

CHADWICH LANE QUARRY LIMITED CHADWICH LANE QUARRY LANDFILL

PARTICULATE MANAGEMENT PLAN

1. Risk Assessment

- 1.1 See risk assessment and risk matrix for the site using wind rose, see Drawing ESSD 2, and ESSD 12 used in ESSD.

2. Point Source Emissions

- 2.1 Mobile plant and pumps are potential point sources of emissions of particulates to air. The principal type of such emissions would be unburned or part-burned fuel oil in exhausts from internal combustion engines (black smoke).
- 2.2 Only proprietary plant and equipment of reputable manufacture and supply are to be deployed and used at the site.
- 2.3 The Company expects and requires its management, staff and site operatives diligently to ensure that manufacturers' instructions for routine maintenance and repair of such equipment are carried out so as to control such emissions to the practicable minimum.
- 2.4 This diligence is to extend to effective supervision of any Contractors employed to use any such plant and equipment or to carry out such maintenance and repair.
- 2.5 In instances where emissions become visually noticeable and unacceptable, equipment is to be replaced and withdrawn from service without unjustifiable delay and more effective repairs attempted.
- 2.6 If repairs are ultimately effective, the equipment can be put back into service. If emissions remain unacceptable even after repair, the equipment is not to be used on site again.

3. Fugitive Emissions

- 3.1 There is a risk of emissions of particulates to atmosphere arising from the raw wastes themselves during delivery in vehicles. Where vehicles do not have enclosed bodies, instructions will be given to customers to sheet or net open bodied vehicles and/or containers to minimise such emissions.

- 3.2 Emissions of particulates from incoming wastes are intimately associated with escape of dust.
- 3.3 There is a risk of emissions of particulates to atmosphere from vehicles driving along the site yard area both when delivering waste loads and returning empty onto the public highway. This risk is to be minimised by sweeping the hard surfaced site roads and public roads (as necessary and without unjustifiable delay) and by using water sprays delivered from a point source water supply near to the waste deposition area.
- 3.4 There is to be imposed a speed limit of 10 miles per hour and appropriate signage is to be displayed by way of instructions to site users.
- 3.5 There is a risk of emissions of particulates to atmosphere when vehicles are discharging their loads in the general waste pile. This is particularly so where fine and dry wastes are involved. Such emissions are to be minimised by ensuring that the dust suppression is used during dry weather periods.
- 3.6 There is a residual risk that, despite the avoidance and prevention measures described previously, there may still be particulate matter emitted into the atmosphere. It will be a subjective judgment of the site manager as to whether or not such emissions are liable to leave the site boundary and present a nuisance to others.
- 3.7 If there is a real risk of particulate matter leaving the site and becoming a nuisance to others, the site manager is to close the site to those operations that are giving rise to the nuisance without unjustifiable delay. In reaching this decision, the wind speed and direction are to be taken into account together with the location and proximity of the nearest sensitive receptors.
- 3.8 In reaching this decision, the wind speed and direction are to be taken into account together with the location and proximity of the nearest sensitive receptors.
- 3.9 The most obvious and sensitive receptor in the path of the most common wind direction is DR10, DR11 and DR6. DR11 is close to the site and is south of the site DR10 is west of the site and DR6 are to the north of the landfill site. This is to be monitored if there is a prospect of dust leaving the site and used to inform site management of any decision on closure of individual operations: staining or filming on the surrounding cars will be a good indication that dust levels leaving the site are unacceptable.

4. Particulates Monitoring

- 4.1 On the basis of past experience at similar types of site, the nature of wastes anticipated to be delivered and the disposition of the site itself with respect to sensitive receptors, a dust monitoring report form will be used Appendix DMP1.
- 4.2 Nevertheless, the Company expects and requires its management, staff and site operatives to be vigilant in visually monitoring for and assessing the potential of off-site nuisance of particulate emissions and to take appropriate remedial and corrective action without unjustifiable delay. Such visual assessment for dust/particulates is to be undertaken at least on a working daily basis.
- 4.3 All such assessments and instances of remedial and corrective action are to be recorded in writing in the site diary.
- 4.4 In any event, daily meteorological monitoring will assist in managing and monitoring particulate matter emissions.
- 4.5 Additionally, and as noted in the Section dealing with the Waste Acceptance Procedures at the site, staff will have prior knowledge of the types of wastes due for delivery owing to there having been subjected to 'Level 1 - Basic Characterisation' testing. This provides an opportunity to divert wastes from the site when particular problems might be envisaged for the time being.
- 4.6 At the site itself, the 'Level 3 - On-site Verification' testing provides a final opportunity to reject any loads that might present a particular problem during the prevailing weather conditions.
- 4.7 Should a particular problem arise or persist, particulate monitoring equipment is to be deployed at the site in accordance with a programme to be submitted for approval to the Planning Authority and Environment Agency.
- 4.8 Any such programme will conform to the requirements and recommendations in '*Technical Guidance Document M17: Monitoring of Particulate Matter in Ambient Air around Waste Facilities*' of the Environment Agency, see Appendix B.
- 4.9 Any equipment so deployed is to be of proprietary manufacture and/or supply and operated in accordance with user's instructions. Such equipment will most probably comprise deposition gauges and gravimetric analysis: these would be deployed at appropriate locations at the site boundary and at or near the façade of any built receptors. All such monitoring results are to be recorded in writing.

- 4.12 In the event of any complaint about particulate matter either at or leaving the site, the details of the complaint are to be recorded in writing, the basis for the complaint is to be investigated and, if deemed to be justified, appropriate remedial action is to be taken to mitigate the complaint. The results of the action are to be noted and their effectiveness assessed and recorded.

5. 'Problem' Wastes

- 5.1 Particular care is to be taken on receipt of dusty loads as to their potential to give rise to dust nuisance.
- 5.2 All such wastes are to be transported within the site discharged and loaded with extra care and attention.
- 5.3 Customers making regular deliveries of 'problem wastes' will be encouraged to use bags or sacks instead of loose load deliveries.
- 5.4 Wastes types that are likely to be dusty are sub soils brought to the landfill and it is likely that such wastes would be covered with other sub soils on site.
- 5.5 Uncovered dusty loads will not be brought onto site and any such loads will be rejected.
- 5.6 Dusty waste would also be damped down using the tractor and bowser if necessary.
- 5.7 It may, nevertheless, be necessary to close the site on occasions to some or all of these waste types and management is expected to take such decisions as are appropriate and to record such actions.

6. Complaints Process

- 6.1 Information relating to any dust complaints received at the Facility or via the Regulatory bodies including Environment Agency and Local Authority, will be recorded on a dust complaints form (Appendix DMP2) and will instigate immediate investigations. Additionally, Chadwich Lane Quarry Ltd will raise a Non-Conformance Report (NCR) for the purposes of their internal site management system, as per the EMS.
- 6.2 Where possible, as much information and detail about the dust complaint will be recorded on the complaints information form, whether this is from the relevant authority or complaint direct to site. This information will assist in the investigation and determining the source of the dust.

- 6.3 All complaints and queries will be logged in accordance within the integrated management system as soon as is practicably possible. All complaints logged will be subject to investigation and complainants responded to within 48 hours of receipt, where possible. All responses will be through trained and experienced staff.
- 6.4 Complaints regarding potential dust from the installation will be investigated in accordance with the protocol, and the following actions shall be instigated:
- 6.4.1.1 Record all details relating to the complaint on the dust complaints information form;
 - 6.4.1.2 Weather conditions at the time and date of the reported dust will be checked against the Met Office app data;
 - 6.4.1.3 If the location of the complaint and corresponding weather data suggests that the source of the dust is unlikely to have originated on site (i.e. distance from site, wind direction and strength etc.) no further action will be undertaken and the Environment Agency informed accordingly;
 - 6.4.1.4 If the complaint could be related to site activities, olfactory monitoring will be undertaken at the location of the complaint and other downwind receptors;
 - 6.4.1.5 Olfactory monitoring will also be undertaken adjacent to potential alternative point source emissions of dust to determine any dusts;
 - 6.4.1.6 Details on the corrective action taken, and any subsequent changes to monitoring and operational procedures will be recorded on the complaints form;
 - 6.4.1.7 The Environment Agency will proactively be informed by the operator of the complaint and the operator will confirm to the best of its knowledge the information described above.
- 6.4.2 The operator will ensure that the complainant has all the relevant contact details of the site (i.e. the Site Manager) and the officer responsible at the Environment Agency. The operator will be in regular contact with the complainant and the Agency whilst the cause of the dust is being investigated and remediated.
- 6.4.3 An evaluation of the effectiveness of the techniques used will be carried out on completion of any remedial measures or if the complaints persist. Records of the above will be retained by site for future reference.

6.5 Means of Contact

- 6.5.1 The installation will be readily contactable to outside organisations and to members of the public. The site signage board (placed in a readily

visible location) contains the necessary contact details for both the site operations and the Environment Agency. These contact details are summarised in Table 1 below.

Table 1: Site Contact Details

Site Address	Chadwich Lane Quarry Landfill Money Lane Madeley Bromsgrove Worcestershire
Relevant Contact Numbers	
Site Reception	Offices
Site Manager	N Wood
Environment Agency	03708 807060

- 6.5.2 Contact details should be made available to any complainant to the Regulating authorities so that a prompt response and remediation if required can be undertaken.
- 6.5.3 Any complaints received directly to the site will be notified to the Environment Agency at the earliest opportunity.

6.1 Complaint Screening

- 6.1.1 As part of each dust complaint received, these will be objectively assessed against the wider environment to ensure that the source of the emission is traced back to the correct source.
- 6.1.2 It is essential that the source is correctly identified in order that mitigating measures can be applied effectively and correctly. The complaint will also be assessed against previous records to place the nature of the complaint into context.
- 6.1.3 A list of receptors has been identified and is summarised below for reference as Table DMP 1 below.

Table DMP 1 Receptor List identified on ESSD 2 and ESSD 12

Type of Receptor	Receptor Name	Location to site	Elevation m AOD
Domestic Dwelling Receptor	DR1	Group of houses located 575 metres north of the permit boundary.	179m AOD
Domestic Dwelling Receptor	DR2	Group of houses 540 metres north-west of the site.	171m AOD
Domestic Dwelling Receptor	DR3	Group of houses 340m north of the site	179m AOD
Domestic Dwelling Receptor	DR4	Group of houses 390m north of site	183m AOD
Domestic Dwelling Receptor	DR5	Group of houses 345m from site	167m AOD
Domestic Dwelling Receptor	DR6	Group of houses located 165m north west of site	167m AOD
Domestic Dwelling Receptor	DR7	Farm located 295 metre north -east of site.	190m AOD
Domestic Dwelling Receptor	DR8	Group of houses located 490m west of site.	152m AOD
Domestic Dwelling Receptor	DR9	Group of houses located 265 metres from site.	170m AOD
Domestic Dwelling Receptor	DR10	Houses directly to west of site 25 metres	170m AOD
Domestic Dwelling Receptor	DR11	House of side of site 2 m	175m AOD
Domestic Dwelling Receptor	DR12	House 335m south of site	335m AOD
Domestic Dwelling Receptor	DR13	Houses to south of site 520m	160m AOD

Domestic Dwelling Receptor	DR14	Houses to south of site 550m	160m AOD
Surface Water Receptor	SW1	A pool to west of site	100m AOD
Surface Water Receptor	SW2	A pool east of the site.	320m AOD
Surface Water Receptor	SW3	A pool to south of site	180m AOD
Surface Water Receptor	SW4	Pond to south Sandy Lane landfill site	570m AOD
Major roads and highways	H1	Heath End Road	171m AOD
Major roads and highways	H2	Quantry Lane	182m AOD
Major roads and highways	H3	Chapel Lane	160m AOD
Major roads and highways	H4	Bonfire Hill	172m AOD
Major roads and highways	H5	The Gutter	198m AOD
Major roads and highways	H6	Chadwich Lane	172m AOD
Major roads and highways	H7	Harbour Hill	180m AOD
Major roads and highways	H8	Sandy Lane,A491	160m AOD
Commercial Activity	IR1	Industrial operations at Chadwich Lane Farm.	155m AOD
Commercial Activity	IR2	Works to the east of Sandy Lane site	160m AOD
Closed historic landfills	CL1	Chadwich Lane landfill site now under restoration	187 -215m AOD
Closed historic landfill	CL2	Sandy Lane landfill site	160-180m AOD

APPENDIX DMP1:

Particulate Matter Report Form

Dust Monitoring Sheet

Dust Monitoring Report Form								Date:
Location	1	2	3	4	5	6	7	8
Time of Test/Observation								
Weather Conditions								
Temperature								
Wind Strength								
Wind Direction								
Intensity								
Duration of Test/Observation								
Constant/Intermittent								
Is dust visible?								
Receptor Sensitivity								
Is the Source Evident?								
Any other Comments or Observations								

APPENDIX DMP2:

Particulate Matter Complaint Report

Dust Complaints

Dust Complaint Information Form	
Time and Date of Complaint:	Name and Address of Complainant:
Telephone Number of Complainant:	

Date of Dust:	
Time of Dust Release/Complaint	
Location of Dust if Not at Above Address:	
Weather Conditions (i.e. dry, rain, fog, snow):	
Wind Strength (none, light, steady, strong, gusting):	
Temperature (very warm, warm, mild, cold):	
Wind Direction:	
Complainant's Description of Dust: <ul style="list-style-type: none"> • Damage/visual impact: • Intensity: • Duration: • Constant or Intermittent: • Any Other Comments regarding Dust: 	
Are there any other complaints relating to the installation, or to that location? (either previously or relating to the same exposure):	
Any Other Relevant Information:	
Activities on Site at the Time:	
Do You Accept that Dust Release likely to be From Site:	
Actions Taken:	
Form Completed By:	Date and Signature: