The Great Grid Upgrade

North Humber to High Marnham

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North Humber to High Marnham

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1. Introduction

1.1.1 This appendix to **Application Document 6.15 Chapter 15 Air Quality** sets out the dust risk assessment that has been carried out in accordance with the Institute of Air Quality Management (IAQM) Construction Dust guidance (Institute of Air Quality Management, 2024).

1.1.2 The steps undertaken in the assessment are detailed in the following sections.

2. Methodology

2.1 Step 1

2.1.1 Step 1 screens the requirement for a more detailed assessment. Should human receptors be identified within 250 m of the Order Limits, or within 50 m from the construction traffic route up to 250 m from the proposed bellmouths, then the assessment proceeds to Step 2.

2.1.2 For ecological receptors, Step 1 of the IAQM Construction Dust guidance(Institute of Air Quality Management, 2024) states that should ecological receptors be identified within 50 m of the Order Limits, or 50 m from the construction traffic route up to 250 m from the proposed bellmouths, then the assessment also proceeds to Step 2. However, at the request of Natural England, these distances have been amended such that the study area for ecological receptors is the same as for human receptors, i.e. an area within 250 m of the Order Limits, and 50 m from the construction traffic route up to 250 m from the proposed bellmouths.

2.1.3 Should sensitive receptors not be present within the relevant distances then negligible impacts would be expected, and further assessment is not necessary.

2.2 Step 2

2.2.1 Step 2 assesses the risk of potential dust impacts. The Project is allocated a risk category based on two factors:

- the scale and nature of the works, which determines the potential dust emission magnitude as small, medium or large (Step 2A); and
- the sensitivity of the area to dust impacts, which can be defined as low, medium or high sensitivity (Step 2B).

2.2.2 The two factors are combined in Step 2C to determine the risk of dust impacts without mitigation applied.

2.2.3 Step 2A defines the potential magnitude of dust emission through the construction phase. The relevant criteria (Institute of Air Quality Management, 2024) are summarised in Table 2.1.

Table 2.1 – Construction dust – magnitude of emission

Magnitude	Activity	Criteria
Large	Demolition	Total building volume greater than 75,000 m^3 Potentially dusty construction material (e.g., concrete) On-site crushing and screening Demolition activities greater than 12 m above ground level
	Earthworks	Total site area greater than 110,000 m^2 Potentially dusty soil type (e.g., clay, which will be prone to suspension when dry due to small particle size)

Magnitude	Activity	Criteria
		More than 10 heavy earth moving vehicles active at any one time Formation of bunds greater than 6 m in height
	Construction	Total building volume greater than 75,000 m^3 On site concrete batching Sandblasting
	Trackout	More than 50 Heavy Duty Vehicle (HDV) outward trips per day Potentially dusty surface material (e.g., high clay content) Unpaved road length greater than 100 m
Medium	Demolition	Total building volume 12,000 m^3 to 75,000 m^3 Potentially dusty construction material Demolition activities 6 m to 12 m above ground level
	Earthworks	Total site area 18,000 m^2 to 110,000 m^2 Moderately dusty soil type (e.g., silt) Five to ten heavy earth moving vehicles active at any one time Formation of bunds 3 m to 6 m in height
	Construction	Total building volume 12,000 m^3 to 75,000 m^3 Potentially dusty construction material (e.g., concrete) On site concrete batching
	Trackout	20 to 50 HDV outward trips per day Moderately dusty surface material (e.g., high clay content) Unpaved road length 50 m to 100 m
Small	Demolition	Total building volume under 12,000 m^3 Construction material with low potential for dust release (e.g., metal cladding or timber) Demolition activities less than 6 m above ground level Demolition during wetter months
	Earthworks	Total site area less than 18,000 m^2 Soil type with large grain size (e.g., sand) Less than 5 heavy earth moving vehicles active at any one time Formation of bunds less than 3 m in height
	Construction	Total building volume less than 12,000 m^3 Construction material with low potential for dust release (e.g., metal cladding or timber)
	Trackout	Less than 20 outward HDV trips per day Surface material with low potential for dust release Unpaved road length less than 50 m

2.2.4 Step 2B defines the sensitivity of the area around the Project to potential dust impacts (Institute of Air Quality Management, 2024), under Section 7. The influencing factors are shown in Table 2.2.

Table 2.2 – Construction dust – examples of factors defining sensitivity of an area

Receptor sensitivity	Examples	
	Human receptors	**Ecological receptors**
High	Users expect high levels of amenity. High aesthetic or value property. People expected to be present continuously for extended periods of time. Locations where members of the public are exposed over a time period relevant to the air quality objective for particulate matter less than 10 microns in diameter (PM_{10}) e.g., residential properties, hospitals, schools and residential care homes.	Internationally or nationally designated site e.g., Special Area of Conservation (SAC), and the designated features may be affected by dust soiling. Locations where there is a community of a particular dust sensitive species such as vascular plant species included in the Red Data List for Great Britain (Stroh, 2025).
Medium	Users would expect to enjoy a reasonable level of amenity. Aesthetics or value of their property could be diminished by soiling. People or property would not reasonably be expected to be present here continuously or regularly for extended periods as part of the normal pattern of use of the land e.g., parks and places of work.	Nationally designated site e.g., Sites of Special Scientific Interest (SSSIs) with dust sensitive features, not considered to be high risk. Locations where there is a particularly important plant species, where its dust sensitivity is uncertain or unknown.
Low	Enjoyment of amenity would not reasonably be expected. Property would not be expected to be diminished in appearance. Transient exposure, where people would only be expected to be present for limited periods. e.g., public footpaths, playing fields, shopping streets, farmland, short-term car park and roads.	Locally designated site e.g., Local Nature Reserve where the features may be affected by dust deposition.

2.2.5 The guidance also provides the following factors to consider when determining the sensitivity of an area to potential dust impacts:

- any history of dust generating activities in the area;
- the likelihood of concurrent dust generating activity on nearby sites;

- any pre-existing screening between the source and receptors;
- any conclusions drawn from analysing local meteorological data which accurately represent the area;
- the season during which works will take place;
- any conclusions drawn from local topography;
- duration of the potential impact, as a receptor may become more sensitive over time; and
- any known specific receptor sensitivities which go beyond the classifications given in the document.

2.2.6 These factors were considered during the undertaking of the assessment.

2.2.7 The criteria (Institute of Air Quality Management, 2024) for determining the sensitivity of the area to dust soiling effects on people and property is summarised in Table 2.3.

Table 2.3 – Construction dust – sensitivity of the area to dust soiling effects on people and property

Receptor sensitivity	Number of receptors	Distance from the source (m)			
		Less than 20	Less than 50	Less than 100	Less than 250
High	**Greater than 100**	High	High	Medium	Low
	10 - 100	High	Medium	Low	Low
	1 - 10	Medium	Low	Low	Low
Medium	**Greater than 1**	Medium	Low	Low	Low
Low	**Greater than 1**	Low	Low	Low	Low

2.2.8 Table 2.4 outlines the criteria (Institute of Air Quality Management, 2024) for determining the sensitivity of the area to human health impacts.

Table 2.4 – Construction dust – sensitivity of the area to human health impacts

Receptor sensitivity	Annual mean PM_{10} concentration	Number of receptors	Distance from the source (m)			
			Less than 20	Less than 50	Less than 100	Less than 250
High	**Greater than 32µg/m^3**	**Greater than 100**	High	High	High	Medium
		10 - 100	High	High	Medium	Low
		1 - 10	High	Medium	Low	Low

Receptor sensitivity	Annual mean PM_{10} concentration	Number of receptors	Distance from the source (m)			
			Less than 20	Less than 50	Less than 100	Less than 250
	28-32µg/m^3	Greater than 100	High	High	Medium	Low
		10 - 100	High	Medium	Low	Low
		1 - 10	High	Medium	Low	Low
	24-28µg/m^3	Greater than 100	High	Medium	Low	Low
		10 - 100	High	Medium	Low	Low
		1 - 10	Medium	Low	Low	Low
	Less than 24µg/m^3	Greater than 100	Medium	Low	Low	Low
		10 - 100	Low	Low	Low	Low
		1 - 10	Low	Low	Low	Low
Medium	greater than 32µg/m^3	Greater than 10	High	Medium	Low	Low
		1 - 10	Medium	Low	Low	Low
	28-32µg/m^3	Greater than 10	Medium	Low	Low	Low
		1 - 10	Low	Low	Low	Low
	24-28µg/m^3	Greater than 10	Low	Low	Low	Low
		1 - 10	Low	Low	Low	Low
	Less than 24µg/m^3	Greater than 10	Low	Low	Low	Low
		1 - 10	Low	Low	Low	Low
Low	-	Greater than 1	Low	Low	Low	Low

2.2.9 Table 2.5 outlines the criteria (Institute of Air Quality Management, 2024) for determining the sensitivity of the area to ecological impacts. It should be noted that for this assessment ecological impacts have been assessed up to 250 m as opposed to the IAQM standard criteria of 50 m.

Table 2.5 – Construction dust – sensitivity of the area to ecological impacts

Receptor sensitivity	Distance from the source (m)	
	Less than 20	Less than 250
High	High	Medium
Medium	Medium	Low
Low	Low	Low

2.2.10 Step 2C combines the dust emission magnitude with the sensitivity of the area to determine the risk of unmitigated impacts.

2.2.11 Table 2.6 outlines the risk category from demolition activities (Institute of Air Quality Management, 2024).

Table 2.6 – Construction dust – dust risk category from demolition activities

Receptor sensitivity	Dust emission magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Medium Risk
Medium	High Risk	Medium Risk	Low Risk
Low	Medium Risk	Low Risk	Negligible

2.2.12 Table 2.7 outlines the risk category from earthworks and construction activities (Institute of Air Quality Management, 2024).

Table 2.7 – Construction dust – dust risk category from earthworks and construction activities

Receptor sensitivity	Dust emission magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible

2.2.13 Table 2.8 outlines the risk category from trackout activities (Institute of Air Quality Management, 2024).

Table 2.8 – Construction dust – dust risk category from trackout activities

Receptor sensitivity	Dust emission magnitude		
	Large	**Medium**	**Small**
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible

2.3 Step 3

2.3.1 Step 3 requires the identification of site-specific mitigation measures within the guidance to reduce potential dust impacts based on the relevant risk categories identified in Step 2. For sites with negligible risk, mitigation measures beyond those required by legislation are not required. However, additional controls may be applied as part of good practice.

2.4 Step 4

2.4.1 Once the risk of dust impacts has been determined and the appropriate mitigation measures identified, the final step is to determine the significance of any residual effects. For almost all construction activity, the aim should be to control effects using effective mitigation. Experience shows that this is normally possible, hence the residual effect will normally be not significant.

3. Construction Dust Assessment

3.1 Step 1

3.1.1 The undertaking of activities such as excavation, ground works, and storage of materials has the potential to result in fugitive dust emissions throughout the construction phase. Vehicle movements both on-site and on the local road network also have the potential to result in the re-suspension of dust from highway surfaces. This construction dust assessment has been carried out to assess the risk associated with dust emissions from construction related activities associated with the Project.

3.1.2 The potential for impacts at sensitive locations depends greatly on local meteorological conditions during the undertaking of dust generating activities, with the most significant effects likely to occur during dry and windy conditions.

3.1.3 A desk-study identified sensitive human receptors and designated ecological sites within 250 m of the Order Limits and within 50 m from the construction traffic routes up to 250 m from the proposed bellmouths, as displayed in **Application Document 6.15.F1 Figure 15.1 Air Quality Construction Dust Study Area**. The ecological sites within the construction dust study area are listed in Table 3.1.

Table 3.1 – Ecological sites within the construction dust study area

Ecological site	Distance from Order Limits	Distance from construction traffic route
Humber Estuary Ramsar, Special Protection Area (SPA), SAC and SSSI	The Order Limits intersect this receptor (0 m)	N/A[1]
Brantingham Dale Historic Local Wildlife Site (LWS) and SSSI	The Order Limits intersect this receptor (0 m)	N/A
Chesterfield Canal (Welham to Misterton) LWS, Chesterfield Canal SSSI	The Order Limits intersect this receptor (0 m)	N/A
Crowle Borrow Pits SSSI	Adjacent to the Order Limits (0 m)	N/A
Treswell Wood SSSI, Ancient Woodland (AW), Local Wildlife Site (LWS) and Wildlife Trust Reserve	Adjacent to the Order Limits (0 m)	N/A
Wheatley Wood AW and LWS	Approximately 130 m from the Order Limits	N/A

[1] A 'N/A' rating is applied here if the receptors is not within 50 m of the construction traffic routes up to 250 m of the proposed bellmouths.

Ecological site	Distance from Order Limits	Distance from construction traffic route
Beckingham Wood LWS	Approximately 68 m from the Order Limits	N/A
Birkhill Wood LWS and AW	Approximately 110 m from the Order Limits	N/A
Broomfleet Pits LWS	Adjacent to the Order Limits (0 m)	Located adjacent to Primary Access Route (PAR) 159 (0 m)
Caddow Wood (Northern Assart) LWS	Approximately 230 m from the Order Limits	N/A
Caddow Wood (Southern Assarts) LWS	The Order Limits intersect this receptor (0 m)	N/A
Cliffs Plantation Candidate LWS	Adjacent to the Order Limits (0 m)	N/A
Dolegate Road, East Drayton Candidate LWS	The Order Limits intersect this receptor (0 m)	N/A
Drove Road LWS	Approximately 120 m from the Order Limits	N/A
Fledborough to Harby Dismantled Railway LWS	Approximately 8 m from the Order Limits	Located adjacent to PAR 139 (0 m)
Folly Drain North LWS	The Order Limits intersect this receptor (0 m)	PAR 53 intersects this receptor (0 m)
Hatfield Waste Drain LWS	The Order Limits intersect this receptor (0 m)	Approximately 18 m away from PAR 51
High House Road Verges, Sturton Le Steeple LWS	Approximately 21 m from the Order Limits	N/A
Jillywood Lane LWS	The Order Limits intersect this receptor (0 m)	Approximately 24 m away from PAR 6
Marnham Railway Yard Candidate LWS	Approximately 6 m from the Order Limits	Adjacent to PAR 139 (0 m)
Misterton Pasture LWS	Approximately 220 m from the Order Limits	N/A
Mother Drain, Misterton LWS	Approximately 14 m from the Order Limits	N/A
North Engine Drain, Belton LWS	The Order Limits intersect this receptor (0 m)	PAR 51 intersects this receptor (0 m)
Pauper's Drain LWS	The Order Limits intersect this receptor (0 m)	N/A

Ecological site	Distance from Order Limits	Distance from construction traffic route
Retford Gate Green Lane LWS	The Order Limits intersect this receptor (0 m)	N/A
Risby Park with Fishpond Wood LWS	Approximately 10 m from the Order Limits	N/A
River Torne LWS	The Order Limits intersect this receptor (0 m)	PAR 53 intersects this receptor (0 m) Adjacent to PAR 51 and PAR 157 (0 m)
Saundby Park Wood LWS	Approximately 2 m from the Order Limits	N/A
Sedge Hole Close LWS and Wildlife Trust Reserve	The Order Limits intersect this receptor (0 m)	N/A
Shaw Ponds LWS	Approximately 200 m from the Order Limits	N/A
South Engine Drain, Belton LWS	The Order Limits intersect this receptor (0 m)	PAR 53 intersects this receptor (0 m) Adjacent to PAR 51 and PAR 157 (0 m)
South Moor Covert and Fishpond Plantation LWS	The Order Limits intersect this receptor (0 m)	Adjacent to PAR 58 (0 m)
Stainforth and Keadby Canal Corridor LWS	The Order Limits intersect this receptor (0 m)	Approximately 29 m away from PAR 48 and PAR 49
Three Rivers LWS	Adjacent to the Order Limits (0 m)	Adjacent to PAR 51 and PAR 157 (0 m)
Tongs and Dogholes Woods LWS	Approximately 14 m from the Order Limits	N/A
Warping Drain Corridor LWS	The Order Limits intersect this receptor (0 m)	PAR 73 and PAR 74 are intersecting this receptor (0 m)
West Burton Meadow LWS and Wildlife Trust Reserve	Approximately 120 m from the Order Limits	N/A
Woodale Historic LWS	Adjacent to the Order Limits (0 m)	N/A
Wooden Beck Hill Verges LWS	Approximately 220 m from the Order Limits	N/A
Blacktoft Sands RSPB Reserve	The Order Limits intersect this receptor (0 m)	Adjacent to PAR 34 (0 m)

3.2 Step 2A

Demolition

3.2.1 The Project does not include any proposed demolition other than the dismantling of existing pylons which is not considered to be a dust generating activity. The removal of existing pylon foundation concrete has been considered as part of earthworks activities. As such, impacts from demolition have not been considered further in the assessment.

Earthworks

3.2.2 Earthworks activities will primarily involve vegetation clearance, excavation of ground material, and site preparation. The total site area is significantly greater than 110,000 m^2 and the soil type mostly consists of clay. The number of heavy earth moving vehicles at any one time is likely to be greater than ten. As such, the potential dust emission magnitude for earthworks is considered to be large (Table 2.1).

Construction

3.2.3 Temporary construction compounds (presented in **Application Document 6.4.F3 Figure 4.3 Temporary Construction Works**) would be established along the route with temporary cabin or modular style units. Construction materials are generally considered to be non-dust generating with galvanised steel as the primary material for the pylons. Reinforced concrete would be required for the foundations however no on-site concrete batching would be required. Therefore, the potential magnitude of dust emissions from construction is considered to be medium (Table 2.1).

Trackout

3.2.4 The maximum number of outward HDV movements per day is likely to be greater than 50 during peak construction, with unpaved construction access tracks greater than 100 m in length. As such the magnitude of potential dust emissions from trackout is considered to be large (Table 2.1).

3.2.5 The dust emission magnitude for each dust generating activity for the Project is summarised in Table 3.2.

Table 3.2 – Construction dust – dust emission magnitude summary

Activity	Dust emission magnitude
Demolition	Not Applicable
Earthworks	Large
Construction	Medium
Trackout	Large

Step 2B

3.2.6 Receptors sensitive to potential dust impacts during earthworks and construction activities were approximated from a desktop study of the area up to 250 m from the Order Limits. These are summarised in Table 3.3.

Table 3.3 – Construction dust – earthworks and construction dust sensitive receptors

Distance from Order Limits	Approximate number of human receptors	Approximate number of ecological sites
Less than 20 m	10-100 with high sensitivity	1 with high sensitivity
Less than 50 m	More than 100 with high sensitivity	1 with high sensitivity
Less than 100 m	More than 100 with high sensitivity	1 with high sensitivity
Less than 250 m	More than 100 with high sensitivity	1 with high sensitivity

3.2.7 Receptors sensitive to potential dust impacts from trackout were approximated from a desktop study of the area up to 50 m from the construction traffic route within 250 m of the proposed bellmouths. These are summarised in Table 3.4.

Table 3.4 – Construction dust – trackout dust sensitive receptors

Distance from sites (m)	Approximate number of human receptors	Approximate number of ecological sites
Less than 20 m	10-100 with high sensitivity	10-100 with low sensitivity
Less than 50 m	More than 100 with high sensitivity	10-100 with low sensitivity

3.2.8 It should be noted that, in accordance with the IAQM Construction Dust guidance (Institute of Air Quality Management, 2024), the highest level of sensitivity should be recorded from the criteria outlined in the guidance, and therefore lower sensitivity receptors have not been included in Table 3.3 and Table 3.4.

3.2.9 The IAQM Construction Dust guidance(Institute of Air Quality Management, 2024) defines residential properties as being high sensitivity receptors to dust soiling impacts, and therefore the sensitivity of the surrounding area for dust soiling impacts has been determined based on the number of high sensitivity receptors and the distance of the receptor from the source (refer to Table 2.3).

3.2.10 To determine the sensitivity of the receiving environment for human health effects, the maximum 2029 (first and peak construction year for construction traffic) PM_{10} background concentration across the Order Limits was obtained from the Department for Environment, Food and Rural Affairs (Defra) UK Air Information Resource (UK AIR) website (Department for Environment, Food and Rural Affairs, 2026) and identified as being 15.6 µg/m^3. Therefore, in accordance with the IAQM Construction

Dust guidance (IAQM, 2024), health impacts should be determined based on the criteria within the less than 24 µg/m^3 category (refer to Table 2.4). As the human receptors include residential properties, the sensitivity of the receptor is considered to be high and therefore the sensitivity of the surrounding area for human health impacts has been determined based on the number of high sensitivity receptors within the less than 24 µg/m^3 background PM_{10} category and the distance of the receptors from the source (refer to Table 2.4).

3.2.11 In accordance with the IAQM Construction Dust guidance (Institute of Air Quality Management, 2024) internationally and nationally designated sites such as SPAs, Ramsar sites, and SACs are defined as high sensitivity for ecological impacts, therefore the sensitivity of the area to ecological impacts has been determined based on the high receptor sensitivity category and the distance of the receptor from the source (Table 2.5). For trackout, there are no nationally designated sites within 50 m of the construction traffic routes, therefore the sensitivity of the trackout study area has been determined based on the low receptor sensitivity category and the distance of the receptors from the routes.

3.2.12 The sensitivity of the receiving environment to specific dust impacts is summarised in Table 3.5.

Table 3.5 – Construction dust – Summary of the sensitivity of the area

Potential impact	Sensitivity of the surrounding area		
	Earthworks	Construction	Trackout
Dust Soiling	High	High	High
Human Health	Low	Low	Low
Ecological	High	High	Low

Step 2C

3.2.13 The risk of effects in the absence of environmental measures was then defined based on the interaction between the magnitude of emission and the highest level of area sensitivity (determined in Steps 2A and 2B, respectively) for each dust generating activity. The risk of dust effects was determined, as presented in Table 3.6.

Table 3.6 – Construction dust – summary of the risk of dust effects

Potential impact	Risk		
	Earthworks	Construction	Trackout
Dust Soiling	High Risk	Medium Risk	High Risk
Human Health	Low Risk	Low Risk	Low Risk
Ecological	High Risk	Medium Risk	Low Risk

3.2.14 As indicated in Table 3.6, the potential risk of dust soiling is high for earthworks and trackout, and medium for construction. The potential risk of human health impacts is low for earthworks, construction and trackout. The potential risk of ecological impacts is high for earthworks, medium for construction and low for trackout. The assessment has therefore indicated that the risk of dust effects is high as a worst-case for the Project.

3.2.15 It should be noted that the potential for impacts depends significantly on the distance between the dust generating activity and receptor location. Risk was predicted based on a worst-case scenario of works being undertaken at the outer edge of the Order Limits. Therefore, actual risk is likely to be lower than that predicted during the majority of the construction phase.

3.3 Step 3

3.3.1 The IAQM Construction Dust guidance (Institute of Air Quality Management, 2024) provides potential mitigation measures to reduce impacts as a result of fugitive dust emissions during the construction phase. These have been adapted for the Project based on the risk of dust effects (Table 3.6) and have been included within **Application Document 7.3 Register of Environmental Actions and Commitments**, these measures are summarised in Table 3.7.

Table 3.7 – Proposed dust mitigation measures based on the IAQM Construction Dust guidance adapted for the Project

Mitigation measure	High Risk Measures. H=Highly Recommended. D=Desirable.	Register of Environmental Actions and Commitments code
Communications		
A stakeholder communications plan that includes community engagement will be developed and implemented before construction work commences.	H	AQ01
Contact details for the Project will be displayed at the entrance to the main construction compounds. This will include an emergency telephone number. A free telephone helpline and website will be provided by the Project. This will be maintained and managed by the National Grid Electricity Transmission plc (National Grid) community relations team.	H	AQ01
The Project helpline and website information will be visible on boards placed in appropriate locations where they will be visible to the public.	H	AQ01
Dust Management		
The Main Works Contractor(s) will develop and comply with a Dust Management Plan (DMP), which may	H	AQ02

Mitigation measure	High Risk Measures. H=Highly Recommended. D=Desirable.	Register of Environmental Actions and Commitments code
include measures to control other air emissions, and will be implemented prior to construction.		
Site Management		
All dust and air quality complaints will be recorded and their cause(s) identified. Appropriate measures to reduce emissions will be implemented in a timely manner, and these measures will be recorded.	H	AQ03
The complaints log will be made available to the local authority on request.	H	AQ03
Any exceptional incidents that cause dust and/or air emissions, either on- or off-site, and the action taken to resolve the situation will be recorded in the logbook.	H	AQ03
Regular liaison meetings with other high risk construction sites within 500 m of the Order Limits will be held to ensure plans are co-ordinated and dust and particulate matter emissions are minimised. Off-site transport and delivery activities using shared sections of the Strategic Road Network and local road network will be considered to understand potential interactions and minimise associated dust and particulate matter emissions.	H	AQ03
Monitoring		
Daily on-site and off-site inspections will be undertaken, where receptors (including roads) are nearby, to monitor dust, record inspection results. The information collected from these inspections will be compiled within a log, which will be made available to the local authority on request. This will include regular dust soiling checks of surfaces such as street furniture, cars, and windowsills within 100 m of the site boundary, with cleaning to be provided if necessary.	H	AQ04
The inspection log will be made available to the local authority on request.	H	AQ04
There will be an increase in frequency of site inspections by the person accountable for air quality and dust issues on-site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.	H	AQ04

Mitigation measure	High Risk Measures. H=Highly Recommended. D=Desirable.	Register of Environmental Actions and Commitments code
Dust deposition, dust flux, or real-time PM_{10} continuous monitoring locations will be discussed with the local authority, if required. Where possible, baseline monitoring will commence at least three months before work commences on-site or, if it is a large site, before work on a phase commences.	H	AQ04
Preparing and maintaining the site		
As far as reasonably practicable and safe to do so, any activity carried out or equipment located within a construction compound that may produce dust, noise, vibration and lighting emissions, will be located away from sensitive receptors such as residential properties or designated ecological sites.	H	GG10
Solid screens or barriers will be erected around dusty activities, where required, that are at least as high as any stockpiles on-site.	H	AQ05
Specific activities will be fully enclosed where there is a high potential for dust production and the activity is ongoing for an extensive period.	H	AQ05
Runoff of water or mud will be avoided where possible.	H	AQ05
Site fencing, barriers and scaffolding will be kept clean using wet methods.	H	AQ05
Materials that have a potential to produce dust from site will be removed as soon as possible, unless being re-used on-site. If they are being re-used on-site, they will be covered as described below.	H	AQ05
Stockpiles will be covered, seeded or fenced to prevent wind whipping (where needed and depending on duration).	H	AQ05
Operating vehicle/machinery and sustainable travel		
Vehicles and vessels will be correctly maintained and operated in accordance with manufacturer's recommendations and in a responsible manner. The operators of plant and vehicles will be required to switch off their engines when not in use and when it is safe to do so. Electric or other low carbon plant and equipment will be used where available and where practicable.	H	GG12

Mitigation measure	High Risk Measures. H=Highly Recommended. D=Desirable.	Register of Environmental Actions and Commitments code
The use of diesel or petrol powered generators will be avoided, and mains electricity or battery powered equipment will be used, where practicable. Where diesel generators are used, ensure the generators adhere to Stage V emissions standards and seek alternatives where possible, such as batteries or alternative fuel. Ensure they are placed as far from receptors as possible and that testing, if applicable, is kept to a minimum. Consideration will be given to increasing the release height of emissions for sufficient dispersion, and relevant abatement technology, if required.	H	AQ12
A maximum speed limit will be imposed on construction access tracks and work areas. For longer length of construction access tracks, these speeds may be increased with suitable additional control measures provided, subject to the approval of the undertaker and with the agreement of the local authority, where appropriate.	H	AQ06
A Construction Logistics Plan will be produced and complied with to manage the sustainable delivery of goods and materials	H	AQ06
All construction HGVs will adhere to the designated construction routes (Preliminary Access Routes (PARs)) to and from the site. As noted within **Application Document 7.4 Outline Construction Traffic Management Plan**.	H	TT01
The Main Works Contractor(s) will prepare a Driver Information Pack prior to construction commencing covering a variety of topics and providing information on the requirements of working on the Project, to form part of the CTMP.	H	TT07
Operations		
Suitable dust suppression techniques, such as water sprays or local extraction, will be fitted to or used in conjunction with, cutting, grinding or sawing equipment.	H	AQ07
There will be an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate.	H	AQ07

Mitigation measure	High Risk Measures. H=Highly Recommended. D=Desirable.	Register of Environmental Actions and Commitments code
Enclosed chutes and conveyors and covered skips will be used, where reasonably practicable.	H	AQ07
Drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment will be minimised and fine water sprays will be used on such equipment wherever appropriate.	H	AQ07
It will be ensured that equipment will be readily available on-site to clean any dry spillages, and spillages will be cleaned up as soon as reasonably practicable after the event using wet cleaning methods.	H	AQ07
Waste Management		
Bonfires and the burning of waste material will be prohibited.	H	GG22
Earthworks (high risk)		
Earthworks and exposed areas/ soil stockpiles will be re-vegetated to stabilise surfaces as soon as practicable, where appropriate and using appropriate seed mix for what habitat the top soil was from.	H	AQ08
Hessian, mulches or trackifiers[2] will be used where it is not possible to re-vegetate or cover with topsoil, as soon as practicable.	H	AQ08
The cover will be removed in small areas during work and not all at once.	H	AQ08
Construction (medium risk)		
Scabbling (roughening of concrete surfaces) will be avoided if possible.	D	AQ09
Sand and other aggregates will be stored in bunded areas and will not be allowed to dry out, unless this is required for a particular process, in which case appropriate additional control measures will be in place.	H	AQ09
Fine powder materials will be delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery.	D	AQ09

[2] A chemical or natural agent applied to the ground to bind particles, prevent erosion, and control dust.

Mitigation measure	High Risk Measures. H=Highly Recommended. D=Desirable.	Register of Environmental Actions and Commitments code
For smaller supplies of fine powder materials, bags will be sealed after use and stored appropriately to prevent dust.	D	AQ09
Trackout (high risk)		
Road sweepers will be deployed on public roads where necessary to prevent excessive dust or mud deposits.	H	GG20
Dry sweeping of large areas will be avoided.	H	GG20
Vehicles carrying materials entering and leaving sites will be covered to prevent escape of materials during transport.	H	AQ10
On-site construction access tracks will be inspected for integrity and any necessary repairs to the surface will be instigated as soon as reasonably practicable.	H	AQ10
All inspections of construction access tracks and any subsequent action will be recorded in a site logbook.	H	AQ10
Hard surfaced haul routes will be installed where possible and regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned.	H	AQ10
Wheel washing facilities will be provided at each compound and intermittently along construction access tracks.	H	GG20
An adequate area of hard surfaced road will be provided between the wheel wash facility and the site exit, wherever site size and layout permits.	H	AQ10
Access gates will be located at least 10 m from receptors where possible.	H	AQ10

3.4 Step 4

3.4.1 With the relevant mitigation measures outlined in Table 3.7 implemented, the residual effect from all dust generating activities is predicted to be **not significant**.

4. References

Department for Environment, Food and Rural Affairs. (2026). *Background Mapping data for local authorities - 2021*. Retrieved June 2026, from uk-air.defra.gov.uk: https://uk-air.defra.gov.uk/data/laqm-background-maps?year=2021

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Stroh, P. (2025, November 16). *A new vascular plant Red List for Great Britain.* Retrieved from ww.bsbi.org: https://bsbi.org/about/news/latest-news/a-new-vascular-plant-red-list-for-great-britain

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