

**A66 Northern Trans-Pennine Project
TR010062**

**2.7 Environmental Management Plan
Annex B4 Air Quality and Dust
Management (Rev **23**) (Tracked)
~~(Clean)~~**

APFP Regulations 5(2)(a)

Planning Act 2008

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

Volume 2

~~4-April~~ 16-May 2023

Infrastructure Planning

Planning Act 2008

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

A66 Northern Trans-Pennine Project
Development Consent Order 202x

**2.7 ENVIRONMENTAL MANAGEMENT PLAN ANNEX B4
AIR QUALITY AND DUST MANAGEMENT**

Regulation Number:	Regulation 5(2)(a)
Planning Inspectorate Scheme Reference	TR010062
Application Document Reference	2.7
Author:	A66 Northern Trans-Pennine Project Team, National Highways

Version	Date	Status of Version
Rev 1	13 June 2022	DCO Application
Rev 2	4 April 2023	Deadline 6
<u>Rev 3</u>	<u>16 May 2023</u>	<u>Deadline 8</u>

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B4 Air quality and dust management plan

B4.1 General

B4.1.1 Certain construction activities have the potential to cause emissions to the air, including but not limited to:

- Demolition including crushing and screening of materials
- Use of diesel powered plant and equipment
- Earthworks and material storage
- Dust from vehicle movements
- Cutting of hard standing.

B4.1.2 Methods complying with the principles of Best Practicable Means (BPM), as defined by Section 79 (9) of the Environmental Protection Act 1990, will be used to mitigate against dust nuisance caused by construction works.

B4.1.3 Burning is not permitted on site.

B4.2 Air Quality Management Areas

B4.2.1 Currently there are no designated AQMA within the scheme.

B4.3 Construction Traffic

B4.3.1 There is the potential that the movement of construction-related vehicles may cause a deterioration in air quality along transport routes for human receptors or lead to elevated nitrogen deposition at designated ecological receptors. As noted in Chapter 2: The Project (Environmental Statement, Application Document 3.2), there are likely to be compounds situated in Penrith and Bowes, amongst other locations. The EMP sets out measures to control construction vehicle movements, and a Construction Traffic Management Plan to be developed by the appointed contractor will ensure construction vehicles avoid identified sensitive locations.

B4.4 Diversion Routes

B4.4.1 An assessment has been undertaken of the traffic impact during construction of the Project and is presented in section 11 of the Transport Assessment (Application Document 3.7). This has been undertaken to understand the mitigation measures that would need to be implemented to prevent traffic issues arising during the construction of the Project.

B4.4.2 Mitigation will be achieved through the implementation of active traffic management measures, those being considered include limiting the use of speed reductions, i.e., through applying higher safe speeds, or limiting the amount of traffic management that is used in areas where the new route is being built adjacent to the existing A66. As a last resort, reactive traffic management measures would be employed to stop traffic from using the least suitable diversion routes. The proposed mitigation measures form part of EMP Annex B13 Construction Traffic Management Plan (Application Document 2.7).

B4.5 Dust

B4.5.1 Dust is generally considered to be any airborne solid matter up to 2mm in size. Dust emissions can cause annoyance to neighbouring properties and in severe cases, can lead to health problems e.g. eye irritation or breathing issues.

B4.5.2 Measures will be implemented to minimise the creation of dust at source; these will be dependent on the specific activity and prevailing weather conditions, but are likely to include the following:

- Speed limits of 140mph on haul routes or unpaved roads and 25mph on paved roads will be enforced. Site traffic will run on hard surfacing as far as practicable
- Haul routes will be damped with water during dry weather. This will be carried out using tractor drawn bowsers fitted with sprinklers. A chemical agent e.g. “Dustbuster 1” may be added to water to increase dust suppression properties and minimise the quantities required. Chemical agents will only be used following approval from the Environment Agency
- Subsoil and topsoil stockpiles located as far as reasonably practicable from sensitive receptors. They will be consolidated to ‘seal’ the surface and allowed to vegetate. Where necessary, stockpiles may be treated using a chemical ‘crusting’ agents e.g. “Dustbuster 2” to bind the surface and prevent windblown dust. Chemical agents will only be used following approval from the Environment Agency. Stockpiles will be seeded where they are to be stored for an extended period of time.
- Demolition works will use water sprays to suppress dust
- The location of mobile crushing plant will be carefully selected to minimise nuisance from dust and/or hazards to road users and any nearby sensitive receptors. Crushing plant will be used in accordance with Process Guidance note PG 3/16 (12) “Mobile Crushing and Screening” (Department for Environment Food & Rural Affairs, 2012)¹ and Part B authorisation as required by the Pollution Prevention and Control (England and Wales) Regulations 2000. Water will be provided to the crusher to allow internal damping of material during processing. Stockpiles of crushed material will also be damped as necessary.

B4.5.3 The local authority will be notified prior to the operation of mobile crushing equipment:

- Hard surfaces and exits onto public roads will be maintained by mechanical sweepers to prevent build-up of dust and / or mud
- Measures for cleaning vehicles will be established at the main exits from the site onto the public highway. These may include wheel washing and/or jet washing facilities. They will be a sufficient distance from the exit to ensure that excessive water from cleaning is not carried onto the public highway

¹ Department for Environment, Food and Rural Affairs (2012) Process Guidance Note 3/16(12) Statutory guidance for mobile crushing and screening

- Vehicles carrying dry friable material on the public highway will be sheeted to prevent escape of dust
- Stabilisation plant will be fitted skirts to contain dust as far as is practicable. Cement or lime for stabilisation will be stored in silos, tankers or under cover
- Drop heights from excavators when loading potential dusty materials/waste will be minimised
- Any cutting that has the potential to produce dust will be adequately suppressed.

B4.6 Plant and vehicle emissions

B4.6.1 In addition to dust, exhaust emissions can affect air quality. The following measures will be adopted to ensure that the impact is minimised as far as practicable:

- Construction plant and equipment will be regularly maintained in accordance with manufacturers’ specifications to ensure that exhaust emissions do not breach statutory limits set for vehicle/equipment type and mode of operation and that black smoke is not visible from exhaust systems other than during start up. Exhausts will be positioned at a sufficient height to ensure effective dispersal of exhaust emissions
- Engines will not be left running unnecessarily and will be throttled back
- The use of ultra-low sulphur diesel will be considered and used where practicable
- The use of electric plant will be considered and used where practicable
- The use of Hydrogen plant will be considered and used where practicable.

B4.7 Fluorinated greenhouse gases

B4.7.1 The site welfare may have a number of air conditioning units, all of which contain fluorinated greenhouse gases. Once confirmed through detailed construction planning, a schedule of units shall be presented in Table 1: Schedule of air conditioning units.

Table 1: Schedule of air conditioning units

Location	Model	Serial number	F gas type	F gas quantity (KG)	CO ₂ equivalent (tCO ₂ eq)

Location	Model	Serial number	F gas type	F gas quantity (KG)	CO ₂ equivalent (tCO ₂ eq)

B4.7.2 The Principal Contractor (PC) will utilise appropriately qualified persons to conduct works on the air conditioning units. Units will be leak tested as per the legal requirements.

B4.7.3 Maintenance records will be kept by the PC.

B4.8 Complaints

B4.8.1 The A66 Project Helpline Number will be used to deal with enquiries and complaints from the public. Details of the complaints will be relayed to the Project IDT Stakeholders team and the relevant local planning authority as soon as practicable. The extent of the action taken will depend on the validity and nature of the complaint. The relevant local planning authority will be advised by National Highways or the PC, prior to implementation of any action, and the relevant local planning authority will be invited to visit the site to view and validate the success or otherwise of the remedial action. Should further mitigation which is implementable be appropriate to prevent a re-occurrence, this will be discussed with the relevant local planning authority and implemented where reasonably practicable.

B4.9 Monitoring

B4.9.1 The Section Environmental Leads and site teams are responsible for ensuring that visual checks are carried out during the construction phase to ensure work is carried out in accordance with the principles set out above and nuisance is not caused to nearby residential areas.

B4.9.2 Visual inspections may be supplemented with quantitative monitoring in sensitive locations e.g. diffusion tubes (NO₂), sticky cylinder or “Frisbee” gauges (dust). The chosen locations for monitoring will be at the closest sensitive receptors to the site. Locations may change dependent on phasing and location of works. For NO₂, monitoring sites shall include a location at The Sills, between Barnard Castle Bridge and Bowes Road. The sites selected will be representative of worst-case exposure (i.e. the closest property or relevant sensitive receptor to the road at that location) along the road (in the case of The Sills, close to the crossing of the River Tees).

B4.9.3 Dust, NO₂ and Noise Monitoring Locations, techniques and durations will be determined by the Principal Contractor and agreed with the relevant Local Authority in advance of construction activities.

B4.9.4 Background air quality data shall be obtained at all monitoring locations prior to construction works in the area. Background monitoring will

include at least three months of data collection at all sites in advance of construction activities.

- B4.9.5 Dust monitoring shall be undertaken at each specified monitoring location regularly for the duration of the project. The results will be recorded and if required, made available to the local authority. For NO₂ results, these will be provided to local authorities on a monthly basis if required by the authority. Weather conditions will be taken into account before monitoring commences, for example the monitoring will be carried out on dry days. Monitoring shall be carried out to assess activities with the highest potential dust generating impact and also the levels of dust during general site works.
- B4.9.6 Daily visual inspections of site activities, dust controls and site conditions will be carried out by an appointed member of the construction team with observations kept in a daily dust log.
- B4.9.7 ~~As no statutory limits for nuisance dust exist in the UK, the Project IDT have implemented an action level of 250ug/m³ above background levels (Best Practice Guidance: The control of dust and emissions from construction and demolition, November 2006).~~ Site action levels for dust shall be based on the thresholds set out in paragraph 4.41 of the Institute of Air Quality Management Guidance on Monitoring in the Vicinity of Demolition and Construction Sites October 2018 (version 1.1). If monitored levels exceed this value existing dust control measures in place on the site will be examined to confirm that best practicable means are being employed to control dust, and to examine whether any further dust control measures can be introduced. If further control measures are introduced, subsequent monitoring will then be undertaken to understand the effectiveness of these control measures.
- B4.9.8 Air quality samples may be sent to suitably accredited testing laboratory, if required.
- B4.9.9 All air quality monitoring records will be managed in accordance with the Environmental management system.
- B4.10 Emergency measures**
- B4.10.1 Emergency measures are detailed in Annex D: Incident response plan.