

Galliford Try Infrastructure Limited

M5 J10 Deposit for Recovery

Dust & Emissions Management Plan
(DEMP)

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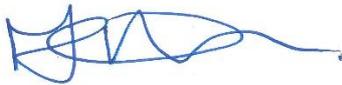
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1.0 INTRODUCTION

Scope Of Plan and Site Details

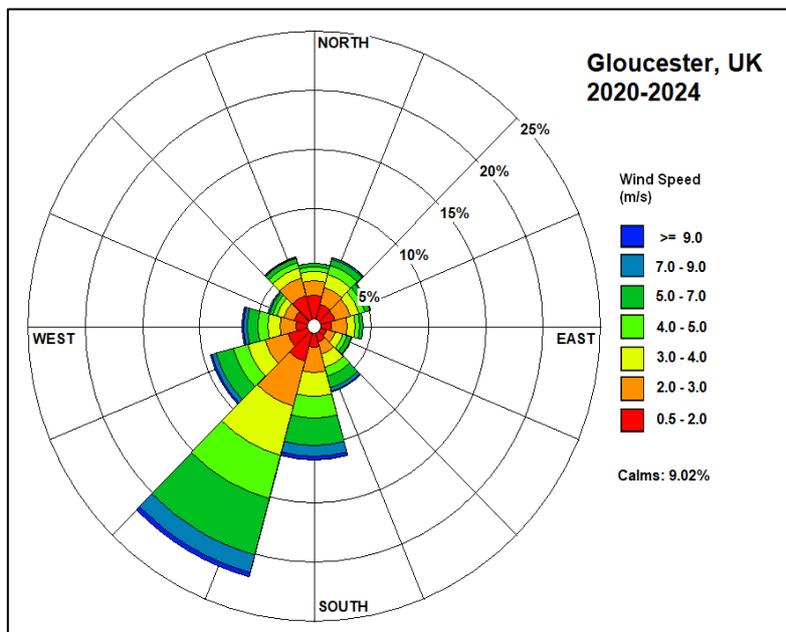
- 1.1 This Dust and Emissions Management Plan (DEMP) forms part of the supporting management systems for the Environmental Permit for the Deposit of Waste for Recovery and aggregate manufacturing area operated by Galliford Try Infrastructure Limited (the Operator). It sets out how the risk of poor air quality emissions will be managed during the construction phase of the M5 J10 Improvement Scheme. The site is centred at Junction 10 of the M5 motorway (M5 J10).
- 1.2 The site is not within an Air Quality Management Area (AQMA). The site location is shown in drawing TR010063/APP/2.1. The nearest residential properties are located directly adjacent to the site (see Drawing 243213/D/003).
- 1.3 The purpose of this plan is to:
- minimise the emissions of dust, particulates and NO₂ produced by site activities, as far as is practicable, using appropriate best practice measures; and
 - mitigate the potentially adverse impacts of the residual emissions of dust, particulates and NO₂ after all appropriate control measures have been applied with due regard to the sensitivity of the local surroundings.
- 1.4 There is no quantitative assessment / modelling of the dust/air emissions as there are no point source emissions. This management plan incorporates industry good practice to ensure the air quality emissions risk remains low during the site's operation. The plan has been developed following the principals set out in the EA dust control guidance, and SPG Mayor of London Guidance and City of London Code of Practice for Deconstruction and Construction Sites¹. The relevant guidance in these plans relates primarily to construction processes which are consistent with those of the recovery operation and present good industry practice.
- 1.5 The crushing/screening, movement, storage and placement of waste may generate particulates and litter. The sources of emissions and associated controls are described in Section 3 of this plan. The plan sets out the proactive and reactive measures that will be implemented to control the emissions during standard and abnormal operational circumstances. These controls are described in subsequent sections.
- 1.6 In the event that the implementation of controls fails, corrective actions will be identified and implemented. The Site Manager will be responsible for implementation of the DEMP on site and site operatives will be provided with copies of this plan and trained on its implementation. Additional copies of the latest revision can be found in the site office and welfare area.
- 1.7 The main site compound is accessed via the A4019. The site layout and access are shown in drawing 243213/D/002 and TR010063/APP/2.4. Waste being received at the site will be predominantly from construction and demolition contracts. The types of material will be aggregate, mineral and soil-based consisting of large inert to finer soil fraction material.
- 1.8 The waste recovery processes can generate particulates. The sources of emissions and associated controls are described in Section 3 of this plan. The plan sets out the proactive and reactive measures that will be implemented to control the emissions during standard and abnormal operational circumstances. These controls are described in subsequent sections.
- 1.9 In the event that the implementation of controls fails, corrective actions will be identified and implemented.
- 1.10 The scope of this management plan follows the Environment Agency's (EAs) requirements set out in the Dust and Emissions Management template. Monitoring is in line with EA Guidance M17.

¹ Guidance used as it is the most authoritative for the type of operations at the site.

2.0 SENSITIVE RECEPTORS & BASELINE CONDITIONS

Baseline Conditions

- 2.1 The frequency of exposure and likelihood of any fugitive emissions on sensitive land uses is determined by the magnitude of release, proximity of receptors and prevailing meteorological conditions. Meteorological wind data, for five years, has been acquired from ADM Limited. The wind data has been taken from the Met Office stations at Gloucester airport and Pershore, which are located circa 4 km and 26 km from the site, respectively. The prevailing wind direction is from the south west.



- 2.2 The site is located within a rural / predominantly agricultural setting. The site predominantly encompasses the M5 motorway, roundabout, and the A4109 public highway. The main part of the site is considered the M5 Junction 10, where parts of the permitted site extend beyond the motorways into agricultural, residential and commercial areas. The residential and commercial properties within the boundary will be subject to demolition as part of the works.
- 2.3 There are a number of sensitive receptors given the size and length of the development. There are numerous residential properties or residential areas within 1 km of the site as shown on drawing 2432313/D/003. With respect to the wind direction, it will be the properties north east of the operational area most at risk such as those on Gloucester Road, north of the A4109. The second most sensitive receptors include the River Chelt in the south of the site along Withybridge Lane, and Leigh Brook north of the A4109 both of which transect the site. There are no statutory designated sites within 1 km of the site, but there are a number of priority habitats at the site boundary and within 1 km as shown on drawing 243213/D/003.
- 2.4 DEFRA Air Quality Management Areas (AQMA) maps² show that the site is not within an AQMA. There is an AQMA for NO₂ on the Cheltenham High Street circa 2 km east of the site.

Sensitive Receptors

- 2.5 Table 1 sets out the potential sensitive receptors to dusts, by either land use or proximity to the operation. This table supplements drawing 243213/D/003.

² Department for Environment Food & Rural Affairs, UK AIR <https://uk-air.defra.gov.uk>, accessed 24/05/2025.

Table 1. Sensitive receptors within 1 km of the permit boundary			
Description	Sensitivity	Approximate distance from permit boundary	
Residential			
Cheltenham Residents	High	0 m east*	
Barn Farm		0 m northwest	
Stanboro Residents		0 m northwest	
Golden Valley Residents		0 m southeast*	
Butler's Court		0 m southeast	
Withybridge / Millhouse Farm		0 m southeast	
Uckington Residents		0 m southeast	
Stoke Orchard Residents		0 m northeast*	
Residents off B4634		0 m southeast	
Residents off B4634 (2)		50 m southeast	
Stavertom Bridge Residents		50 m southwest*	
Hardwicke Residents		100 m northwest*	
Chestnut Farm		100 m northeast	
Bamfurlong Residents		150 m south*	
Colman's Farm / The Ruffs		150 m northeast*	
Staverton Residents		250 m southwest*	
Elmhurst House (off B4634)		250 m southwest*	
Elmstone Hardwicke Residents		300 m northeast*	
Knightsbridge Residents		400 m west*	
Boddington Residents		400 m southwest*	
Hayden Residents		500 m southeast	
Tredington House		600 m north	
Swindon Residents		650 m northeast	
Tredington Residents		700 m north	
Slate Mill Farm		750 m southwest	
Rudgeway Farm		950 m northwest	
Brock Farm	950 m southwest		
Commercial / Industrial			
Cheltenham Industrial Estate	Medium	0 m east*	
Stanboro Businesses		0 m northwest	
Staverton Bridge Industrial Estate		0 m southwest*	
Hertz Car Hire		0 m southeast*	
R&W Civil Engineering		0 m southeast*	
Stoke Orchard Businesses		0 m northeast*	
Uckington Auto Services / Ironwork		0 m southeast	
Arle Nursery / Greenhouse		50 m southeast	
Stoke Orchard Solar Farm		100 m northeast*	
Stanboro Businesses (2)		100 m northwest	
Staverton Businesses		150 m southwest*	
Blaisdon Way Businesses		150 m southeast	
Bamfurlong Businesses		200 m south*	
Gloucestershire Airport		350 m south*	
Knightsbridge Nurseries		400 m west*	
Hardwicke Businesses		550 m northwest	
Swanbrook Transport		600 m southeast	
Hayden Sewage Works		800 m southeast	
Knightsbridge Businesses		900 m west	
Harry Buckland Car Breaker		900 m south	
Jeb 53 Construction Equipment Supplier		950 m southeast	
Cheltenham Electricity Works		950 m southeast	
Recreational/Educational			
Hayden Road Allotments		Medium	0 m southeast
Stanboro Cricket Ground			0 m southwest
Stanboro Fishing Pond			50 m northwest
Cheltenham Sports Ground	50 m southeast		
All Saints Academy	150 m southeast*		
Tredington Community Primary School	200 m north*		

Table 1. Sensitive receptors within 1 km of the permit boundary		
Description	Sensitivity	Approximate distance from permit boundary
Ramada Hotel / Hayden Caravan Park		300 m southeast*
George Reading Play Area		300 m southeast*
St James The Great Church		300 m northeast*
Playmate Childrens Riding School		450 m northwest*
Staverton Dog Park		450 m southwest*
Bamfurlong Caravan Park		500 m south
Springfields Park / Giggles Nursery		500 m southeast
St Mary Magdalene Boddington Church		550 m southwest
Children Lead The Way Co-Ed School		600 m north
New Chelt Walk Playground		650 m southeast
St Catherine Church, Staverton		650 m southwest
Springbank Primary School		650 m southeast
Hesters Way Children's Centre		700 m southeast
Sherdons Golf Course		750 m north
Swindon Village Park		900 m northeast
St Mary Magdalene Church		900 m northeast
Church of St Hohn, Tredington		950 m north
Hesters Way Baptist Church		950 m southeast
Agricultural		
Agricultural fields	Low	This is the most prevalent land use surrounding the site.
Environmental		
Priority Habitats*	Medium	Refer to 243213/D/003
No SAC, AONB, National Parks, Marine Conservation Zones, SSSI, LNR, Special Protection Areas or Ramsar Sites within 1 km of the site.	N/A	N/A
Other		
Listed Building	Low	Refer to TR10063/APP/2.12
Scheduled Monument	Low	Refer to TR10063/APP/2.12
Public Right of Way (PRoW)	Low	Refer to TR10063/APP/2.13
* Note that the bulk of the earthworks will be centred around the gyratory and new link road. Whilst being located within 1 km of the permit boundary, the receptors situated along the length of the M5 northbound and southbound as well as towards Cheltenham will be less affected by the earthworks. Receptors denoted with * are located over 500 m from the bulk of earthworks activity around the gyratory and new link road.		

2.6 Table 2 sets out the potential contributors to dust emissions.

Table 2. Potential dust and emission emitters within 1 km of the site			
Emitter	Approximate distance from site boundary (m)	Direction	Comment
Agricultural workers	To 0 m	All directions	Tilling of soils
Cheltenham Industrial Estate	To 0 m	East	HGVs
Staverton Bridge Industrial Estate	To 0 m	Southwest	HGVs
Bamfurlong Businesses	To 200 m	South	Ongoing development HGVs

2.7 There are up to four areas proposed for redevelopment which may occur alongside the M5 J10 development under a separate planning permission. These areas are north of the A4109 and south of Old Gloucester Road. These developments may contribute (depending on project timeline) to dust emissions due to traffic, HGV use, plant use, earthworks and construction activities.

3.0 OPERATIONS

Site Overview & Waste Operations

- 3.1 The operations on site will involve:
- Transfer, placement and storage of suitable waste streams originating from construction and demolition sources, to construct the bulk embankment and roads; and
 - Storage and crushing/screening of construction and demolition arisings to produce aggregate / engineered bulk fill for re-use. The throughput is in accordance with Standard Rules permitted throughputs at 75,000 tonnes per annum.
- 3.2 The main access to site will be via the M5 and A4019 (Tewkesbury Road), with site access dependent on the phase of the development. An indicative site entrance point is shown on drawing 243213/D/002.
- 3.3 The construction work will be in phases. All topsoil, if present, will be removed prior to placement of material. The wider site will comprise of a site office and welfare facilities, wheel wash³, haul route, temporary stockpile storage and final placement of suitable fill material.
- 3.4 602,802 m³ of suitable engineering fill is proposed for importation and placement, consisting solely of suitable construction and demolition mineral-based (soil and aggregate) waste types.
- 3.5 The overall dust risk for the typical waste stream is considered medium to high without mitigation. Table 3 highlights the potential dust risk from the typical waste streams expected on site.

EWC	Description	Tonnes per week (indicative)	Destination and Process	Potential Risk (with no mitigation)
01 01 02 01 04 08 01 04 09 17 01 01 17 01 02 17 01 03 17 01 07 17 05 04 19 13 02 20 02 02	Inert C&D arisings & soils	< 10,000 tonnes	Tipped at the currently designated tipping area. Material bulked up into stockpile form with excavator if necessary. Material graded and compacted with bulldozer.	Medium - High
17 01 01 17 01 02 17 01 03 17 01 07 17 05 04 19 13 02 20 02 02	Inert C&D arisings & soils	< 500 tonnes	Tipped in feedstock area. Treated by dry crusher / screener to produce a product.	Medium - High
Notes: 1. The tonnes per week and processes are considered worst case and are subject to varying factors.				

- 3.6 All lorries will be 8-wheeled enclosed, sheeted lorries or vehicles with equivalent dust controls and will be sheeted upon arrival. The lorries will be briefly uncovered for visual inspection at the weighbridge and at the final placement location only. The vehicle will remain sheeted for the duration of the internal haul route and site access.
- 3.7 All driver delivery waste will be subject to signage reminders of speed limit (10 mph), dust controls and the operator at the ticket office. Driver's under the Operator's primary control will be subject to a site induction and toolbox talks

³ The wheel wash will consist of a high pressure hose and bowser in the event it is required. Requirement is based off the bi-daily inspections for dust, must and emissions by the designated operative.

- 3.8 Prior to any placement of material, the bulldozer will remove all topsoil from the surface. Any topsoil will be temporarily stored in the adjacent construction phase of the site, pending re-instatement following the works.
- 3.9 The waste types are all mineral / soil based. The associated risk with these waste types are the finer fraction of the matrix drying out and becoming mobile via wind or site disturbance. This is most likely during the drier, summer months
- 3.10 Table 4 sets out the waste streams, waste management activities and the potential for fugitive particulate emissions. The dust risk derives from the finer fraction which can become airborne during dry conditions and without abatement controls. Appendix A has the source pathway receptors for all potential dust activities below.

Table 4. Waste processes, streams and description of management activities		
Description	Processes (area)	Potential for fugitive particulate emissions without mitigation
Haulage and site operation	Import of material (on site and at access / egress)	Possible exhaust emissions and fugitive dusts from loads from vehicles (NO _x , PM ₁₀ (<10 µm) and Total Suspended Particulates (TSP)). Possible: Wind entrainment of dust on operating surface and haul route.
Movement and placement of suitable engineering fill waste streams.	Transfer and tipping of material and temporary storage	Possible emissions from the movement of plant over the operational area if there is significant build-up of mud and waste.
Crushing / screening of waste streams		As the material is dropped onto the ground there is the potential for wind entrainment of fines/ lighter fractions.
	Treatment / Manual segregation of material into stockpiles	As the material is transferred into stockpiles, there is the potential for wind entrainment of fines.
	Crushing / screening of waste streams	Possible emissions from the crushing and screening of waste streams. Mechanical breaking and abrasion of the waste can cause particulates to be emitted. If these become entrained, they can become airborne. Exhaust emissions and fugitive dusts from the plant in operation (NO _x , PM ₁₀ (<10 µm) and Total Suspended Particulates (TSP)).
	Grading of material by bulldozer	Possible emissions during the levelling of deposited material due to mechanical disturbance and tracking over breakable/friable material.
Storage of Waste	Storage of material or waste within stockpiles	Possible wind entrainment of waste.

Plant and Equipment

- 3.11 The delivery plant involved are sheeted 8-wheel delivery lorries with an emission rating of Euro 5 and above. The deliveries are with either standard, sheeted tipper lorries, or sheeted skip loaders at a rate per day compliant with planning permission.
- 3.12 The plant to be used on site will include crushers, screeners, front loaders, excavators, bulldozers and rollers.
- 3.13 All plant is maintained in line with manufacturer's specification. If plant must be replaced, the replacements will be of the lowest emission standard possible at the time of purchase.

4.0 DUST & PARTICULATE MANAGEMENT

Sources of Fugitive Particulates and Control Processes

- 4.1 The potential dusts include fine particulate matter which consist of inhalable fractions (total suspended particulates (<100 µm) and the more dangerous respirable fraction (less than PM₁₀). Such dust types are termed as friable. Friable dusts may occur in hardcore and aggregate waste.
- 4.2 There will be no point source emissions of air pollutants. Any release will be fugitive. All tipping operations and material storage will take place as far as practically possible from the site boundary. Lorries will drive directly to the area of placement (dependent on work programme). A bulldozer will spread the directly tipped material into the final landform area.
- 4.3 Refer to Appendix B for the Air Quality Management Plan (AQMP), which details site-wide dust and emission control measures as well as the inspection and monitoring regime.
- 4.4 All lorries leaving the site will go through the wheel wash to remove tyre mud/dust and will be supplemented by a road sweeper to limit risk of dust from residual waste and dust picked up on the tyres. In the event that the wheel wash is in need of repair, implementation of a temporary alternative method of wheel washing should be put in place which may include, but is not limited to, manual washing with a jet wash.
- 4.5 The stockpiles will be subject to periodic wetting by water bowser during dry conditions. There will be some trickle through within the waste depending on the particle size of the stockpile. Stockpiles will be compacted to minimise wind entrainment. When moved or disturbed by bulldozer or excavator, the inside of stockpile may be exposed. Manual dust suppression using a high pressure hose and bowser will suppress any exposures to ensure dust emissions remain low during dry conditions.
- 4.6 During dry conditions, crushing and screening of wastes will be undertaken under dust suppression. This is typically integrated on to the mobile crusher/screener plant.
- 4.7 All imported waste streams have the potential for fine particulates emission. Table 5 sets out the controls that will be implemented at all times the site is operational, unless specified otherwise.

Table 5. Dust Emissions Standard Operating Controls				
Ref	Abatement Measure	Description/Effect	Overall Consideration and Implementation	Trigger for Implementation
1	Haul route well maintained with clear signage and repairs made in good time.	<p>Minimal mud generated.</p> <p>Any mud/ dust tracked onto the haul route by HGVs is easy to clean.</p> <p>The haul route will be subject to a 'deep clean' on a weekly basis to prevent the buildup of dirt and dust.</p> <p>Condition of haul route to be inspected and recorded during the daily visual monitoring inspection, with repairs made accordingly.</p> <p>The interface and section of haul route leading up to the tipping area will be cleared of mud and debris at the end of each shift, or if significant accumulation is identified.</p> <p>Clear signage and direction from ticket office to follow haul route to tipping area.</p>	<p>Repairs will be made to the haul route within half a day of the identification of deterioration.</p> <p>A trained operative will inspect the access / egress of the site with the external road three times a day to determine whether there is beginning to be an accumulation of dust/mud on the internal impermeable concrete. In the event there is, a road sweeper will be deployed.</p> <p>The operative will also be manned with a strong brush for manual assistance. The operative will be aware of the DEFRA's CoP grading classifications and the corrective action response time will be immediate, provided it is safe to do so. As a minimum, the section of road external to the site access/egress will be swept within half a day of identification.</p>	Excess mud/ dust will be identified in daily visual inspections. Grading classification and triggers will be in accordance with DEFRA's CoP.
2	Requirement for delivery lorries to implement dust controls.	<p>All lorries will be 8-wheel enclosed, sheeted lorries or vehicle with equivalent dust controls.</p> <p>Vehicles will be sheeted upon arrival.</p>	Vehicles will temporarily uncover for visual inspection at the weighbridge or gate, then re-cover for the transit to the designated tipping location.	<p>Operative responsible for ticket collection will enforce compliance with sheeting/ equivalent dust controls if dust control is inadequate.</p> <p>If non-compliance is observed, a strike will be given, which when tallied up to 3 strikes for repeat offenders, the haulier will be contacted and driver banned from site.</p>
3	Tipping location situated in designated areas and under dust suppression	<p>Vehicles will finally uncover at tipping location and under dust suppression spray (if required).</p> <p>Direction and signage clearly displaying tipping location and adjustment of tipping location depending on progress of work in relation to receptors.</p>	<p>These designated areas are the only locations where unloading/ tipping will occur to ensure adequate suppression.</p> <p>Clear signage to tipping area and direction given at weighbridge or gate.</p>	Site operatives are briefed on the tipping location and will ensure that tipping occurs here. All vehicular unloading will be supervised by a banksman operative to ensure tipping is not uncontrolled.
4	Mobile dust suppression operational during tipping and regular dampening of stockpiled material. Mobile dust	<p>When tipping, manual dust suppression will be used during dusty conditions. This will be by high pressure hose attachment and mobile water bowser/pump system.</p> <p>Stockpile material will be regularly dampened in dusty conditions. There will be some trickle through within the material depending on the particle size of the stockpile. Material within the stockpile is intrinsically sealed and therefore</p>	<p>Periodic wetting of stockpiles will occur by water bowser during dry conditions.</p> <p>Critical spares for the dust suppression (sprays) will be maintained on site.</p>	Suppression will be implemented whenever these activities are taking place during dusty conditions.

Table 5. Dust Emissions Standard Operating Controls				
Ref	Abatement Measure	Description/Effect	Overall Consideration and Implementation	Trigger for Implementation
	suppression operational in areas of crushing and screening during dry weather.	low risk of causing dust emissions. When moved or disturbed by front loader or excavator, the inner part of the waste stockpile may be exposed. Manual dust suppression will minimise any exposure and ensure that dust emissions remain low. In areas of crushing and screening, manual dust suppression will be used during dusty conditions. This will be by high pressure hose attachment and mobile water bowser/pump system.		
5	Drop heights and double handling minimised.	Drop heights and double handling when stockpiling and transferring material into screen and crusher hoppers will be minimised at all times. To note, the tipping location will be clearly signposted and moved in accordance with the current phase of work, with relation to location of receptors. This will allow material to be tipped and then immediately graded.	Operatives who drive front loader and excavator will be briefed on the need to minimise drop heights.	Tipping location will be reviewed during daily visual inspection and relocated if found to be impractical.
6	Sealing / patting down stockpiled material	Stockpiles will be compacted to minimise wind entrainment and be stored at safe angles of repose (typically 1:3), to minimise the risk of instability that can lead to a greater risk of wind entrainment.	The compaction of aggregate will decrease the pore space between particles and increasing the bonds between soil particles, in turn reducing the potential for wind entrainment. The compaction method is solely by the excavator tidying up the perimeter of the stockpile and compacting with the bucket to minimise debris rolling down the slopes and will minimise mobilisation by wind or rain.	Site operatives are briefed on the stockpile management controls and these will be implemented at all times.
7	Site wide speed limit set at 10 mph for all HGVs	Minimisation of fugitive emissions from site surfacing/ vehicle wheels/ loads by keeping vehicle speed low.	All drivers delivering waste will be subject to signage reminders of speed limit, dust controls and by the operator at the ticket office. Driver's under the Operator's primary control will be subject to a site induction and toolbox talks.	If non-compliance is observed, a strike will be given, which when tallied up to 3 strikes for repeat offenders, the haulier will be contacted and driver banned from site.
8	Anti idling policy	Limit the fugitive emissions from vehicles by implementing a no idling policy.	All drivers delivering waste will be subject to reminders of no idling policy by the Operator at the ticket office. Driver's under the Operator's primary control will be subject to a site induction and toolbox talks.	If non-compliance is observed, a strike will be given, which when tallied up to 3 strikes for repeat offenders, the haulier will be contacted and driver banned from site.
9	Visual monitoring inspection	The visual monitoring check will be completed daily by nominated site operative, where wind direction, airborne dust, dust soiling and weather conditions will be monitored. This will be recorded in the site diary. This will be undertaken at the point of placement (likely to be a phased approach in defined areas). The checklist will be kept on site in the Site Office. These	The number of visual inspections will be increased in accordance with the weather conditions and following an emissions incident or complaint. The inspections will be undertaken during normal operating hours, not during breaks. The inspection will	A minimum of 2 visual monitoring inspections will be undertaken per day. During dry / windy conditions, 3 inspections will be undertaken per day. A check record should be filled out for each inspection, and kept in the Site Office.

Table 5. Dust Emissions Standard Operating Controls				
Ref	Abatement Measure	Description/Effect	Overall Consideration and Implementation	Trigger for Implementation
		<p>conditions will be monitored using the Met Office website and real-time observations on site. Notes of weather conditions off site may also be noted if different from on site notes.</p> <p>This will inform the need to use additional preventative measures.</p>	include check of concrete surfacing, acceptance of loads and tipping/loading activities.	In the event of dust identification, the procedure and actions set out in Section 5 of this DEMP will be implemented.
10	Air emissions awareness training	All staff receive internal air emissions awareness training at site induction and through regular toolbox talks to engender awareness on emissions reduction.	All staff receive internal air emissions awareness training at site induction and through regular toolbox talks	All staff receive internal air emissions awareness training at site induction and through regular toolbox talks.
11	Routine servicing of plant and equipment.	All plant and equipment will be routinely serviced in line with manufacturers' guidance.	All plant and equipment will be routinely serviced in line with manufacturers' guidance.	Frequency of servicing will take be undertaken in line with manufacturer's guidance, or as faults or excessive emissions are identified.
12	Plant and equipment will be switched off when not in use	Plant and equipment will be switched off when not in use to reduce excessive emissions.	The importance of this measure will be reinforced during the daily briefing, site induction and during site walkovers (as part of the daily site inspection) by the Site Manager and the site operative nominated for visual dust monitoring.	During site walkovers (as part of the daily site inspection) by the Site Manager and the site operative nominated for visual dust monitoring, operatives will be reminded to switch off their engines if idling is identified. Incidences will be recorded in the visual monitoring check in the site diary and appropriate action taken upon repeat offences.
13	Higher Tier generators used where possible	For permanent infrastructure requiring constant power, Tier 4 compliant generators will be used. For short term operations, as a minimum, Tier 2 or 3 will be used (where electricity cannot be provided).	Any procurement of generators will be aware of the classification and the need for the more suitable Tier 4 standard, where practically possible.	Any procurement of generators will be aware of the classification and the need for the more suitable Tier 4 standard, where practically possible.
14	Dusty load response procedure	<p>Upon entering the site, loads are inspected on the gate by staff member responsible for waste ticket collection/examination. Waste composition information is relayed onto machine driver via two-way radio. A second inspection is undertaken during tipping. If an unacceptably dusty load is identified at either of these stages, the load will be returned to the waste producer. If the load has been tipped, it will be re-loaded under suppression from water bowser, adsorbing any dust generated.</p> <p>To note, it is the overall responsibility of the Site Manager to implement the dusty load response procedure.</p>	<p>The inspection at weighbridge/gate should not overly disturb the dusty load. In the event dust is identified at the acceptance stage, additional handheld misting can be applied.</p> <p>In the unlikely event that a dusty load is accepted, the load will be dealt with under dust controls.</p> <p>The waste producer will be notified, and an investigation initiated to prevent recurrence.</p>	Inspection and identification of dusty loads undertaken at ticket office and during tipping.
15	Weekly litter pick	A litter pick will be undertaken by a nominated site operative who has been briefed internally on housekeeping requirements (shown in Appendix C). This will prevent buildup of debris and airborne emissions of waste.	<p>If litter has migrated offsite as identified, litter pick will also cover external road.</p> <p>In the event that there is an escape of litter from the</p>	Visual Inspections will identify unacceptable conditions and trigger the litter pick in addition to the daily scheduled litter pick.

Table 5. Dust Emissions Standard Operating Controls				
Ref	Abatement Measure	Description/Effect	Overall Consideration and Implementation	Trigger for Implementation
		To note, the waste types to be imported are not considered to be of high risk for litter generation.	<p>confines of the site and into the local environment, it will be the responsibility of the site staff to arrange for litter picking of the affected areas within the working day. The operation or delivery generating the escape of litter will be stopped and thereafter controlled to minimise further releases and any container releasing fugitive material will be covered or removed from site immediately.</p> <p>An excessive spillage of materials anywhere within the site or on the adjacent road will be dealt with immediately by sweeping of the surface and litter picking if required. Such a spillage and the action taken will be recorded in the site diary. The EA can inspect the daily site diaries during inspections.</p>	Records of inspections or remedial actions will be made in the site diary.
16	Records of visual site inspections recorded	Records of visual site inspections recorded in Site Diary.	Records allow for easy review and identification of dust sources in the event of complaints/ emission incident etc.	Results and checklist of visual inspections are to be filled out and recorded each time.
17	Wheel wash at access / egress for HGVs	HGVs entering and leaving the site will pass through a wheel wash of a high-pressure hose and mobile bowser (when required). The water will be contained.	<p>This is a permanent design feature which will be in place during works.</p> <p>If broken and/or repairs being made, critical parts will be kept on site and an alternative method of mobile high-pressure hose will be utilized.</p>	Going through the wheel wash is compulsory during dry conditions (or conditions causing mud on road) for all HGVs.
18	Integrated dust suppression on crusher / screener.	Crusher and/or screener will have an integrated dust suppression active during dry conditions.	<p>Suppression will occur by integrated sprays during dry conditions.</p> <p>Critical spares for the dust suppression (sprays) will be maintained on site.</p>	Suppression will be implemented whenever these activities are taking place during dusty conditions.
19	Treatment activity to occur close to site of re-use or site of demolition.	Site Team to implement any treatment at area of placement or area of demolition to limit double-handling and risk of unnecessary dust mobilization from one area to another.	Design feature considered at planning point.	

- 4.8 Water for suppression will be sourced from mains supply and on site storage ponds (this is estimated at circa 50 m³ conservatively) and storage of onsite surface water (20 m³). The estimated worst-case water consumption of on-site operations is calculated below:

Table 6. Onsite worst-case water consumption	
Dust suppression Activity	Worst Case Water Consumption (per day)
Road sweeper	35L/min x 10 hours = 21 m ³ (Additional assistance would come from subcontractor sweeper contract)
Manual misting system (including crusher / screener)	15 L/min x 20 minutes per hour (12 hour working day) = 3.6 m ³
Mobile tractor and bowser suppression	2,200 L tank emptied x 10 trips (1 per hour) = 22 m ³
Maintenance (cleaning, washing down)	Estimated at 0.5 m ³
Total	47.1 m³
1. Water consumptions taken from WRAP 'Case Study: Water Efficiency on construction site' and or equivalent specification sheets from leading manufacturers. 2. The operating working hours are taken from the Operational Plan. These are conservative and do not include break times.	

- 4.9 Based on the worst-case scenario in Table 6, the water capacity at the site can accommodate site operations given the conservative estimates.
- 4.10 In the unlikely event that further contingency measures are required, off-site / third party sources can be used during drought conditions and/or water supply disruptions. These could include private water suppliers or off site (private or public) mains, tanks and boreholes.
- 4.11 There will be a tractor and 2,200 L water bowser trailer hired in within 24 hours to suppress the haul route during prolonged dry or windy periods. The bowser discharge point will allow a deluge type effect to cover the haul route with water. This will minimise potential fugitive dusts from HGV's driving along the haul route and on site.
- 4.12 Mobile misting systems will be deployed during period of dry weather to ensure there is effective suppression in all wind directions. Other measures during high winds include a review of certain types of works or additional controls e.g. hire in more road sweepers, or mobile misters; or no delivery lorries on certain days and placement of material only. These are subject to further review at the beginning of each working day.

5.0 PARTICULATE MATTER MONITORING

- 5.1 A daily site inspection will be undertaken by the Operator including potential sources that day, the control of dusts and the provision of controls. This information will be recorded in the Site Diary. To note, any site operative can report incidents to their line manager and appropriate actions will be taken immediately. The inspection will be undertaken by the Site Manager and/or a nominated site operative who has been given appropriate internal training by Site Manager and/or Technically Competent Person (TCP), and/or environmental consultant. In the event the Site Manager is not at the site, the On-Duty Manager and/or nominated site operative will be expected to undertake the site inspection. The Site Diary is kept in the site office / welfare unit. Corrective actions are outlined in Section 6 and will be recorded in the Site Diary and effectiveness monitored.
- 5.2 The visual inspection will be performed on foot, allowing adequate opportunity to identify emission sources at the 5 locations across the site and the external location (locations seen in drawing 243213/D/002), where the operative will stop to observe from each monitoring point for a minimum of 2 minutes. The locations are indicative and ultimately the inspections will be tailored to the area of placement and haulage route. The visual monitoring will be undertaken prior to ceasing operations each day. Inspection of static objects (cars, street furniture, storage containers) will be used to gauge the extent of dust soiling and will be wiped clean so an accurate judgement can be performed on the subsequent inspection. To note, no out of hour visual monitoring provision is

deemed necessary given control measures applied.

- 5.3 Weather conditions (temperature, precipitation and wind speed/direction) will be recorded on the visual monitoring check in the site diary using a value obtained from the Met Office online resource. After completion of the inspection, the inspected wind directions will be compared against the desktop inspection. The comparison will be for information only. If the local weather conditions do not match the Met Office conditions, the local conditions will take precedence.
- 5.4 A minimum of 2 visual inspections will be undertaken per day. During dry / windy conditions, 3 inspections will be undertaken per day. One of the checks will be before cessation of works each day. The inspections will be undertaken during normal operating hours, not during breaks. The inspections will include checking of concrete surfacing, acceptance of loads and tipping/loading activities. To ensure this system is operating effectively, it will be reviewed monthly by the Site Manager. If found to be ineffective (e.g. recurring identification of dust sources on site, poorly filled out forms), the methodology and frequency of the monitoring will be reviewed, revised and briefings will be implemented. This is the responsibility of the Site Manager.
- 5.5 The daily inspections will have a trigger threshold of visual dust in the form of a visible dust (this may be in plume form or separated, this may also just be felt on your skin rather than visible) within the site, as a result of vehicle movements, wind whipping or material handling. This trigger threshold is an internal site action threshold only and not a compliance threshold. There is no severity to visual dust: if it is seen, the response procedure (set out in section 5.6 to 5.9 below) must be implemented.
- 5.6 In the unlikely event this threshold is breached, the Site Manager or nominated site operative will notify the Site Team and the response procedure will be initiated. The Site Manager is responsible for the implementation of the incident response procedure. The response procedure actions are set out below. When triggered, the Site Manager and/or nominated site operative will assess the operations, waste type being handled and deliveries immediately prior to the alarm being activated;
- If the source cannot be ascertained with certainty, the Site Team will temporarily cease the most likely operation;
 - If the source is within the site's control, the Site Team will take appropriate action in terms of dust/particulate abatement to ensure further observations do not encounter the same emissions for a similar activity. Actions will include:
 - Review of the activity's dust control measures;
 - Increased frequency of the existing control measures; and
 - Temporarily suspending likely works until suitable abatement can be introduced.
 - If an effective control measure cannot be identified and the internal trigger level is identified again within 30 minutes of the first identification raised; and the wind direction indicates it could be from the site; the source activity will be temporarily suspended. The activity will not resume until sufficient controls have been achieved (i.e. no visible identification). Visual inspection frequency will be every half an hour during the response procedure, until incident is closed out.
 - If there are more than three incidents within a month, further targeted quantitative dust monitoring will be undertaken to establish source and effective control measures. Details of the quantitative monitoring is set out in section 5.7.
- 5.7 Quantitative monitoring will be undertaken within 5 working days (this covers consultant lead in times and procurement) of when the final of three incidents has been identified. The quantitative monitoring will be one of the following and will be in accordance with the standard set out in M8 EA guidance:
- Pumped (active) sampling of PM10 onto filter paper; Gravimetric analysis; or
 - Light-scattering optical particle counter
- 5.8 The monitor will be set up in accordance with supplier recommendations and environmental consultant's procedures. The focus of the monitoring will be on determining the source activities and measurements will be collated within 10 m, within 30 m and at boundary in upwind and downwind locations. This will only be undertaken in dry conditions (to recreate similar conditions to the breaches and to preserve integrity of the equipment). Monitoring will also be undertaken at specific receptors to account for any complaints/concerns.

- 5.9 The monitoring activity will be carried out under MCERTS accreditation. The quantitative dust monitoring PM10 threshold will be 75 µg/m³ over a 5-minute period average. If the quantitative action threshold is exceeded; and the wind direction indicates it could be from the site; the site will identify and cease the likely source operation until measured PM10 concentrations drop below the action threshold for a 30-minute period.
- 5.10 The internal action observation exceedance will be logged in the Site Diary and a report of the exceedance and corrective action response to the local EA officer via email within 1 week. To note, these are internal identifications of dust on site. Any exceedance which is not from the site but from an adjacent third-party activity, will be noted in the Site Diary.
- 5.11 All complaints will be logged and dealt with appropriately in accordance with the Operator's complaint procedure (shown in Appendix D). Operations and additional controls are in accordance with Appendix D.
- 5.12 All monitoring data will be made available to the Local Authority and Environment Agency, upon request or as specified within the Environmental Permit. This will include any reporting or notification response or contextual information regarding the monitoring data. This will be undertaken within 10 working days of when the monitoring data is issued.

Controls in the Event of Abnormal Fugitive Emissions

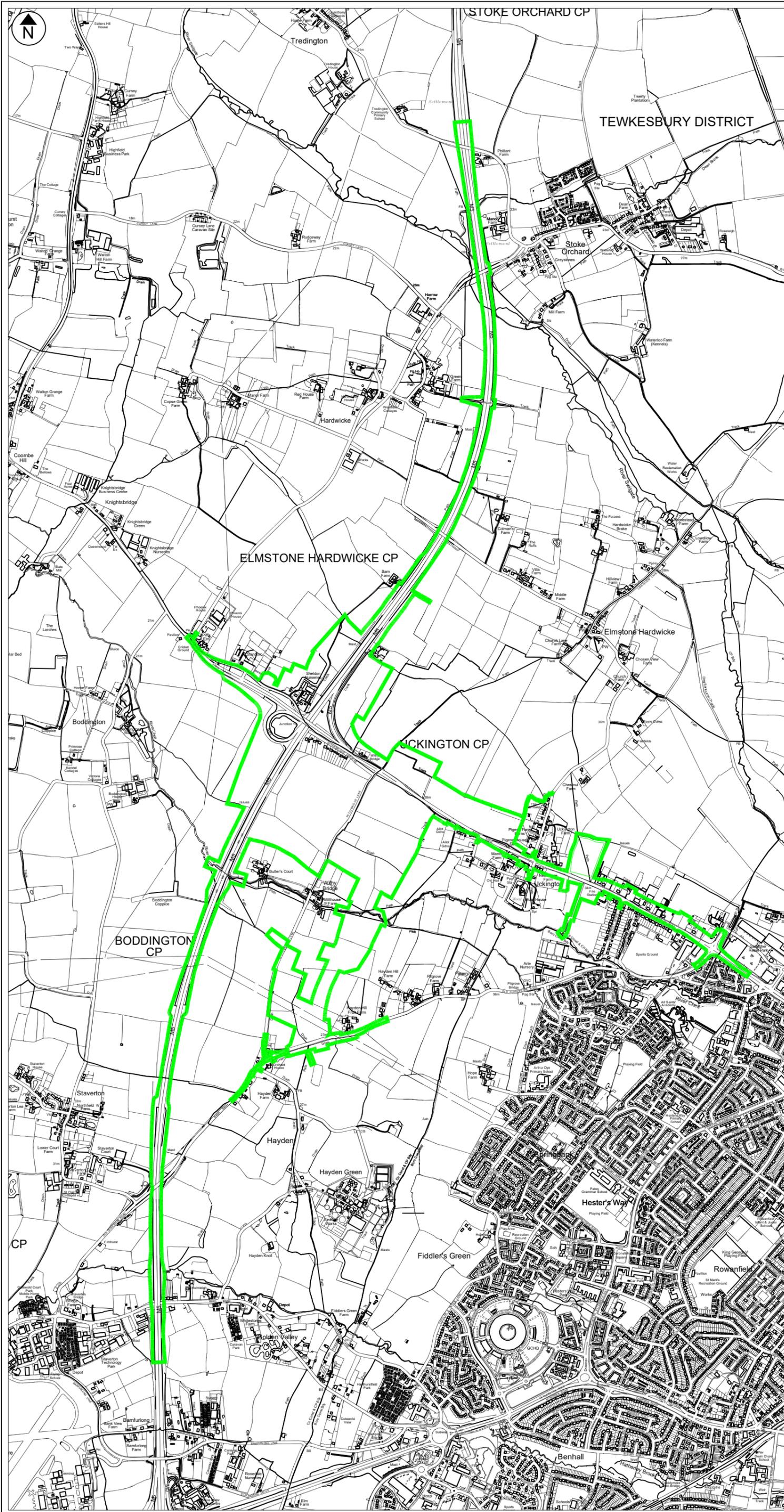
- 5.13 In the event that abnormal fugitive particulate emissions are identified during site inspections the following controls should be applied:
- take immediate action to cease operations;
 - investigate the incident;
 - record the incident and the remedial site action in the Site Diary; and
 - the DEMP will be updated accordingly and issued to the EA for review.
- 5.14 Remedial actions are dependent on the source but may include, but not limited to:
- Increase the frequency of road sweeping along the operational hardstanding and external road;
 - Deploy more misting systems, including manual hosing down, specifically targeting certain locations;
 - Limit activities to fewer hours each day (in addition to the standard controls being implemented);
 - Stop accepting certain mixed waste types which are likely to have more friable dust potential; and
 - Remove the dusty waste from site under dampened conditions immediately (under suppression systems).
- 5.15 In periods of drought (defined as > 35 °C over 3 days consecutively or no rainfall in 14 days) and high winds (defined as > 25mph on any day), operations will be limited in the following ways:
- Install rain guns at key operations;
 - Wet down loads in main enclosure before transferring to external Yard 1A;
 - Limit the number of loads accepted proportional to the reduction in activities;
 - Deploy more misting systems, specifically targeting tipping and loading activities, including manual hosing down of stockpiles; or
 - If limited or no water is available, the Operator will operate in accordance with section 4.8 and 4.9 of this DEMP.
- 5.16 In the event that these controls do not resolve fugitive particulate emissions at the site, key source activities will be suspended until suitable arrestment systems are implemented. These systems will be implemented in agreement with the Local Authority and the EA. The systems may include permanent use of remedial actions or alternative measures, as agreed. In the event that the implemented systems change, the DEMP will be reviewed and amended accordingly.

6.0 DEMP MANAGEMENT, TRAINING & RESPONSIBILITIES

Management Responsibilities

- 6.1 The staff member responsible for implementation, updating and review of this document is the site manager. The site manager is given appropriate training regarding this document upon induction. Upon each document revision and review by site manager, a final review of the document and evaluation of training will be undertaken by senior management.
- 6.2 All site operatives will receive internal dust and emissions training. Training is included within the site induction (upon the start of employment), during daily site briefings, and through toolbox talks.
- 6.3 As a minimum, this plan will be reviewed by the site manager on an annual basis to ensure that it is up to date, addressing the dust risks of the operations at any time. The plan will be reviewed by Senior Management either following an emissions incident quantified by a substantiated complaint, a monitoring threshold exceedance or observed emissions over the boundary or change to the working area. The review procedure will be undertaken within 1 month of the incident to allow any further data to be interpreted. The review will ensure mistakes are learnt from and new/improved methods will be integrated.
- 6.4 The main site telephone number, including site emergency number is displayed on the exterior of the site boundary on signage and the site telephone number and email are found on the website. Complainants are readily able to contact site management through different avenues, allowing their concerns to be addressed in a timely manner. The site will also have a Community Engagement Plan, under the construction Contract, which will be adhered to during the project.

DRAWINGS



Key

— Permit Boundary(EPR/SP3728LA)

Rev.	Details	Drawn Chkd.	Date
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Project
 243213
 M5 Junction 10 Improvement Scheme
 Withybridge Gardens, Cheltenham
 GL51 9TL

Title
 Permit Bounday Plan

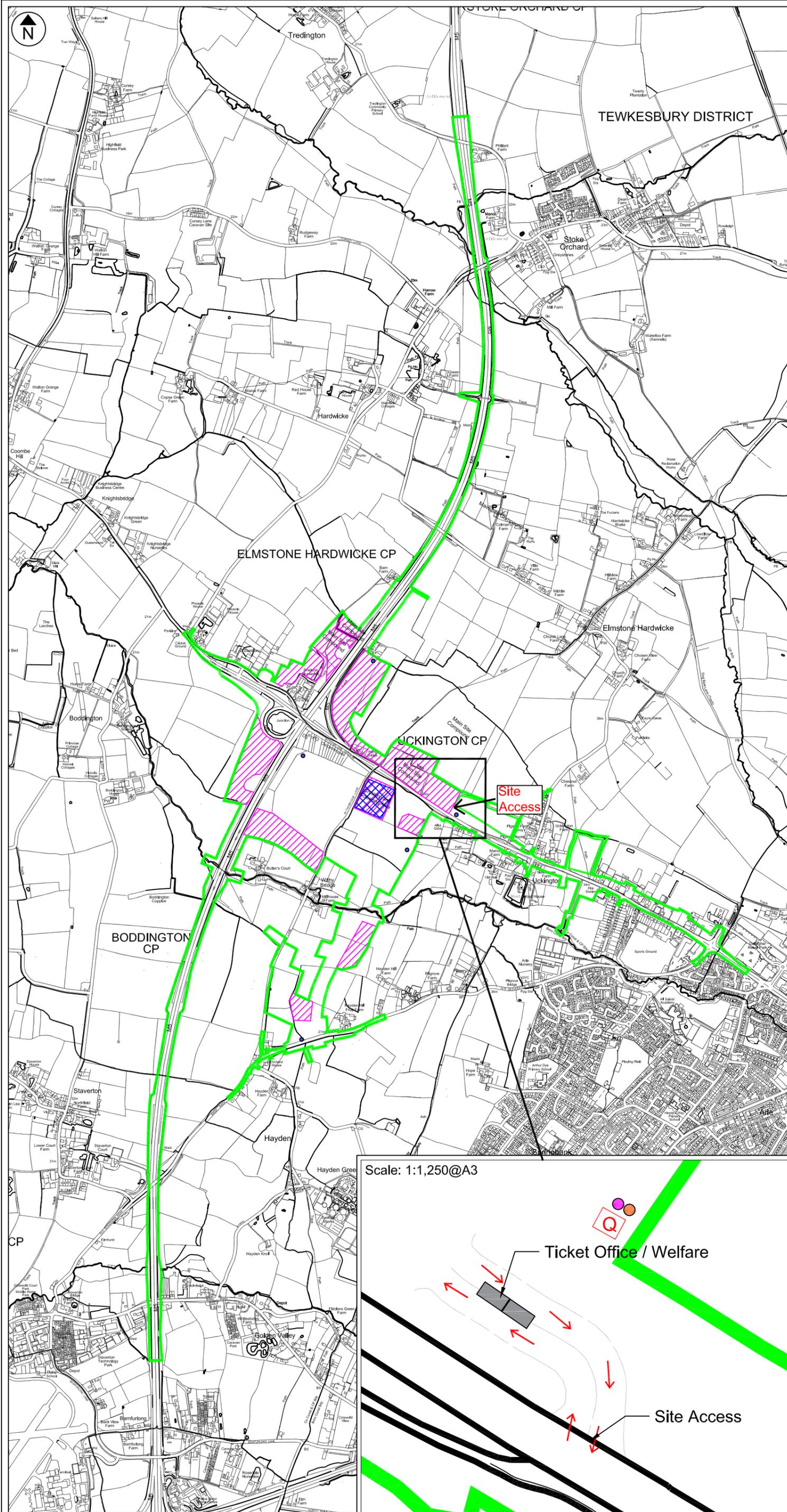


AAe
 Environmental Consultants

AA Environmental Ltd
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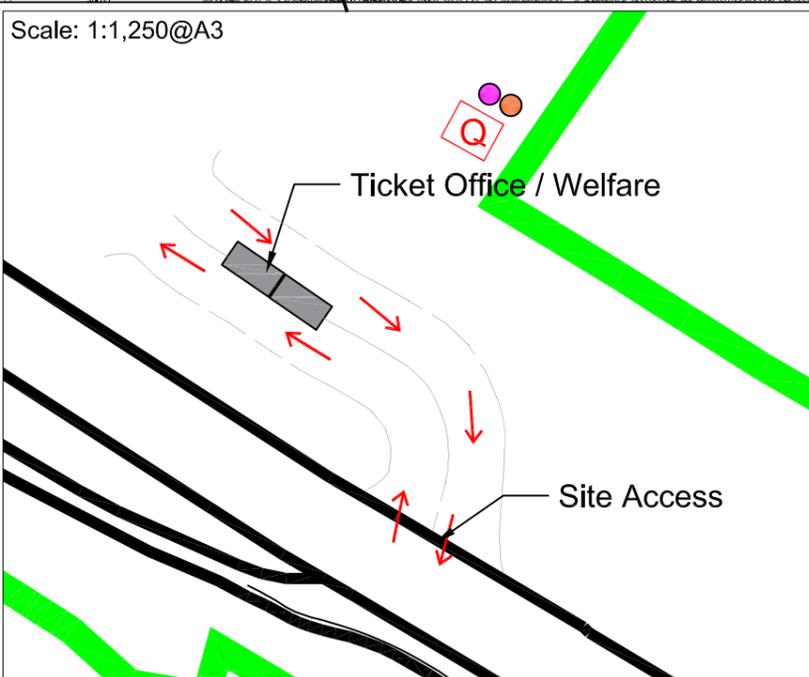
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Scale	Date	June '25	Drw. No.	Rev.
1:20,000@A3	Drawn VM	Chkd. SM	243213/D/001	



- Key**
- Permit Boundary
 - Site Compound, Soil and Plant Storage or other Temporary Works Site
 - Crushing and Screening Area
 - Vehicle Flow
 - Q Quarantine Area
 - COSSH
 - Spill Kit
 - Offices
 - Visual Monitoring Locations

Notes
 The site layout is subject to variability due to the proposed works' area size and number of phases. The location of the site access, quarantine area, COSSH, spill kit and offices will vary depending on the phase of development.



Rev.	Details	Drawn Chkd.	Date

Project
 243213
 M5 Junction 10 Improvement Scheme
 Withybridge Gardens, Cheltenham
 GU51 9TL

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 Site Layout Plan

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Scale	Date	Drng. No.	Rev.
1:20,000@A3	Aug '25	243213/D/002	

APPENDIX A
Source, Pathway Receptor Table

Assessment of fugitive emissions

Hazard	Receptors	Harm	Pathway	Hazard Receptor Significance	Likelihood of Hazard Receptor Linkage	Magnitude	Justification	Risk Management	Residual Risk
To Air									
<p>Dust from vehicle operations from external haul roads.</p> <p>Dust from operations (crushing and/or screening) and handling of soil.</p> <p>Dust from importation and placement.</p>	<p>Residential properties in close proximity to the site boundary.</p> <p>Agricultural land adjacent to the site.</p> <p>Temporary construction workers.</p> <p>Users of the Public Right of Way.</p> <p>Flora and fauna surrounding the site.</p>	<p>Harm to human health, respiratory irritation and illness.</p>	<p>Air then inhalation.</p>	<p>Moderate</p>	<p>Possible</p>	<p>Medium</p>	<p>Permitted wastes include wastes with small particle sizes and potential to generate dust, especially during re-grading.</p> <p>Operations have the potential to generate dusts from off-site movements during prolonged dry periods.</p> <p>The Operator will implement this dust management plan.</p>	<p>All works will be undertaken in accordance with the Dust Management Plan. A dusty load check will be completed as part of the waste acceptance procedure.</p> <p>Haul route to be compacted and maintained, with repairs made within 24 hours.</p> <p>Wheel wash and road sweeping implemented, with access point swept and maintained daily.</p> <p>All lorries will pass through the wheel wash on exit. All lorries will be enclosed, sheeted or vehicle with equivalent dust controls upon arrival and until placement.</p> <p>Weather will be monitored and site operations limited accordingly./ higher frequency of water suppression.</p> <p>Material will be placed as soon as practicable. Stockpiles will be compacted to minimize wind and rain entrainment and stored at safe angles of repose.</p> <p>Drop heights will be minimized.</p> <p>Site wide speed limit for all HGVs (10 mph). Construction traffic and plant operations will be optimised including by ensuring full loading, minimising double handling and efficient routing. An anti-idling policy will be in place for all plant and vehicles.</p>	<p>Low</p>



M5 Junction 10

Hazard	Receptors	Harm	Pathway	Hazard Receptor Significance	Likelihood of Hazard Receptor Linkage	Magnitude	Justification	Risk Management	Residual Risk
								All staff will receive internal awareness training at site induction and through regular toolbox talks. A daily litter pick will be undertaken by a nominated site operative. At the end of each day temporary stockpiles will be compacted, large debris tidied, and an inspection of the haul route, car park and highway will be undertaken.	



APPENDIX B **Air Quality Management Plan**

M5 Junction 10 Improvements Scheme

Environmental Management Plan

Annex B4 - Air Quality Management Plan

TR010063 – APP 9.4

Regulation 5 (2) (q)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

Volume 9

March 2024

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Infrastructure Planning Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

M5 Junction 10 Improvements Scheme Development Consent Order 202[x]

Environmental Management Plan
Annex B4 - Air Quality Management Plan

Regulation Number:	Regulation 5 (2) (k)
Planning Inspectorate Scheme Reference	TR010063
Application Document Reference	TR010063/APP.9.4
Author:	M5 Junction 10 Improvements Scheme Project Team

Version	Date	Status of Version
Rev 0	March 2024	Section 51

Contents

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B.4. Air Quality Management Plan

B.4.1. Introduction

Purpose

- B.4.1.1. This document forms Annex B.4 of the Environmental Management Plan (EMP) (1st iteration) (Application document TR010063/APP/7.3). Annex B4 is an Air Quality Management Plan (AQMP) (1st iteration) for the M5 Junction 10 Improvements Scheme (the Scheme). This AQMP (1st iteration) will be updated by the appointed Principal Contractor (PC) into an AQMP (2nd iteration), as required by Requirement 3 of the DCO, prior to commencement of works.
- B.4.1.2. The purpose of this AQMP (1st iteration) is to detail the measures that the appointed PC would be required to adopt to control and limit nuisance at residential properties and other sensitive receptors in the vicinity of the Scheme. This AQMP applies to all construction activities related to the Scheme.

B.4.2. Structure of the air quality management plan

- B.4.2.1. This AQMP identifies the key items which will be included in the final AQMP as follows:
- Relevant legislation that relates to dust and emissions management during construction.
 - Roles and responsibilities at project and site-specific levels.
 - Construction activities and dust risk level.
 - Dust and emissions control measures.
 - Inspections and monitoring.
 - Communication and complaints arrangements.

B.4.3. Relevant legislation

- B.4.3.1. The appointed PC will need to update this section prior to construction and provide an overview of the key legislation that the Scheme has to comply with.
- B.4.3.2. A comprehensive review of legislation relevant to dust and emissions was included in Chapter 5: Air Quality of the Environmental Statement (ES) (Application document TR010063/APP/6.3).

B.4.4. Project team roles and responsibilities

- B.4.4.1. In relation to the control and management of dust and emissions to air, the appointed PC shall establish the main roles and responsibilities of site personnel to ensure the proposed control measures are being implemented during the construction activities. These are set out in Section 2 of the EMP (1st iteration) (Application document TR010063/APP/7.3) and will be established in the final AQMP. Consultation will be carried out, where necessary, with the environmental health departments of Tewkesbury Borough Council and Cheltenham Borough Council regarding the management of dust and emissions to air during construction of the Scheme.
- B.4.4.2. The implementation of a Community Engagement Plan will ensure that local residents and other affected parties are kept informed of the progress of the works.

B.4.5. Construction activities and risk level

B.4.5.1. The study area for construction dust for the Scheme is provided in Appendix 5.2 (Application document TR010063/APP/6.15) Figure 5.2 – Construction dust assessment.

B.4.5.2. Table B 4-1 sets out activities, and examples of the works and associated risks of emissions from site activities that could give rise to poor air quality and the risk level in accordance with DMRB LA 105 – Air Quality

Table B 4-1 - Summary of key construction activities and sources of dust from each activity and risk level

Activity	Dust type and risk	Risk level*
General Site Operations	Potential for fugitive dust / Particulate Matter arising from general site operations.	High
Muck away/ trackout	Potential for fugitive dust / Particulate Matter arising from activities on site including stockpiles, and movement of vehicles on haul roads and off site.	High
Demolition	Potential for fugitive dust / Particulate Matter arising from planned demolition works.	High
Excavation	Potential for fugitive dust / Particulate Matter arising from earthworks.	High
Construction	Potential for fugitive dust / Particulate Matter arising from construction of an all-movements junction at M5 Junction 10, a new West Cheltenham Link Road east of Junction 10 from the A4019 to the B4634 and widening of the A4019 to the east of Junction 10, including a bus lane on the A4019 eastbound carriageway from the West Cheltenham Fire Station to the Gallagher Junction.	High

*The risk level can be High or Low according to DMRB LA105 guidance (Table 2.58b) depending on the distance of the sensitive receptor to the construction activities. For projects with a large construction dust risk potential such as this one, the risk level is high where receptors are within 100 metres, and low where they are within 100 – 200 metres.

B.4.6. Dust and emissions control measures

B.4.6.1. The measures that are set out in Table B 4-2 are considered appropriate for a high-risk site, as identified in the Dust Risk Assessment, presented in Chapter 5: Air Quality of the ES (Application document TR010063/APP/6.3).

B.4.6.2. The appointed PC shall observe the requirement to use Best Practical Means (BPM) by providing for and adopting all necessary means to prevent a statutory nuisance occurring from the site.

Table B 4-2 - Control measures to be implemented during the construction activities

Activity	Control
General Site Operations	Control of Dust Emissions from General Site Operations: <ul style="list-style-type: none"> • Implement a no burning policy on site. • Equipment that is likely to generate excessive quantities of dust will be enclosed, shielded or where appropriate fitted with dust extractors, filters or scrubbers, which shall be maintained in accordance with manufacturer's specifications. • Keep the number of material handling operations to a minimum. • Undertake cutting and grinding operations using equipment and techniques which suppress and reduce dust emissions.

Activity	Control
	<ul style="list-style-type: none"> • Where appropriate, erect and maintain windbreaks, netting screens or semi-permeable fences to effectively reduce dust emissions from working areas and/or to screen sensitive location. • Where necessary employ water sprays to control dust generated during earthworks. • Minimise drop heights of soils and excavated material into vehicles. • Sheet vehicles taking soils and friable material from site at all times • Avoid site runoff of water or mud. • Damping down of surfaces prior to their being worked. • Control of dust emissions from materials storage/ stockpiling and handling areas. • Store aggregates, sand and spoil with adequate protection from the wind and, where practicable, within buildings. • Storing dusty materials away from site boundaries and in appropriate containment (e.g. sheeting, sacks, barrels etc.). • Maintain slopes of stockpiles, tips and mounds at an angle not greater than the natural angle of repose and avoid creating sharp changes of shape. • Aim to minimise any double handling of soils and other friable materials. • Minimise the amount of excavated material stockpiled and dampen the surfaces of stockpiles of dry friable materials by controlled application of water sprays or alternatively, shroud or screen stockpiles. • Maintain handling areas to reduce the risk of dust emissions using static misting systems, bowsers and other watering methods as necessary to reduce or prevent dust emissions. <p>Control of Dust Emissions from Haul Roads and Vehicle Movements on Site:</p> <ul style="list-style-type: none"> • Enforcing speed limits for vehicles on unmade surfaces and site haul roads to minimise dust entrainment and dispersion. • Sheeting vehicles carrying dusty materials to prevent materials being blown from the vehicles whilst travelling. • Ensure all vehicles switch off engines when stationary. <p>Control of Exhaust Emissions from Vehicles and Plant/ Equipment:</p> <ul style="list-style-type: none"> • Select a suitable supplier in accordance with the Procurement Policy. • Select and procure plant and equipment with the least potential for dust and other pollutant emissions, allowing for economic constraints and practicability. • Use plant and equipment powered by mains electricity or battery powered whenever practicable. • Request the power output and EU staged emissions classification of the equipment. Where equipment is under 37 kW output no action is required, but where it is above 37 kW output the supplier is informed of the need to fit Diesel Particulate Filter (DPF) device. • Use low emission fuels such as ultra-low sulphur fuels for all non-road mobile machinery (NRMM). • Use plant fitted with catalysts, DPF and similar devices as listed by the Energy Saving Trust for NRMM with a power output greater than 37kW, where practicable. Ensure the process for managing this is detailed in the contractor's relevant plans and procedures.

Activity	Control
	<ul style="list-style-type: none"> • Ensure project suppliers' commercial vehicles comply with the necessary legislative requirements including Regulation (EC) No 715/2007. • Ensure that no vehicle or equipment emitting visible black smoke from its exhaust system other than during ignition is used on any construction site or public highway. • Ensure that combustion engines are not left running when not in use. • Ensure that all vehicles and equipment engines and exhaust systems are maintained so that exhaust emissions do not breach statutory limits set for vehicle/ equipment type and mode of operation. • Ensure all vehicles and equipment are maintained in accordance with manufacturer's specifications and statutory requirements. • Construction vehicle movements will be restricted, where possible, to specified preferred construction traffic routes. PC to confirm the preferred construction traffic route to each construction area within the Traffic Management Plan (Annex B11 to the EMP 1st iteration, Application document TR010063/APP/9.12).
Muck away/ trackout	<ul style="list-style-type: none"> • Locate haul roads and access points as far away as practicable from sensitive receptors. • Undertake wet cleaning of any large-scale concrete hard standing. • Restrict dry sweeping to small areas only. • Inspect haul road condition at least weekly and repair as soon as possible if damage is identified. • Apply water to site roads (including haul roads) using bowsers at an appropriate rate to effectively suppress dust. • Maintain unpaved roads and verges in a compacted condition. • Regular water-spraying and sweeping of unpaved and paved roads to minimise dust and remove mud and debris. • Provide easily cleaned hard standings for vehicles. • Using wheel washes, shaker bars or rotating bristles for vehicles leaving the site where appropriate to minimise the amount of mud and debris deposited on the public highway. • Ensuring any temporary site roads are no wider than necessary to minimise their surface area.
Demolition	<ul style="list-style-type: none"> • Fully sheet all vehicles carrying loose or potentially dusty material to or from the working areas. • Use effective water suppression during demolition operations. • Screen buildings where dust producing activities are taking place with debris screens or sheeting, where appropriate.
Excavation	<ul style="list-style-type: none"> • Ensure regular cleaning of hard standings using wet sweeping methods. • Fully sheet all vehicles carrying loose or potentially dusty material to or from the working areas. • Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment. • Avoid carrying out earthworks during dry weather if reasonably practicable having regard to programme or provide and ensure appropriate use of water sprays to control dust.

Activity	Control
	<ul style="list-style-type: none"> Re-vegetate earthworks and exposed areas/ soil stockpiles to stabilise surfaces as soon as practicable.
Construction	<ul style="list-style-type: none"> Avoid scabbling (roughening of concrete surfaces) if possible. Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery. Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place. For smaller supplies of fine powder materials ensure bags are sealed after use and stored appropriately to prevent dust generation.

B.4.7. Inspections and monitoring

- B.4.7.1. A daily construction report log will be completed for each area where work is being undertaken by the Site Supervisor and recorded within the daily diary. The site will also be inspected by the Environment Manager (or delegate) at least weekly.
- B.4.7.2. On identification of a non-conformance where inspections, surveillance, or auditing identify a failure to implement this management plan and/or a substantiated complaint is received, a full review of working practices will be undertaken to ensure corrective and preventative measures are implemented.
- B.4.7.3. Inspection will also be undertaken in the event that a complaint is received. When investigating an incident, the following information will be gathered:
- Wind direction and strength.
 - Weather conditions.
 - Operations at the site at the time of the exceedance.
 - Any abnormal operations both inside the worksite and outside (by both the contractor and/or others).
 - Any air quality controls being applied.
 - Identification of additional controls required.

B.4.8. Communications

Stakeholder communication

- B.4.8.1. The appointed PC will maintain and develop a Community Engagement Plan (CEP) (application document TR010063 APP 9.10) in consultation with stakeholders.

Complaints

- B.4.8.2. All complaints received will be recorded, investigated and corrective actions implemented, and feedback given to the complainant. The relevant local authority will be advised of any justified complaint, actions taken to investigate, and any actions found necessary to put in place.

Records

- B.4.8.3. Documentation and records will be produced, filed and maintained to record the activities and processes used to manage dust and emissions to air.

B.4.9. Register of Environmental Actions and Commitments

B.4.9.1. The following are the Register of Environmental Actions and Commitments (REAC) as they relate to the Air Quality Management Plan.

Table B 4-3 - Air Quality Management Plan REAC

REAC	Commitment Text	Description of the mitigation measure or commitment	Implementation mechanisms
AQ1	Control of dust during construction.	<p>Scheme specific mitigation measures to control dust during construction would be specified within contract documentation and incorporated into the EMP (2nd iteration) prior to commencement of the Scheme.</p> <p>Prior to commencement of the Scheme, Best Practice guidance will be followed to determine appropriate limits for the implementation of dust control measures. These measures will be captured in the Air Quality Management Plan annexed (Annex B4) to the EMP (2nd iteration). The EMP (2nd iteration) will be submitted to and approved by the county planning authority following consultation with the relevant local planning authority and strategic highway authorities to the extent that it relates to matters relevant to its functions.</p> <p>Appropriate mitigation measures for the management of dust include the following. Full details are presented in the Nuisance Management Plan:</p> <ul style="list-style-type: none"> • Regular water-spraying and sweeping of unpaved and paved roads to minimise dust and remove mud and debris. • Using wheel washes, shaker bars or rotating bristles for vehicles leaving the site where appropriate to minimise the amount of mud and debris deposited on the roads. • Sheeting vehicles carrying dusty materials to prevent materials being blown from the vehicles whilst travelling. • Enforcing speed limits for vehicles on unmade surfaces to minimise dust entrainment and dispersion. • Ensuring any temporary site roads are no wider than necessary to minimise their surface area. • Damping down of surfaces prior to their being worked. 	EMP (2nd iteration). Annex B4 – Air quality management plan.

REAC	Commitment Text	Description of the mitigation measure or commitment	Implementation mechanisms
		<ul style="list-style-type: none"> Storing dusty materials away from site boundaries and in appropriate containment (e.g. sheeting, sacks, barrels etc.). 	
AQ2	Control of engine emissions during construction.	<p>Scheme specific mitigation measures to limit engine emissions during construction would be incorporated into the EMP (2nd iteration) prior to commencement of the Scheme.</p> <p>Specifically these measures will be captured in the Air Quality Management Plan annexed (Annex B4) to the EMP (2nd iteration).</p> <p>The EMP (2nd iteration) will be submitted to and approved by the county planning authority following consultation with the relevant local planning authority and strategic highway authorities to the extent that it relates to matters relevant to its functions.</p> <p>Appropriate mitigation measures include the following. Full details are presented in the Air Quality Management Plan:</p> <ul style="list-style-type: none"> Ensuring plant and equipment is maintained in good working order. Ensuring construction plant is not left running when not in use. 	EMP (2nd iteration). Annex B4 – Air quality management plan.

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APPENDIX C Housekeeping Checklist

Housekeeping activity	Area of the site	Frequency	Personnel	Record
Litter inspection and pick	Whole site	Daily – typically beginning of each working day	Nominated operative	Daily Site Diary
Manual brush	Access / egress to the site	Daily - if mud on road is identified	Nominated operative	Daily Site Diary
Road sweeper brush	Access / egress to the site	Daily - if mud on road is identified	Nominated operative / third party contractor	Daily Site Diary
Maintenance of haul route	Whole site.	Daily – end of each day	Plant operator	Daily Site Diary
Maintenance of public highways	Whole site	Daily – end of each day	Plant operator	Daily Site Diary



APPENDIX D **Complaints Procedure & Form**

Complaints Procedure

243213/CP

INTRODUCTION

This Complaints Procedure outlines how the Operator will respond in the event of a complaint. A complaint may arise relating to the site permitted activities involving a nuisance (dust, noise, odour, pests). This procedure contains information on how any complaint will be investigated and any actions taken as a result of the complaint.

KEY CONTACTS

The key contacts will be shown on the site notice board at the site entrance. Alternatively, any complaints can be made at the site to any site operative and/or the Site Manager.

PROCEDURE

1. Any complaints made will be immediately logged by the Site Manager and/or Site Operative. In the event a complaint is made to a Site Operative, the Site Operative will refer the complaint to the Site Manager. If able to do so, the complainant details will be taken on initial contact either by phone or in person. The response time is typically within 1 hour.
2. The Site Manager (or nominated operative) will discuss any concerns with the complainant directly within 1 working day of the complaint being made; and request contact details to notify the complainant of any updates/corrective measures. The complaint will be logged using the Complaint Form (attached) and given a unique reference number.
3. The Site Manager will review the site activities and ensure control measures are in accordance with the Site's Management Systems. This review will typically happen in conjunction with point 1 and review will be undertaken within 2 working days of complaint being made.
4. Once initial contact and review of the site has been undertaken, the Site Manager will investigate the location of concern raised in relation to the site i.e. at a local receptor location and/or public highway to inspect the impact on the receptor. This will occur within 3 working days.
5. The Site Manager will notify the complainant of any updates to the control measures / site operations. Control measures may be corrective and/or preventative and include additional control measures and/or increase the frequency of an existing control measure. Alternatively, the design of the site operations may change to decrease nuisance to that receptor. The notification will be within 1 week of the complaint being made.
6. In the event the same issue persists, the Site Manager will further review site operations and control measures. This may require a temporary cessation of certain operations whilst additional measure is implemented. The works will not recommence until further control measures have been incorporated and a review of effectiveness has been agreed / witnessed by the Site Manager. The complainant will be kept abreast of further measures. This is likely to be within 1-2 weeks subject to what the complaint is, severity of complaint and associated activity taking place.
7. In the event of an out of hour complaint, the complaint will be picked up on the next working day and dealt with as per point 1-6 above.

RECORDS

On site Records

A copy of this procedure is kept on site and briefed to all site operatives upon site induction. Any identified complaints, incidents or accidents, as well as corrective measures, are recorded in the Complaint Form. Copies of the complaint forms are kept on site.

Complaints Procedure

243213/CP

Review

This procedure is reviewed on a yearly basis or post-incident to ensure it remains up-to-date with the site operations. The review procedure would involve the Senior Management Team and site team collectively to establish the root cause and the best available control techniques. The review will take place within 1 month of the incident.

Complaint Form

Complaint Form Reference No.	
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Date of Complaint	
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Details of Complainant			
Name			
Address			
Contact Number		Email Address	
Nature of Complaint			
Reported To		Date of Incident (if different to date of complaint)	
Corrective Measure Taken			
Follow up Communication with Complainant			
Preventative Measure Taken (if any)			
Sign off		Close out Date	