loading into the SWIP. The thermal building will be kept clean and tidy to prevent dust build up, this will be regularly inspected by the Site Manager. Air from within the thermal treatment building is extracted as combustion air.	Very Low – the materials are loaded directly and within the building	Low	Insignificant
Dust generated during operation of the SWIP	Neighbouring residents (100 m N and 200 m S) and children attending Sacred Heart Primary School (300 m N)	Air/ Wind dispersion	The SWIP will be designed to be air-tight which will prevent any fugitive emissions. The doors to the thermal building will be kept closed except for vehicular access during normal working hours. Air from within the thermal treatment building is extracted as combustion air. Exhaust gases are subject to flue gas treatment including a ceramic filter for particulate removal. to control below IED emission limits and will be continuously monitored. Spares for the ceramic filters are kept on site so they can be quickly replaced if for any reason they stop working. The treated exhaust gases are released from a stack which has been designed to achieve effective dispersion. Air dispersion modelling has demonstrated effects from dust releases from the stack are not significant. Maintenance checks will be regularly carried out on the SWIP to ensure that it is correct working order.	Very Low – The SWIP is located within the thermal building	Low	Insignificant

Hazard What has the potential to cause harm?	**Receptor** What is at risk? What do I wish to protect?	**Pathway** How can the hazard get to the receptor?	**Risk management** What measures will you take to reduce the risk? If it occurs – who is responsible for what?	**Probability of exposure** How likely is this contact?	**Consequence** What is the harm that can be caused?	**What is the overall risk?** What is the risk that still remains? The balance of probability and consequence.
Dust generated during removal and storage of bottom ash from SWIP	Neighbouring residents (100 m N and 200 m S) and children attending Sacred Heart Primary School (300 m N)	Air/ Wind dispersion	All ash produced is collected in an underfloor ash container and manually raked from the plant into sealed ash containers, this will be within the building. Staff raking the ash will be appropriately trained. The thermal building will be kept clean and tidy to prevent dust build up, this will be regularly inspected by the Site Manager. Air from within the thermal treatment building is extracted as combustion air.	Very Low – use of sealed ash containers and it will be within the building	Low	Insignificant
Dust generated during removal and storage of APC residues from SWIP	Neighbouring residents (100 m N and 200 m S) and children attending Sacred Heart Primary School (300 m N)	Air/ Wind dispersion	APC residues will be handled within the thermal building and loaded into an enclosed skip which in turn will be loaded onto a vehicle prior to removal from the site. Vehicle loading will be undertaken within the thermal building. The thermal building will be kept clean and tidy to prevent dust build up, this will be regularly inspected by the Site Manager.	Very Low – use of enclosed systems and vehicles within the building	Medium	Low
Dust generated during transportation of bottom ash and APC residue from the site	Neighbouring residents (100 m N and 200 m S) and children attending Sacred Heart Primary School (300 m N)	Air / Wind dispersion Vehicle tracking	The bottom ash and APC residue will be removed from site in an enclosed vehicle. Vehicle loading will be undertaken within the thermal building. Any accidental spillages of the any part of the load will be cleaned up immediately. Visual checks will be made on the haul road so that if there is any residual dust on the road a road sweeper can be deployed.	Very Low – the bottom ash and APC residues will be transported in sealed containers	Medium	Low
Dust from storage of aggregate and soils prior to drying	Neighbouring residents (100 m N and 200 m S) and children attending Sacred Heart Primary School (300 m N)	Air /Wind dispersion Vehicle tracking	Storage of soils and aggregate will be within the existing WTS building. No dust complaints from the existing WTS have been received by CVSH for the duration of the site's operation. The existing WTS building will be kept clean and tidy to prevent dust build up, this will be regularly inspected by the Site Manager.	Low – Soils and aggregates will be stored within the existing building	Low	Low

Hazard What has the potential to cause harm?	**Receptor** What is at risk? What do I wish to protect?	**Pathway** How can the hazard get to the receptor?	**Risk management** What measures will you take to reduce the risk? If it occurs – who is responsible for what?	**Probability of exposure** How likely is this contact?	**Consequence** What is the harm that can be caused?	**What is the overall risk?** What is the risk that still remains? The balance of probability and consequence.
Dust from transfer and loading of the drying plant	Neighbouring residents (100 m N and 200 m S) and children attending Sacred Heart Primary School (300 m N)	Air/ Wind dispersion	Material will be transferred using front loading shovels. The drying unit is located immediately adjacent to the existing WTS building minimising transfer distances. Drop heights will be restricted for the loading of soils and aggregates to the drying plant. Any accidental spillages of the any part of the load will be cleaned up immediately. Visual checks will be made on the haul road so that if there is any residual dust on the road a road sweeper can be deployed.	Low – Minimal distance of transfer	Low	Low
Dust from operation of the drying plant	Neighbouring residents (100 m N and 200 m S) and children attending Sacred Heart Primary School (300 m N)	Air/ Wind dispersion	The drying plant is a covered unit with no point source emissions. Inspection and maintenance checks will be regularly carried out on the drying plant to ensure that it is correct working order.	Low	Low	Low
Dust from unloading and storage of the dried material	Neighbouring residents (100 m N and 200 m S) and children attending Sacred Heart Primary School (300 m N)	Air/ Wind dispersion	Drop heights are minimised. Any accidental spillages of the any part of the load will be cleaned up immediately. Dried material is transferred from the drying plant via an enclosed conveyor. Dried materials will be stored temporarily to the rear of the WTS building storage bay and will be sheeted, no more than 20 tonnes of dried material will be stored in the bay at one time. It is the intension to remove the dried materials off site as a waste as soon as possible to minimise the need to store dried materials.	Low	Low	Low

4 DUST AND PARTICULATE (PM_{10}) MANAGEMENT

4.1 Responsibility for Training and Implementation of the DMP

4.1.1 The person responsible for the DMP and its implementation on site is CVSH's Operations Director and Site Manager.

4.1.2 This DMP will be reviewed every two years or sooner if there is a change in activities which will have a potential impact on dust on site. The DMP shall also be reviewed if there is a significant dust emission or verified dust complaint, this is detailed further in section 6 of this DMP.

4.1.3 The site labourers and machine operatives will have the necessary training to implement dust control measures detailed within this DMP, this training will be delivered by the Site Manager.

4.2 Management of Fugitive Dust / Particulate Emissions

4.2.1 There are some aspects of the design of the buildings and infrastructure which will contribute to the control of any potential fugitive dust / particulate emissions. These are detailed in section 2.3 of this DMP.

4.2.2 Site practices will minimise the potential for fugitive dust / particulate emissions. These are detailed in paragraphs 4.2.3 to 4.2.7 below.

RDF, Soil and Aggregate Storage Prior to Treatment

4.2.3 No RDF, soil or aggregates will be stored outside prior to further treatment. All soil and aggregate to be processed within the drying plant will be delivered and stored within the WTS building until needed. RDF will be produced on site within the WTS building and the primary storage of RDF will also be within the WTS building (see also additional storage within the thermal treatment building (paragraph 4.2.8)).

Material Transfers

4.2.4 The vehicle operators transferring material to or removing from the SWIP or drying plant will adhere to site 5 mph speed limits to minimise the potential for accidental spillages. This will be made clear during site inductions/training and enforced by site management.

4.2.5 All front-loader drivers will be trained and this will include clear instructions on ensuring front-loaders are not overloaded. When loading the dryer plant front loader drivers will ensure drop heights are minimised.

4.2.6 Dried material leaving the drying plant will be transferred using an enclosed conveyor. All vehicles that transfer dried waste off site will be sheeted or covered before leaving site. This will be enforced by the Operations Director and the Site Manager and communicated to the drivers when they arrive at the site. Vehicles removing bottom ash and APC residues from the site will do so in a fully enclosed manner. The bottom ash will be held within sealed containers and the APC residues will be held within enclosed skips.

Operation of the SWIP

4.2.7 All activities relating to the SWIP will be carried out within the thermal treatment building. The doors to the thermal building will be kept closed, opening only for vehicular access during normal daytime working hours. This requirement will be enforced by the Site Manager.

4.2.8 No more than 20 tonnes of RDF will be stored with the buffer store within the thermal treatment building.

4.2.9 The SWIP has been designed to be airtight. Air from within the thermal treatment building will be supplied as combustion air to the SWIP. Exhaust gases from the SWIP will be treated within the flue gas treatment plant including a ceramic filter to control particulates. Continuous monitoring of emissions, including dust will confirm emissions are within IED emission limits. In the event that dust emissions in the exhaust gases approach IED limits alarms will be triggered allowing sufficient time for Operators to take corrective actions. In the event of a problem that cannot be rectified the plant will be shut down until a repair can be made.

4.2.10 Spares for the ceramic filter will be held on site in case there is a requirement to change the filter. If a breakage were to occur during operation it is signalled by a change in pressure at the filter block and signalled. The machine would need to be put into shutdown mode and when temperatures drop to safe levels the fans will stop and safe access can commence.

4.2.11 All bottom ash and APC residue handling will take place within the thermal treatment building. Bottom ash will be manually raked by trained staff directly into containers prior to removal from the site. APC residues will be handled in fully enclosed skips and will be loaded directly onto vehicles.

4.2.12 The SWIP will be operated in accordance with site operating procedures and these will include the flue gas cleaning plant. Operating procedures will cover start-up and shutdown of the plant, foreseeable emergencies as well as normal operation. Start-up procedures will include a visual check that the SWIP unit remains airtight. All SWIP operators will be trained against these procedures.

4.2.13 At the end of each working week, the SWIP will be shutdown. As the building doors remain shut other than for access the potential for dust emissions during non-operational periods is minimised.

Operation of the Drying Plant

4.2.14 The drying plant has been designed as a covered unit and therefore material once within the dryer plant will be contained.

4.2.15 The dried material will leave the dryer by an enclosed conveyor belt which will discharge into a nearby storage bay. Any dried material being stored temporarily will be sheeted both to protect the dried material as well as preventing dust emissions. There will be a maximum of 20 tonnes of dried material stored on site at any one time. The storage will be managed by the Operations Director and Site Manager.

4.2.16 The dried material will be removed from the site using 8-wheel tipper vehicles. These will collect dried material as soon as practicable after it leaves the dryer plant and they vehicles will be sheeted once full and prior to removal from the site. The sheeting over of the tipper vehicles will be enforced by the Operations Director and the Site Manager and communicated to the drivers when they enter the site.

4.2.17 Site operating procedures will be in place for the dryer unit and will cover start-up, shutdown and foreseeable emergencies as well as normal operation. Start-up procedures will include a visual check that the dyer plant cover is in place. All operators of the drying plant will be trained against these procedures.

4.2.18 At the end of each working day the dryer unit will be emptied, the unit shutdown. Management of any dried material not removed from the site is covered above.

Housekeeping and Spillages

4.2.19 Housekeeping measures that will be implemented on site to minimise the potential for fugitive dust / particulate emissions include:

- The site will be kept clean and tidy both externally and within buildings.
- Any spillages of materials and wastes will be immediately cleaned up.

- Visual checks will be undertaken of the haul road to minimise potential dust spreading off site.
- A road sweeper is deployed on a weekly basis as a minimum to keep site roadways and access clean. Should there be visible dust emissions from the SWIP or drying plant on roads or surfaces this will be utilised more frequently.
- The Site Manager will undertake site inspections which will include checking for dust and litter across site and implementing corrective measures should any be identified. The site inspections will be recorded on the site inspection form (CV07, from the CVSH EMS).

Dust and Particulate Abatement

4.2.20 Particulate abatement plant installed as an integral part of the SWIP is detailed in paragraph 4.2.9 above.

4.2.21 A static dust suppression system is available at the site.

Site Inspection and Maintenance

4.2.22 The SWIP and drying plant will be regularly inspected and maintained to ensure it is in good working order. Inspection and maintenance will be in accordance with manufacturers recommendations as a minimum.

4.2.23 Key plant/infrastructure that will be subject to routine inspection will include:

- Routine inspection of the thermal treatment building fabric.
- Routine inspection and maintenance of the automatic doors to the thermal treatment building to ensure they remain in good working order.
- The ceramic filter unit will be regularly inspected and maintained to ensure it is effectively controlling particulate emissions. Spares are held onsite to enable a repair to be made (see paragraph 4.2.10 above).
- The CEMs monitoring emissions from the SWIP will be subject to routine calibration checks.
- Routine inspection of the SWIP will be undertaken to ensure it remains airtight.
- Routine inspection of the integrity of the conveyor enclosure from the drying plant.

4.2.24 Records of inspections and maintenance will be retained in the site office.

5 DUST MONITORING

5.1 Visual Dust Monitoring

5.1.1 The CVSH Site Manager will undertake a routine daily inspection of the site which includes visual monitoring for dust. Details of inspections are recorded in line with CVSHs EMS (see paragraph 5.2.2 below).

5.1.2 The Site Manager will also note if there are any abnormal conditions on site likely to give rise to dust emissions, such as particularly dry weather.

5.1.3 Any improvements of dust controls required will be actioned by the Site Manager as soon as possible to minimise any potential impacts to the site or surrounding neighbours.

5.2 Record Keeping

5.2.1 The daily site inspection is recorded in the Site Manager's Site Diary which is a requirement of the site's existing Environmental Permit.

5.2.2 The Site Manager will also complete a Site Inspection Form, CV07 which is part of the CVSH EMS. The site inspection includes:

- Compliance with the environmental permit and EMS;
- Waste storage;
- Signage;
- Condition of building;
- Dust emissions; and
- Complaints received.

5.2.3 In accordance with the current environmental permit on site. records will be retained at least 6 years from the date the records were made, or in the case of the records pertaining to off-site environmental and health effects, until the permit is surrendered

5.2.4 The EA may request copies of the site diary and site inspection records at any time.

6 ACTIONS IN THE EVENT OF A DUST EMISSION OR COMPLAINT

6.1 Actions in the Event of a Dust Emission

6.1.1 In the event that a dust emission is identified the site will follow their Non-conformity, Corrective Action and Preventive Action procedures in accordance with the CVSH EMS, as set out below.

1. All dust emission incidents must be communicated to the Site Manager immediately.
2. The Site Manager will investigate the cause of the dust emission and identify if the source is on site.
3. The Site Manager will stop the associated activity where possible or identify appropriate measures that can be applied to reduce or stop the dust emission (e.g. sheeting and/or dampening of stockpile).
4. The Site Manager will ensure that the corrective actions taken to eliminate the causes of dust emission are appropriate to the magnitude of problem and commensurate with the environmental impacts encountered. The Site Manager will also be responsible for ensuring that preventative actions are considered and where appropriate measures which may be general or specific to the problem or incident are identified and that appropriate plans are put in place to deliver these measures within a reasonable timeframe.
5. The dust emission event, all mitigating and preventative actions will be recorded in the site diary and on the CVSH Non-Compliance Report form CV16.
6. The Site Manager will continue to monitor the issue and review the effectiveness of corrective and preventative action taken.
7. The Site Manager will implement and record any changes in the EMS documented procedures resulting from corrective and preventive action;
8. If the dust or particulate fugitive emission has caused, is causing or may cause significant pollution the EA should be notified without delay, in accordance with the environmental permit currently issued to CVSH.
9. The Site Manager will report to the Operations Director as regards all of his responsibilities set forth above, any dust emission events and all mitigating and preventative actions.

6.1.2 If required, changes can be made to the dust management plan in order to prevent the dust emission from reoccurring in the future.

6.2 Actions in the Event of a Dust Complaint

In the event of a dust complaint, the following measures will be undertaken:

1. The Site Manager will obtain as much information regarding the complaint including:
    a. the complainant details
    b. the nature of the complaint;
    c. the location of the complainant;
    d. the date and time that the incident occurred;
    e. the on-site activities at the time of the incident that might be the cause of or associated with the complaint;
    f. the site diary will be checked for ‘abnormal’ site operations / conditions at the time of the complaint; and

g. the prevailing wind direction at the time, which will be recorded using the site's weather station.

2. The complaint will be investigated to establish whether it is well-founded and whether it does or does not arise from on-site operations or activities.
3. Corrective measures, where identified will be recorded and followed up in accordance with section 6.1 of this DMP.
4. If the complainant wishes, the Site Manager will contact them to detail the corrective measures implemented on site.
5. The complaint will be recorded on a complaint record proforma, form CV05 Complaint Investigation Report, as shown in CVSH's EMS. All complaint records will be kept until the permit is surrendered and will be made available to the regulator to view if requested.
6. Any dust complaints received by CVSH as well as the implementation of this Plan can also be discussed with the Liaison Group.