

AENC-ARC-ETA-REP-0009

Norwich to Tilbury

Volume 7: Other Documents

Document: 7.2 Outline Code of Construction Practice Appendix D -
Outline Dust Management Plan - Clean Version

Final Issue D

July 2026

Planning Inspectorate Reference: EN020027

Infrastructure Planning (Applications: Prescribed Forms and Procedure)
Regulations 2009 Regulation 5(2)(q)

nationalgrid

Revision History

Version	Date	Submitted at
A	29 August 2025	DCO Application
B	12 May 2026	Commitments made in response to AQ 1.2 within the Examining Authority's Written Questions 1 [PD-014].
C	7 July 2026	Updates made following engagement with Thurrock Council.
D	21 July 2026	Deadline 7 to include latest cross references and commitments in 7.2 Outline Code of Construction Practice [Revision G].

Contents

1.	Introduction		1
1.1	Summary		1
1.2	Purpose of this Document		2
1.3	Construction Dust Assessment		2
1.4	Dust Risk Assessment		3
1.5	Adverse Weather		3
1.6	Key Responsibilities		4
1.7	Contacts and Communications		4
1.8	Monitoring		4
1.9	Non-Road Mobile Machinery		8
2.	Implementation		10
2.1	Implementing the DMP		10
2.2	Non-Compliance Procedure		10
2.3	Change Process		10
	Table 1.1	Summary of construction assessment details within the ES	2
	Table A.1	IAQM construction dust guidance	A2
	Table B.1	Daily inspection checklist	B1
	Table B.2	Weekly inspection notes	B2
	Table B.3	Dust event form	B3
	Table B.4	Dust complaint form	B4
	Image 1.1	Dust event response flowchart	8
	Abbreviations		12
	Glossary		13
	Bibliography		15
	Annex A	Construction Mitigation Measures	
	Annex B	Indicative Dust Forms	

1. Introduction

1.1 Summary

- 1.1.1 National Grid Electricity Transmission plc ('National Grid') has developed plans for Norwich to Tilbury (the 'Project'). The Project would support the UK's net zero target through the connection of new low carbon energy generation in East Anglia and by reinforcing the transmission network.
- 1.1.2 The Project comprises reinforcement of the transmission network between the existing Norwich Main Substation in Norfolk and Tilbury Substation in Essex, via Bramford Substation, the new East Anglia Connection Node (EACN) Substation and the new Tilbury North Substation.
- 1.1.3 The Project is a Nationally Significant Infrastructure Project (NSIP), and National Grid is seeking development consent under statutory procedures set by government. NSIPs are projects of certain types, over a certain size, which are considered by the government to be of national importance, hence permission to build them needs to be given at a national level, by the relevant Secretary of State (in this case the Secretary of State for Energy Security and Net Zero). Instead of applying to the Local Planning Authority for planning permission, the developer must apply to the Planning Inspectorate for a Development Consent Order (DCO) that would grant development consent.
- 1.1.4 This document is an outline management plan prepared as an appendix to the Outline Code of Construction Practice (CoCP) (document reference 7.2) (Revision G). It forms part of a suite of outline management plans that provide the preliminary framework for the principles, standards and procedures that the Main Works Contractor(s) must implement to minimise and manage the potential environmental impacts of construction activities associated with the Project. This outline management plan will be fully developed based on detailed design and construction methodology information to be provided by the Main Works Contractor(s). The final version will be submitted for approval in accordance with Requirement 4 (construction management plans) of the Draft DCO (document reference 3.1) (Revision G) prior to commencement of development. This process ensures that detailed design is developed with a clear alignment between the Outline CoCP (document reference 7.2) (Revision G), and this outline management plan.
- 1.1.5 All pre-commencement operations (as defined in Article 4(1) of the Draft DCO (document reference 3.1) (Revision G)) must be carried out in accordance with the Outline CoCP. In doing so, where any measures referenced in the Outline CoCP are to be agreed with the relevant Local Planning Authority, National Grid and / or its Main Works Contractor(s) must seek the agreement of the relevant Local Planning Authority before carrying out any pre-commencement operations to which those measures are relevant.
- 1.1.6 The Outline CoCP (document reference 7.2) (Revision G) sets out embedded, standard and additional mitigation measures.
- 1.1.7 As set out in Environmental Statement (ES) (Volume 6 of the DCO application) Chapter 7: Air Quality (document reference 6.7) (Revision B), the ES construction

dust assessment was carried out in accordance with the following Institute of Air Quality Management (IAQM) guidance documentation:

- Guidance on the assessment of dust from demolition and construction (IAQM, 2024)
- Guidance on Monitoring in the Vicinity of Demolition and Construction Sites (IAQM, 2018)

1.2 Purpose of this Document

- 1.2.1 National Grid will control dust, odour and air pollution, including exhaust emissions, during the construction works as far as reasonably practicable and in accordance with best practicable means (BPM) and the Outline CoCP (document reference 7.2) (Revision G).
- 1.2.2 The Outline Dust Management Plan has been prepared to describe the measures to be implemented by National Grid to prevent and, if not practicable, minimise potential effects on receptors of dust and emissions across the Project.

1.3 Construction Dust Assessment

- 1.3.1 A construction dust assessment has been carried out as part of the Environmental Impact Assessment, as reported in the ES (Volume 6 of the DCO application), to inform appropriate control measures to be deployed during the construction works.
- 1.3.2 Given the size of the Project and location of receptors, the potential dust emission magnitude is classified as ‘large’ in the ES (Volume 6 of the DCO application), in accordance with IAQM Guidance (IAQM, 2024). Sensitive receptors are identified within 250 m of construction activities.
- 1.3.3 This in turn led to the development of mitigation measures following IAQM Guidance (IAQM, 2024) which states that, with the application of suitable mitigation measures, impacts can be reduced to a negligible level. Standard mitigation measures are included in the Outline CoCP (document reference 7.2) (Revision G).
- 1.3.4 Table 1.1 signposts sections of the ES (Volume 6 of the DCO application) relevant to construction dust, including the appropriate mitigation measures for all on-site activities during construction.

Table 1.1 Summary of construction assessment details within the ES

Topic	ES (Volume 6 of the DCO application) Reference
Project Description	ES Chapter 4: Project Description (document reference 6.4) (Revision B) ES Figure 4.1: Proposed Project Design (document reference 6.4.F1) (Revision B) ES Figure 4.2: Proposed Project Design – Permanent Features (document reference 6.4.F2) (Revision B)
Air Quality Legislation and Policy	ES Chapter 7: Air Quality (document reference 6.7) (Revision B) • Section 7.2: Regulatory and Planning Policy Context

Topic	ES (Volume 6 of the DCO application) Reference
Construction Dust Assessment	ES Chapter 7: Air Quality (document reference 6.7) (Revision B) • Section 7.4: Study Area • Section 7.1.11: Construction Dust Assessment Methodology • Section 7.6: Proposed mitigation
Construction Dust Buffers for Project Components	ES Figure 7.4: Construction Dust Study Area (document reference 6.7.F4) (Revision A)

1.4 Dust Risk Assessment

- 1.4.1 The risk of dust effects occurring at any given receptor will vary widely across Project components depending on the nature of construction activities occurring near the receptor and the distance of the receptor from those activities.
- 1.4.2 Dust management plans will be prepared prior to the construction of each planned work package for the Project. These will be developed by the Main Works Contractor(s) or a suitably qualified environmental specialist, in line with the responsibilities set out in this Outline Dust Management Plan. The plans will aim to mitigate dust effects in accordance with the measures outlined in the Outline CoCP (document reference 7.2) (Revision G) and good practice to reduce all effects to a negligible level.
- 1.4.3 Therefore, this document is focused on the method of assessment and approach to mitigation at individual work package areas, not across the whole Project. It is best practice to assess activity taking place at the work package level as the effects and risks will be different at each locality.
- 1.4.4 Dust management plans will include the risk of dust impacts, determined in line with the most recent best-practice IAQM guidance (IAQM, 2024). Mitigation measures would be identified based on the level of risk and applied as required.

Mitigation measures and risk factors

- 1.4.5 The IAQM mitigation measures are listed in Annex A. The IAQM guidance (IAQM, 2024) is clear that, with appropriate mitigation in place, the impacts of construction dust will normally be 'not significant'. Standard mitigation measures are described in the Outline CoCP (document reference 7.2) (Revision G). The standard mitigation measures are considered appropriate to mitigate the level of risk, however, adverse weather incidents have been identified as events that may require contingency action in order to minimise dust emissions.

1.5 Adverse Weather

- 1.5.1 During extreme weather conditions, such as long periods of dry weather and/or high wind speeds, there is a risk that dust may be entrained or dispersed over a greater distance, potentially reaching off-site locations, beyond the site boundary. During such events, water suppression will be used in order to minimise the dispersion of dust beyond the site boundary.

- 1.5.2 Short-term weather forecasts will be used to plan future site operations, and hardstanding will be wetted before winds blow towards sensitive receptors to prevent dust annoyance.

National Grid Responsibilities and Records

1.6 Key Responsibilities

- 1.6.1 The day-to-day operations at the site will be the responsibility of the Main Works Contractor(s), who will be responsible for ensuring that the measures set out in the Outline CoCP (document reference 7.2) (Revision G) are implemented fully and appropriately, and that the monitoring and response protocols set out in Section 1.8 are adhered to. If the monitoring indicates that dust emissions are likely to have an effect on the local community, then the relevant Local Planning Authority will be informed via email by the Main Works Contractor(s). Additional measures will be implemented where necessary.
- 1.6.2 If any exceptional dust and/or air emissions, such as Saharan dust events, or volcanic ash occur, or any complaints are received, they will be investigated by the Main Works Contractor(s) or a delegated representative who will record the complaint. The final CoCP will detail the environmental incident management procedure, including specific provisions for managing dust and air quality effects attributable to Project activities. This procedure will align with contractors' internal incident investigation and response protocols, which typically include root cause identification and analysis, assignment of corrective actions, and implementation tracking. As a minimum, the procedure shall incorporate the requirements outlined in Section 1.4, which details specific measures to address dust issues. Annex B provides example forms to be used for recording dust events and the corresponding mitigation actions.

1.7 Contacts and Communications

- 1.7.1 The name and contact details of the Environmental Manager/engineer or the site manager will be displayed at the site entrance. These signs will also include the address and phone number for the Main Works Contractor(s) UK head office.

1.8 Monitoring

- 1.8.1 IAQM guidance (IAQM, 2024) advises that for negligible and low risk sites, it is not required to undertake quantitative air quality monitoring. For high risk sites, dust and Particulate Matter (PM₁₀) should be continuously measured during construction using a minimum of two automatic (continuous) particulate monitors. It may also be appropriate to have a real-time monitoring plan at medium risk sites. The guidance will be reviewed and applied to each part of the Project depending on the works being carried out. Therefore, there will be a number of individual assessments carried out once the detailed design is complete to identify the level of suitable mitigation at each location.

Visual Inspections

- 1.8.2 A daily visual inspection of the site (work areas where dust generating activity is being undertaken) will be carried out by the Main Works Contractor(s), or an appropriately trained operator. The inspection will consist of a walk around the entire perimeter of that work area with observations made of any dust emissions. Particular attention will be paid to any areas where professional experience would suggest that current operations have a higher-than-normal risk of dust emissions. This requirement will vary significantly across different sections of the Project. Each section will be reviewed individually to determine whether a daily visual inspection is necessary, as appropriate. This should include regular dust soiling checks of surfaces such as street furniture and cars within 100 m of the site boundary. The frequency and extent of dust soiling checks should be proportionate to site-specific risk and receptor sensitivity and may be adjusted where necessary in consultation with the relevant Local Planning Authority.
- 1.8.3 If significant dust is identified beyond the site boundary, a Dust Event Form will be completed (see Annex B) by the Main Works Contractor(s), and investigation/remedial action will be taken, as outlined in the following sections. Significant dust refers to visible dust emissions beyond the site boundary that have the potential to cause nuisance or environmental effects. This may include clearly visible dust plumes, dust setting on nearby surfaces, or complaints from the public. The Main Works Contractor(s) will review Dust Event Forms regularly to ensure that any necessary actions have been implemented, and to identify problem areas where additional mitigation against further dust emissions may be necessary.
- 1.8.4 The frequency of visual inspections will be increased when activities with a high potential to produce dust are being carried out on site and during periods of adverse weather. Adverse weather includes conditions such as high winds, dry spells, or extreme heat, which can increase the risk of dust becoming airborne. Inspections will be carried out more than once a day if necessary.

Meteorology

- 1.8.5 Meteorological conditions at the time of any significant dust emissions will be recorded in the Dust Event Form.

PM₁₀ Monitoring

- 1.8.6 Should dust monitoring be required, it would begin at least three months prior to the commencement of the construction works to allow a suitable pre-construction baseline to be established unless otherwise agreed by National Grid following consultation with the relevant local authorities.
- 1.8.7 Monitoring would be undertaken either at the Order Limits of the site closest to receptors or for larger areas at locations upwind and downwind of the prevailing wind direction.
- 1.8.8 Real-time particle monitors certified to Monitoring Certification Scheme (MCERTS) standards are capable of measuring and logging PM₁₀ concentrations, with the ability to transmit data remotely via GSM modem. These types of monitors are recommended for this purpose by the IAQM (IAQM, 2024). Site-specific wind speed and direction data can be gathered from the nearest meteorological station.

Additionally, on-site measurements can be enhanced by installing an anemometer and wind direction sensor alongside the dust monitoring equipment.

- 1.8.9 It is recommended the collected data be sent to a web-based location, this is considered to be an efficient method to manage any exceedances. The monitors can be housed in a lamppost box powered by mains electricity or powered by battery or solar power. These arrangements would be agreed with the Main Works Contractor(s), and other relevant parties such as the Local Planning Authority, in advance.

Site Action Level

- 1.8.10 The site action level (SAL) for PM₁₀ monitoring will be set at 190 µg/m³ averaged over a 1-hour period, based on the most recent guidance (IAQM, 2018). If the SAL is exceeded, the Main Works Contractor(s) will be alerted via email alert system, and the following actions are proposed, subject to agreement with the contractor and relevant stakeholders:
- The event will immediately be recorded, along with the date and time and details of any actions taken on site to reduce emissions
 - An assessment of the results will be commissioned to ascertain the potential cause of the exceedance
 - Construction activities taking place at the time the action level was exceeded will be reviewed whilst the mitigation measures that are in place are reviewed and additional measures implemented, where necessary, and the Dust Management Plan (DMP) will be updated accordingly to reflect any changes or improvements.
 - The relevant Local Planning Authorities will be notified of the event and actions, by telephone or email, as soon as reasonably practicable after or during the dust event
 - If no source of the dust event is identified, other project sites and local authorities or Automatic Urban and Rural Network monitoring sites will be contacted to establish whether there is an increase in particulate concentrations in the wider area
 - If the cause of the alert is not related to site operations, the outcome of any investigation will be recorded in a site logbook, which would be made available to the relevant local authorities (on request)
 - Dust monitoring will continue until that part of the construction works has been completed, or earlier, if the site is deemed to be low risk, subject to agreement with the Local Planning Authorities.
- 1.8.11 If complaints are regularly received on a frequent basis, such as multiple complaints within a short timeframe or recording complaints under similar conditions, before the SAL is reached, this may indicate the SAL is not sufficiently protective. In such cases the SAL should be reviewed and potentially adjusted to a level below which complaints are received. Any adjustment must follow the formal incident management and corrective actions process to ensure changes are evidence based and proportionate. The revised SAL should then be reviewed every three months to assess its ongoing suitability.

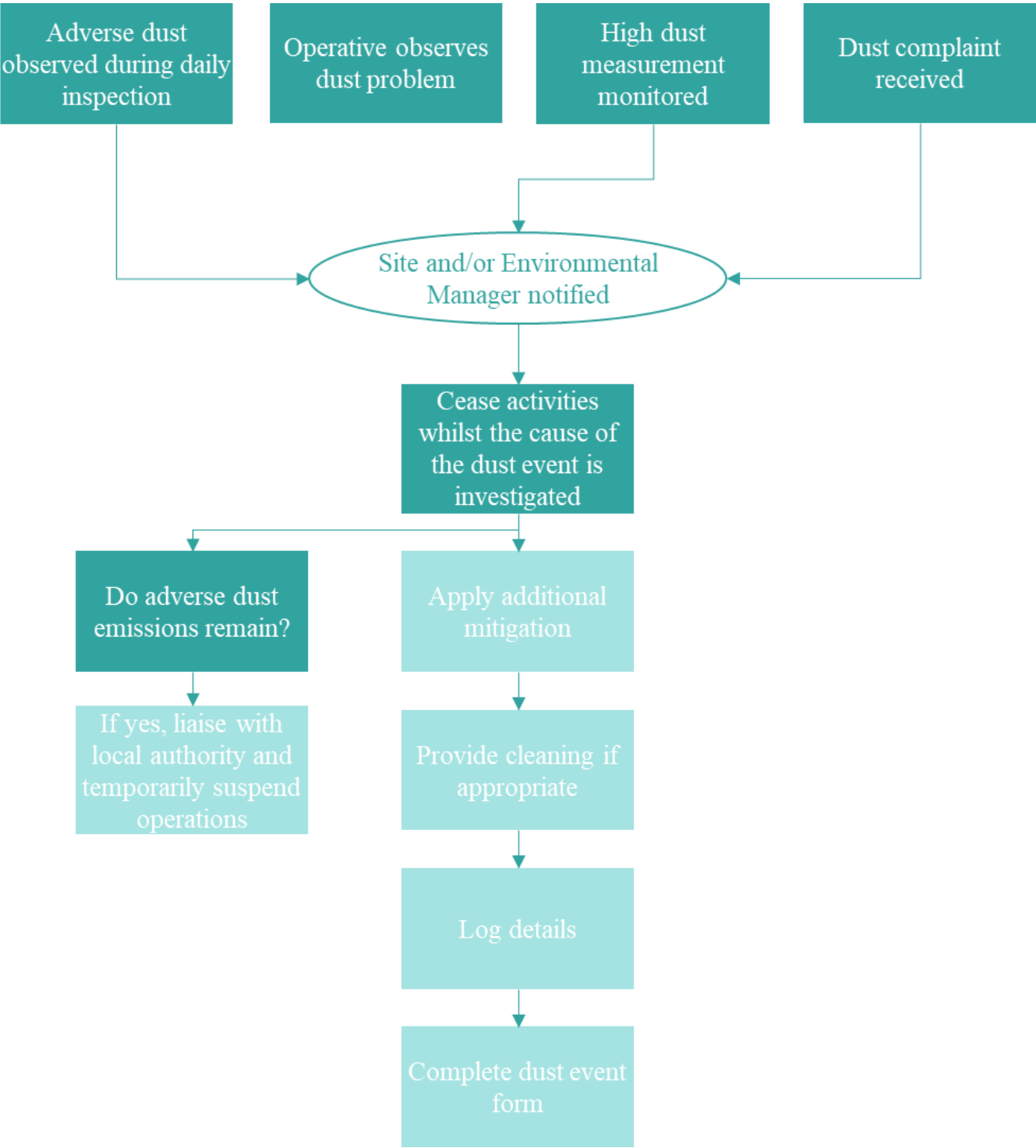
- 1.8.12 Monitoring summary reports will be prepared and submitted to the Local Planning Authority on an annual basis as a standard requirement. However, where there is a higher risk of dust effects, such as breaches of the SAL, more frequent reporting may be implemented, subject to agreement with the Local Planning Authority. The requirement for monitoring and reporting will be determined on a site-specific basis, taking into account the nature of the works, local sensitivities, and the assessed risk of dust generation. These reports will summarise the following:
- Date and time of any breach of the SAL, with the recorded 1-hour mean PM₁₀ concentrations clearly stated
 - Summary table of exceedances of the trigger levels during the monitoring period
 - Graphs of PM₁₀ concentrations during the monitoring period
 - Valid data capture during the monitoring period
 - Wind direction at the time of any breaches of the SAL
 - Details of the identified cause of elevated dust emissions and mitigation measures
 - Depositional or dust soiling data
 - Inspection and dust event forms.
- 1.8.13 Monitoring equipment will be maintained and checked regularly to ensure proper functionality and data integrity. Alerts may be configured to notify the Main Works Contractor(s) of any equipment faults or interruptions in data collection, such as loss of power or signal. Any periods of data loss will be identified in the monitoring reports, along with the cause and any corrective actions taken. The number, type, and location of monitors will be determined based on site-specific requirements and risk assessments.
- 1.8.14 Should it be necessary to relocate either of the monitors during the construction programme, the Local Planning Authority will be notified of any proposed changes in the location and operation of the monitors and will be allowed to agree the new location(s) prior to relocation.

Response and Reporting

- 1.8.15 All significant dust events will be investigated, addressed and, if necessary, reported to the Local Planning Authority. Significant dust refers to visible dust emissions occurring within the site boundary that have the potential to cause nuisance or environmental effects. This may include clearly visible dust plumes, dust settling on surfaces within the site, or internal complaints or observations. The flowchart set out in Image 1.1 sets out the approach that will be taken when such events occur.
- 1.8.16 In the event that significant levels of dust are experienced off-site, additional mitigation measures will be employed, where necessary. These may include, for example:
- Immediate identification of the source of the dust
 - The use of water suppression
 - Covering or sheeting sources of unacceptable dust emissions
 - Removal of excessively dusty material from the site.

1.8.17 In the event that dust emissions persist at levels considered significant, despite the additional mitigation measures, site operations will be modified in liaison with the Local Planning Authority, and site operations may be temporarily suspended until the issue can be resolved.

Image 1.1 Dust event response flowchart



1.9 Non-Road Mobile Machinery

1.9.1 Emissions from Non-Road Mobile Machinery (NRMM) would be temporary and localised and controlled via the application of NRMM standards. The NRMM

commitments as outlined in the Outline CoCP (document reference 7.2) (Revision G) are set out in Annex A of this document.

- 1.9.2 Improvements beyond compliance may be identified by subcontractors in consultation with National Grid. This may include the use of electric vehicles and battery or electrically powered equipment, where practicable.
- 1.9.3 National Grid will register all NRMM in advance of NRMM being used on site by completing a NRMM register Excel spreadsheet at least five working days in advance of bringing proposed compliant NRMM to site, as far as is reasonably practicable. The completed register should be submitted to the Local Planning Authority and the relevant Environmental Health Officer. Exemption requests are required to be submitted ideally 30 days, but a minimum of 10 working days, in advance of proposed delivery to site.
- 1.9.4 National Grid will also ensure that all NRMM used for the Project works meet minimum standards in terms of exhaust emissions of nitrous oxides (NO_x), PM and total suspended particles (TSP). Where practicable, NRMM will be selected to meet more stringent emissions standards than the Stage IV requirements, in line with best practice and to minimise environmental effects. Certain exemptions to the vehicle emission standards may be required for specialist vehicles, unforeseen circumstances, or where the emissions effect is considered negligible. These will be adjudicated on a case-by-case basis.

2. Implementation

2.1 Implementing the DMP

- 2.1.1 National Grid will put in place robust procedures to inform and supervise all those working on the Project including its Main Works Contractor(s), to make sure the control measures set out in the DMP (to be developed by the Main Works Contractor(s)) are adopted when undertaking the construction of the Project. The main responsibility for implementing these control measures will fall to the Main Works Contractor(s).
- 2.1.2 The Main Works Contractor(s) will brief all operatives on the specific details within the DMP prior to the commencement of works. The briefings will be delivered by a suitably trained member of the team such as the Environmental Manager or Works Supervisor.

2.2 Non-Compliance Procedure

- 2.2.1 The Environmental Manager will be responsible for undertaking site audits to check compliance with the DMP and method statements. All incidents associated with the construction of the Project, including environmental incidents and non-conformance with the DMP, will be reported and investigated as defined within Section 6 of the Outline CoCP (document reference 7.2) (Revision G). Further detail will be included in the Code of Construction Practice to be developed by the Main Works Contractor(s).

2.3 Change Process

- 2.3.1 The CoCP is one of the plans listed in Requirement 4 of the Draft DCO (document reference 3.1) (Revision G).
- 2.3.2 Requirement 4(1) of the Draft DCO (document reference 3.1) (Revision G) states: *'No stage of the authorised development may commence until, for that stage, the following plans as relevant to that stage have been submitted to and approved by the relevant planning authority (in consultation with Natural England in the case of the landscape and ecological management plan) or other discharging authority as may be appropriate to the relevant plan concerned.'*
- 2.3.3 Where there is a need to update the CoCP beyond derogations addressed pursuant to the above, the below text addresses the process for changing the CoCP itself. This does not cover changes to the DCO (material or non-material) which would be managed through the process set out in Schedule 6 of the Planning Act 2008.
- 2.3.4 Therefore, the below process is limited to changes to the CoCP.

CoCP Changes

- 2.3.5 It may be necessary to amend the details contained in the CoCP as a result of the iterative discussion and engagement that will continue after the CoCP has been

approved. The resulting changes would not alter any of the underlying commitments, mitigations and methodologies set out in the CoCP. An example may be where a preconstruction survey identifies that a measure already committed to is no longer required in the CoCP. In every case, consideration will be given to any changes to the outcome of the assessment of environmental effects.

- 2.3.6 Where there is a proposed change to the CoCP, National Grid will provide details to the relevant Local Planning Authority together with evidence of relevant stakeholder engagement, where upon, the relevant Local Planning Authority will, acting reasonably, endeavour to respond within 28 days to either confirm its consent to the change to the CoCP or provide its reasons why the change is not accepted.

Abbreviations

Abbreviation	Explanation
BPM	Best Practicable Means
CoCP	Code of Construction Practice
DCO	Development Consent Order
DMP	Dust Management Plan
EACN	East Anglia Connection Node
ES	Environmental Statement
IAQM	Institute of Air Quality Management
LEZ	Low Emission Zone
MCERTS	Monitoring Certification Scheme
NOx	Nitrous oxides
NRMM	Non-Road Mobile Machinery
NSIP	Nationally Significant Infrastructure Projects
PM10	Particulate matter (in this example, particulates smaller than 10 µm that can cause health problems)
PM2.5	Particulate matter (in this example, particulates smaller than 2.5 µm that can cause health problems)
SAL	Site Action Level
TSP	Total Suspended Particulate

Glossary

Term	Definition
Baseline conditions	The existing (pre-Project) environmental conditions against which any future changes can be measured or predicted.
Code of Construction Practice	A code of construction practice (CoCP) sets out the standards and procedures to which a developer (and its contractors) must adhere in order to manage the potential impacts of construction works.
Dust	Dust is defined as all particulate matter up to 75 µm (millionths of a metre or thousandths of a millimetre) in diameter and is both suspended in air and deposited from air. Particles less than 1 µm behave more like gases than solids and are generally termed 'fume'. The bulk of particulate matter generated by demolition and construction activity has a diameter greater than 30 µm.
Dust Monitoring	The systematic measurement of airborne particulate matter, particularly PM10, around construction and demolition sites to assess and manage dust emissions.
Earthworks	Engineering works created through the processing of parts of the earth's surface involving quantities of soil or unformed rock.
Local Planning Authority	The public authority whose duty it is to carry out specific planning functions for a particular area.
London Low Emission Zone (LEZ)	A road charging scheme introduced by Transport for London (TfL) to reduce air pollution from heavy diesel vehicles. The LEZ covers most of Greater London and operates 24 hours a day, every day of the year. It targets heavier diesel vehicles, such as lorries, buses, and coaches, that do not meet specific emissions standards.
Mitigation measure	Measures, including any process, activity or design that will avoid, reduce, remedy or compensate for the predicted significant effects of a development on the environmental baseline.
MCERTS certified monitors	A monitoring instrument that has been tested and certified under the UK Environment Agency's Monitoring Certification Scheme (MCERTS) to ensure it meets strict performance standards for environmental monitoring.
Non-Road Mobile Machinery (NRMM)	Any mobile machine, transportable equipment, or vehicle that is not intended for carrying passengers or goods on roads and is fitted with a combustion engine.
Order Limits	The maximum extent of land within which the authorised development may take place.
Receptor	A population, fauna, flora, soil, water, air, climatic factors, or material assets with the potential to be impacted by the Project.

Term	Definition
Scabbing	A mechanical process used in demolition and construction to remove a thin layer of concrete or masonry from a surface, typically to prepare it for further treatment or to achieve a specific surface texture.
Site Action Level (SAL)	A threshold concentration of airborne particulate matter (typically PM10) set during construction or demolition activities, in line with the latest IAQM guidance (IAQM, 2018), above which specific mitigation actions must be taken to reduce dust emissions.
Stage IV (NRMM Emissions Standard)	An EU emissions standard that sets limits on the amount of NOx, PM and other pollutants emitted by NRMM, such as construction equipment and generators.
Trackout	The transport of dust and dirt from the construction/demolition site onto the public road network, where it may be deposited and then re-suspended by vehicles using the network.
Work Package Area (WPA)	A designated section of a project site associated with a specific set of construction, maintenance, or operational activities. Within a Dust Management Plan, each WPA is assessed individually for dust risks, and appropriate control measures are implemented based on the nature, duration, and intensity of the work being performed. WPAs help in localising dust monitoring, assigning responsibilities, and tailoring mitigation strategies to the specific conditions of each area.

Bibliography

Council, M. (2024) *Non-Road Mobile Machinery (NRMM) Practical Guide v6*. Retrieved from <https://www.merton.gov.uk/system/files/NRMM%20Practical%20Guide-Accessible-May2024.pdf>.

Environment Agency, N. R. (2022) *Specified generator: when you need a permit*. Retrieved from: <https://www.gov.uk/guidance/specified-generator-when-you-need-a-permit>

Institute of Air Quality Management (2018). *Guidance on Monitoring in the Vicinity of Demolition and Construction Sites*. Retrieved from:
[REDACTED]

Institute of Air Quality Management (2024). *Guidance on the assessment of dust from demolition and construction Version 2.2*. Retrieved from: [REDACTED]
[REDACTED]

Annex A.

Construction

Mitigation Measures

Annex A

Construction Mitigation Measures

A.1 Vehicle and Plant Emissions

- A.1.1 All on-road heavy vehicles will comply with the standards set by the London Low Emission Zone (LEZ) across all sites within Order Limits for the relevant class of vehicle. The commitment to meet such targets will be introduced via the Main Works Contractor(s) procurement process. Should LEZ requirements change during the contract period, any necessary adjustments will be considered in line with contractual provisions and feasibility.
- A.1.2 The Main Works Contractor(s) procurement process will be used to facilitate an improvement in emissions from all NRMM. NRMM used for the Project with a net power of 37 kW to 560 kW will, as a minimum, comply with the applicable emission standards in force at the time of use. Stage V equipment is recommended for generators, and Stage IV is the minimum standard for all other machinery types. From January 2030, all NRMM will be required to comply with Stage V standards. (Council, 2024).
- A.1.3 All vehicle engines, mobile and fixed plant stationed on site will not be left running or idling unnecessarily. Consideration will be given to the location and intensity of works where NRMM are required with the aim of minimising work close to sensitive receptor locations.
- A.1.4 Low-emission vehicles and plant fitted with catalysts, diesel particulate filters or similar devices will be used where reasonably practicable.
- A.1.5 Ultra-low sulphur fuels will be used in plant and vehicles where reasonably practicable.
- A.1.6 Vehicles and plant will be well maintained, with routine servicing completed in accordance with the manufacturer's recommendations, and records maintained for the work undertaken.
- A.1.7 As set out in the Outline CoCP (document reference 7.2) (Revision G), if diesel generators are located next to sensitive sites action will be taken to minimise the risk of causing significant effects on relevant receptors. This could include but is not limited to: increasing the release height of emissions for sufficient dispersion, using relevant abatement technology and relocating generators where practicable. The Project will be carried out in accordance with legislation relevant to generators (Environment Agency, 2022).

A.2 Dust Management

- A.2.1 The measures listed are set out in the latest IAQM construction dust guidance (IAQM, 2024). The mitigation measures are divided into general measures and measures specifically applicable to demolition, earthworks, construction and trackout. For general measures the highest determined dust risk category should be applied. 'H' indicates Highly Recommended, 'D' indicates Desirable, and 'N' indicates Not Required.
- A.2.2 These measures are taken directly from the IAQM guidance (IAQM, 2024), and they will be used to inform the actions carried out at each location of the Project, following detailed design. It should be noted that it is difficult to provide generic guidance, as each site and its location will be different and professional judgement is required, therefore, these measures are not expected to be applied at all locations. The process set out in this document will be used to determine which measures are suitable following the guidance.

Table A.1 IAQM construction dust guidance

Mitigation Measure	Low Risk	Medium Risk	High Risk
Communications			
Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environmental manager/engineer or the site manager.	H		
Develop and implement a Dust Management Plan, which will include measures to control other emissions, approved by the Local Planning Authority.	D	H	
Display the head or regional office contact information.	H		
Develop and implement a stakeholder communications plan that includes community engagement before work commences on site.	N	H	
Site Management			
Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner and record the measures taken.	H		
Make the complaints log available to the Local Planning Authority when asked.	H		
Record any exceptional incidents that cause dust and/or air emissions, both on and off site, and the action(s) taken to resolve the situation in the logbook.	H		
Hold regular liaison meetings with other high risk construction sites within 250 m of the site boundary, to ensure plans are co-	N		H

Mitigation Measure	Low Risk	Medium Risk	High Risk
ordinated and dust and particulate matter emissions are minimised. It is important to understand the interactions of the off-site transport/deliveries which might be using the same strategic road network routes.			
Monitoring			
Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, including regular dust soiling checks of surfaces within 100 m of the site boundary.	D		H
Carry out regular site inspections to monitor compliance with the Dust Management Plan, record inspection results and make an inspection log available to the Local Planning Authority, when asked.	H		
Increase the 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		
Agree dust deposition, dust flux, or real-time PM _{2.5} and PM ₁₀ continuous monitoring locations with the Local Planning Authority. Baseline monitoring will commence at least three months before work commences on site, at agreed locations where monitoring is considered to be necessary. Further guidance is provided (IAQM, 2018) on monitoring during demolition, earthworks and construction.	H		
Site Maintenance			
Plan the site layout so that machinery and dust-causing activities are located away from receptors, as far as practical or possible.	H		
Erect solid screens or barriers around dusty activities on the site boundary that are at least as high as any stockpiles on site.	H		
Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extended period.	D	H	
Avoid site runoff of water or mud.	H		
Keep site fencing, barriers and scaffolding clean using wet methods.	D	H	
Remove materials that have a potential to produce dust from site as soon as practicable, unless being re-used on site.	D	H	
Cover, seed or fence stockpiles to prevent wind whipping.	D	H	

Mitigation Measure	Low Risk	Medium Risk	High Risk
Operating Vehicle/Machinery and Sustainable Travel			
Ensure all on-road vehicles comply with the requirements of London Low Emission Zone and the London NRMM standards.	H		
Ensure all vehicles switch off engines when stationary – no idling vehicles.	H		
Avoid the use of diesel or petrol-powered generators and use mains electricity or battery powered equipment where practicable.	H		
Impose and signpost a maximum speed limit of 15 mph on surfaced roads and 10 mph on unsurfaced haul roads and work areas.	D	D	H
Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials.	N	N	H
Implement a Travel Plan that supports and encourages sustainable travel.	N	D	H
Operations			
Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques, such as water sprays or local extraction.	H		
Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where practicable and appropriate.	H		
Use enclosed chutes and conveyors and covered skips.	H		
Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use the fine water sprays on such equipment wherever appropriate.	H		
Ensure equipment is readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.	D	H	
Waste Management			
No bonfires or burning of waste materials.	H		
Measures Specific to Demolition			
Soft strip inside buildings before demolition. This measure is considered desirable.	D	D	H
Ensure effective water suppression is used during demolition operations. Handheld sprays are more effective than hoses attached to equipment as the water can be directed to where it is	H		

Mitigation Measure	Low Risk	Medium Risk	High Risk
needed. In addition, high volume water suppression systems, manually controlled, can produce fine water droplets that effectively bring the dust particles to the ground.			
No explosive blasting; use appropriate manual or mechanical alternatives.	H		
Bag and remove any biological debris or damp down such material before demolition.	H		
Measures Specific to Earthworks			
Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable.	N	D	H
Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable.	N	D	H
Only remove the cover in small areas during work and not all at once.	N	D	H
Measures Specific to Construction			
Avoid scabbling if practicable. This measure is considered desirable.	D	D	H
Ensure sand and other aggregates 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.	D	H	
Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored silos with suitable emission control systems to prevent escape of material and overfilling during delivery. This measure is considered desirable.	N	D	H
For smaller supplies of fine powder materials ensure bags are sealed after use and stored appropriately to prevent dust. This measure is considered desirable.	N	D	H
Measures Specific to Trackout			
Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use.	D	H	
Avoid dry sweeping of large areas.	D	H	
Ensure that vehicles entering and leaving sites are covered to prevent escape of materials during transport.	D	H	
Inspect on-site temporary haul roads for integrity and undertake necessary repairs to the surface as soon as reasonably practicable.	N	H	

Mitigation Measure	Low Risk	Medium Risk	High Risk
Record all inspections of haul roads and any subsequent action in a site logbook.	D	H	
Where practicable, install hard surfaced haul roads, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowzers and regularly cleaned so far as is reasonably practicable	N	H	
Implement a wheel-cleaning system.	D	H	
Ensure there is an adequate area of hard surfaced road between the wheel cleaning facility and the site exit, wherever site size and layout permits.	N	H	
Access gates to be located at least 10 m from receptors where practicable.	N	H	

Key:

H = Highly Desirable

D = Desirable

N = Not Required

A.3 Air Quality Monitoring During Construction

- A.3.1 The Main Works Contractor(s) shall determine the level of any dust and particulate monitoring carried out on Project construction sites by means of a risk-based approach. This will identify the type of monitoring that is required on each worksite by looking at the details of the specific packages of work within the site boundaries and the location of receptors around the site. Should it be considered monitoring is required, the monitoring locations will be submitted to and approved by the relevant Local Planning Authority prior to commencement of development.

A.4 Baseline Dust Monitoring

- A.4.1 Should dust monitoring be required in accordance with the requirements of the IAQM guidance (IAQM, 2018), it would begin at least three months prior to the commencement of the construction works to allow a suitable pre-construction baseline to be established unless otherwise agreed by National Grid following consultation with the relevant local authorities.

A.5 Actions in Case of Air Quality Monitoring Exceedance

- A.5.1 Continuous particulate monitoring for PM₁₀ will be carried out using appropriate survey instruments at locations approved in consultation with the relevant Local Planning Authority.

- A.5.2 Instruments will be set up at relevant sites to operate an alert system when an action level set at $190 \mu\text{g}/\text{m}^3$ for PM_{10} averaged over a 1-hour period, based on the most recent guidance (IAQM, 2018) is reached. If the alarm is triggered, the following actions will be taken:
- The Main Works Contractor(s), or a delegated representative, shall at the earliest reasonable opportunity, investigate activities on the site to ascertain whether any visible dust is emanating from the site or activities are occurring that are not in line with dust control procedures
 - Any identified causes will be rectified, where reasonably practicable. Actions will be recorded in a site logbook and the relevant Local Planning Authority notified of the event and actions by telephone or email, as soon as is reasonably practicable, after or during the dust event
 - If no source of the dust event is identified, sites of other projects and Local Planning Authority or Automatic Urban and Rural Network monitoring sites will be contacted to establish whether there is an increase in particulate concentrations in the wider area
 - If the cause of the alert is not related to site operations, the outcome of any investigation will be recorded in a site logbook which would be made available to the relevant Local Planning Authority on request
 - Dust monitoring will continue until that part of the construction works has been completed, or earlier, if the site is deemed to be low risk in consultation with National Grid and the relevant Local Planning Authority.

Annex B.

Indicative Dust Forms

Annex B

Indicative Dust Forms

Table B.1 Daily inspection checklist

Week of:									
Name:									
Inspected Items	Frequency	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	
Person completing the checklist	Initials								
Date of Inspection	Date								
Dust being controlled correctly by personnel	Daily								
Visual inspection of mud/debris on haul roads	Daily								
Visual inspection of dust soiling on local streets, cars and window sills	Daily								
Bunded areas not drying out	Daily								
Any skip doors operating satisfactorily	Daily								
Dust monitoring equipment operating satisfactorily	Daily								
Wind direction	Daily								
Wind speed	Daily								
Weather forecast	Daily								

Table B.2 Weekly inspection notes

Month of:
Week 1
Week 2
Week 3
Week 4
Week 5

Table B.3 Dust event form

Sheet No.:
Time & date form completed:
Date, time and duration of event:
Location of dust:
Weather conditions (i.e. dry, rain, fog, snow):
Cloud cover (cloud height – low, high, very high, none, partial complete):
Wind strength (light, steady, strong, gusts):
Wind direction:
Description of dust event (i.e. colour, particle size, any other comments):
On-site activities at the time the dust emission occurred:
Has a previous event occurred relating to this source:
Any other relevant information:
Any upwind dust?
Operating conditions at the time the dust emission occurred:
Any remedial actions taken or to be taken:
Form completed by (name & signature):

Table B.4 Dust complaint form

Sheet No.:	
Date:	Time & date of complaint:
Name and address of complainant:	
Date, time and duration of offending dust:	
Location of dust, if not at the above address:	
Weather conditions (i.e. dry, rain, fog, snow):	
Cloud cover (Cloud height (low, high, very high): none, slight, partial complete):	
Wind strength (light, steady, strong, gusting):	
Wind direction (from/to):	
Complainant's description of dust & any other comments (i.e. colour, particle size):	
Has complainant previously made complaint relating to the site:	
Any other relevant information:	
Any upwind dust?	
On-site activities at the time the dust emission occurred:	
Operating conditions at the time the dust emission occurred:	
Any remedial actions taken or to be taken:	
Form completed by (name & signature):	

National Grid plc
National Grid House,
Warwick Technology Park,
Gallows Hill, Warwick.
CV34 6DA United Kingdom

Registered in England and Wales
No. 4031152
nationalgrid.com