



Air Quality and Dust Management Plan

St. Ann's New Neighbourhood

February 2023

Waterman Infrastructure & Environment Limited

Pickfords Wharf, Clink Street, London, SE1 9DG
www.watermangroup.com

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This document has been prepared and checked in accordance with
Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS EN ISO 45001:2018)

Issue	Date	Prepared by	Checked by	Approved by
First Draft	February 2023	Eleri Paterson Hughes Consultant	Iarla Kilbane-Dawe Technical Director	Iarla Kilbane-Dawe Technical Director
Final	February 2023	Eleri Paterson Hughes Consultant	Iarla Kilbane-Dawe Technical Director	Iarla Kilbane-Dawe Technical Director

Comments

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1. Introduction

- 1.1. Waterman Infrastructure & Environment Ltd, hereafter referred to as 'Waterman', has prepared this air quality and dust management plan (AQDMP) for the re-development of part of St Ann's hospital hereafter referred to as 'the Site'.
- 1.2. The Applicants, Hill Partnerships Ltd, secured planning consent subject to planning conditions being met. This AQDMP has been undertaken to discharge the following Planning Condition:

"Air Quality and Dust Management

(a) No development shall take place on the relevant Phase of the development, save for investigative and site preparatory work, until a detailed Air Quality and Dust Management Plan (AQDMP) for that Phase, detailing the management of demolition and construction dust, has been submitted to and approved in writing by the Local Planning Authority. The AQDMP shall be in accordance with the Greater London Authority SPG Dust and Emissions Control (2014) and shall include:

i) Monitoring locations;

ii) Mitigation measures to manage and minimise demolition/construction dust emissions during works;

iii) a Dust Risk Assessment.

(b) Demolition and construction works shall only be carried out in a particular Phase in accordance with an approved AQDMP for that Phase."

- 1.3. The aim of this AQDMP is to minimise all emissions from the Site during demolition and construction. The AQDMP gives specific instructions on how to manage impacts from dust and air pollutant emissions on the Site.

Legal Requirements

- 1.4. This AQDMP will ensure compliance with The Environmental Protection Act 1990¹ which makes it an offence to cause a nuisance to nearby inhabitants by generating dust.
- 1.5. Section 79 of the Environmental Protection Act 1990 defines a number of factors relating to dust and air pollution which constitute a statutory nuisance. This includes:
 - Smoke emitted from premises so as to be prejudicial to health or a nuisance;
 - Fumes or gases emitted from premises so as to be prejudicial to health or a nuisance;
 - Any dust, steam, smell or other effluvia arising on industrial, trade or business premise and being prejudicial to health or a nuisance; and
 - Any accumulation or deposit which is prejudicial to health or a nuisance.
- 1.6. In addition to the above it is also necessary to meet the requirements set out in "The Control of Dust and Emissions During Construction and Demolition Supplementary Planning Guidance"² (hereafter referred to as the 'Construction and Demolition SPG') issued by the Mayor of London.

¹ Legislation.gov.uk. 1990. Environmental Protection Act 1990. [online] Available at: <<http://www.legislation.gov.uk/ukpga/1990/43/section/79/enacted>>

² Greater London Authority (July 2014), 'The Control of Dust and Emissions During Construction and Demolition' Supplementary Planning Guidance, Greater London Authority, London.

2. Site Evaluation

- 2.1. The level of risk attached to a demolition / construction site is dependent not only on the size and scale of a development, but also the demolition / construction activities, the timing of works (seasonality) and the sensitivity of the surrounding area.

The Development

- 2.2. Description of the Development, from the hybrid planning application with reference HGY/2022/1833 was:

"1. detailed planning for Phase 1a, for:

- a) the change of use, conversion and alteration of seven existing hospital buildings within Phase 1a for a flexible range of uses (Use Class E, F1 / F2);*
- b) the demolition of some existing buildings (in accordance with the demolition plan);*
- c) the erection of new buildings for residential uses (Use Class C3); and*
- d) alterations to the existing access road and installation of new vehicular, pedestrian and cycle accesses; landscaping including enlargement of the Peace Garden, associated car and cycle parking spaces and servicing spaces.*

2. the demolition of existing buildings and structures in Phases 1b, 2 and 3 (in accordance with the demolition plan);

3. outline planning (all matters reserved except access) for Phases 1b, 2 and 3 for:

- a) the erection of new buildings for residential development (Use Class C3), commercial business and service (Use Class E), and local community and learning (Use Class F1 / F2); and*
- b) associated pedestrian and cycle accesses; landscaping including enhancements to the St Ann's Hospital Wood and Tottenham Railsides Site of Importance for Nature Conservation (SINC) car and cycle parking spaces and servicing spaces."*

The Site and Surrounding Area

- 2.3. The Site is located within the administrative area of the London Borough of Haringey (LB Haringey) and extends to approximately 72,000m².
- 2.4. The Site is in a residential area. The nearest sensitive receptors are the adjacent residential properties along Warwick Gardens to the west of the Site. Additionally, St Ann's Hospital properties are located within 20m to the east of the Site. Additionally, the following schools and medical services are located within 350m of the Site:
- St Ann's Road Surgery, located approximately 90m north-east of the Site;
 - Chestnuts Primary School, located approximately 100m north of the Site;
 - Saint Mary's Infant and Juniors School, located approximately 150m east of the Site;
 - Peregrine House, located approximately 210m east of the Site;
 - Islamic Shakhsiyah Foundation, located approximately 300m east of the Site; and
 - St Ann's CE Primary School, located approximately 300m east of the Site.
- 2.5. There are no ecologically designated sites within the vicinity of the Site or potential demolition / construction routes.

- 2.6. The Construction and Demolition SPG identifies receptors within 350m of the Site boundary, and within 50m of demolition / construction routes up to 500m of the site entrance would be sensitive to emissions and nuisance dust from demolition / construction activities. **Figure 1** shows the area surrounding the Site where sensitive receptors could be affected.

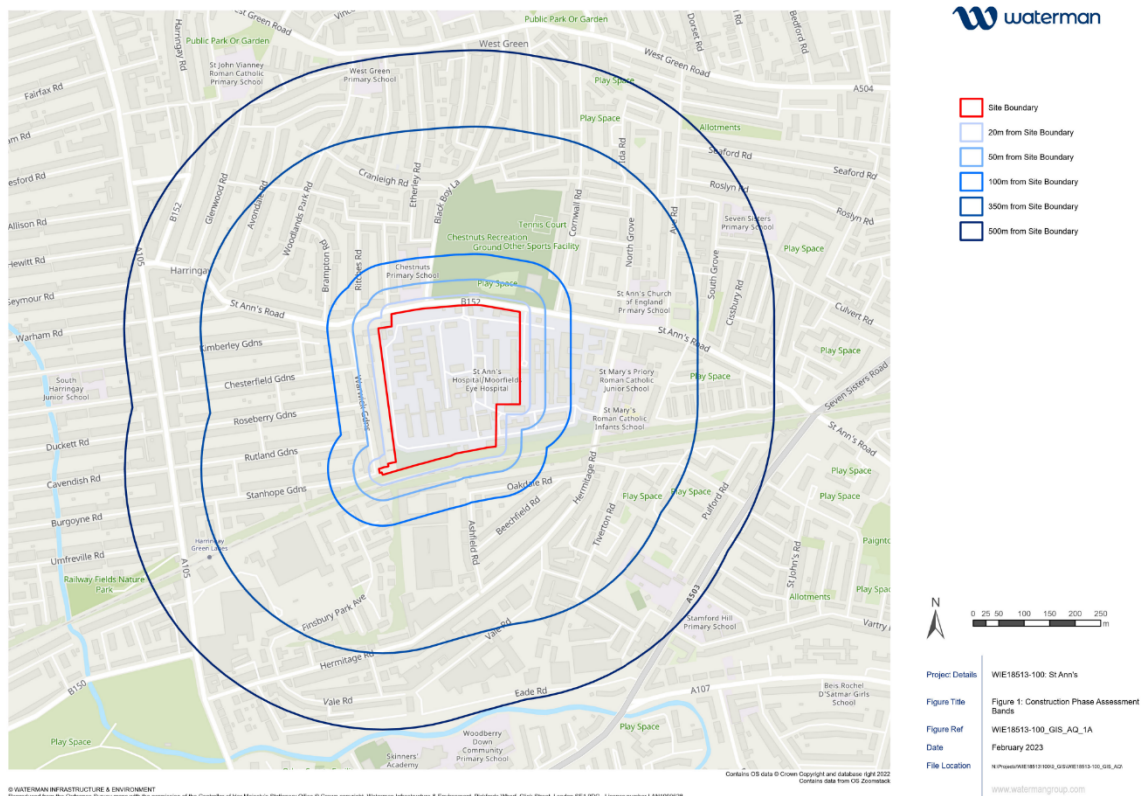


Figure 1: Site Plan and Demolition / Construction Phase Assessment Bands

Scope of Demolition / Construction Works

- 2.7. The proposed works includes:
- Demolishing existing buildings;
 - Constructing a mix of residential, commercial, and community uses;
 - Retaining and enhancing seven of the existing hospital buildings and St Ann's Road historic wall; and
 - Hard and soft landscaping, including the Peace Garden, and associated works.

Roles and Responsibilities

- 2.8. The appointed Principal Contractor (Hill Partnerships Ltd) is responsible for ensuring that all contractors always follow best practice to control and limit emissions of gaseous and particulate pollutants into the atmosphere from demolition / construction activities, including from vehicles and plant. A record of dust generating activities would be produced and kept up to date.
- 2.9. A trained and responsible person on Site for air quality will be identified with knowledge of pollution monitoring, control methods and vehicle emissions.

3. Dust Risk Assessment

Dust Risk Assessment Site Evaluation

- 3.1. An initial assessment was conducted to establish if a detailed assessment was required. As there are existing sensitive receptors within 350m of the boundary of the Site and within 50m of the routes that would be used by demolition / construction vehicles, up to 500m from the site entrance on the public highway the assessment will proceed to a detailed assessment.

Assessment Methodology

- 3.2. The demolition / construction dust risk assessment was based on guidance set out in the Mayor of London's Control of Dust and Emissions During Construction and Demolition SPG, and the Institute of Air Quality Management's (IAQM's) Guidance on the Assessment of Dust from Demolition and Construction, 2014³. The results of the demolition / construction dust risk assessment are detailed below.

Demolition / Construction Dust Risk Assessment Effects

Dust Emissions

- 3.3. The following demolition / construction dust assessment follows the methodology set out in Mayor of London's Control of Dust and Emissions During Construction and Demolition SPG.

Step 1 – Site Evaluation / Screen the Need

- 3.4. The Site is in a residential area. The nearest sensitive receptors are the adjacent residential properties along Warwick Gardens to the west of the Site. Additionally, St Ann's Hospital properties are located within 20m to the east of the Site. Additionally, the following schools and medical services are located within 350m of the Site:
- St Ann's Road Surgery, located approximately 90m north-east of the Site;
 - Chestnuts Primary School, located approximately 100m north of the Site;
 - Saint Mary's Infant and Juniors School, located approximately 150m east of the Site;
 - Peregrine House, located approximately 210m east of the Site;
 - Islamic Shakhsiyah Foundation, located approximately 300m east of the Site; and
 - St Ann's CE Primary School, located approximately 300m east of the Site.
- 3.5. There are no ecologically designated sites within 350m of the Site and so ecological receptors have been scoped out. The assessment would proceed to detailed assessment.

Step 2 – Potential Dust Emission Magnitude

- 3.6. The risk of dust impacts from the demolition / construction works has been considered based upon the magnitude of works as detailed in the Construction and Demolition SPG. This includes:
- Demolition – It is estimated the total volume of building to be demolished is likely to be greater than 50,000m³. Based on this and considering the criteria in Paragraph 4.27 of the Construction

³ Institute of Air Quality Management, 2014, 'Guidance on the Assessment of dust from demolition and construction

and Demolition SPG, the potential dust emissions during demolition activities would be of **large** magnitude;

- Earthworks – The Site area is approximately 72,000m². Based on this and considering the criteria in paragraph 4.29 of the Construction and Demolition SPG, the potential dust emissions during earthworks activities could be of **large** magnitude;
- Construction – It is estimated the total volume of building to be constructed is likely to be greater than 100,000m³. Based on the criteria in Paragraph 4.31 of the Construction and Demolition SPG, the potential dust emissions during construction activities would be of **large** magnitude; and
- Trackout – It is estimated that there would be more than 50 heavy duty vehicle (HDV) trips in any one day. Based on this and considering the criteria in paragraph 4.33 of the Construction and Demolition SPG, the potential for dust emissions due to trackout activities would be of **large** magnitude.

3.7. A summary of the potential dust emission magnitudes is presented in **Table 1**.

Table 1: Dust Emission Magnitude

Activity	Dust Emission Magnitude
Demolition	Large
Earthworks	Large
Construction	Large
Trackout	Large

Step 3 – Sensitivity of the Area

3.8. In accordance with the Construction and Demolition SPG (paragraph 4.36 of the Construction and Demolition SPG, Step 2B: Define the Sensitivity of the Area), the sensitivity of the area has taken account of the following factors:

- The specific sensitivities of receptors in the area;
- The proximity and number of those receptors;
- The local background PM₁₀ concentration; and
- Site-specific factors, such as whether there are trees or other vegetation to reduce the risk of wind-blown dust.

Step 4 – Sensitivity of the Area to Dust and Soiling Effects on People and Property

3.9. There were estimated to be more than 100 high sensitivity receptors within 20m of the Site boundary. Based on Table 4.2 of the Construction and Demolition SPG, it is considered the area would be of **high** sensitivity to dust and soiling effects on people and property.

3.10. The summary of the sensitivity of people to dust and soiling effects is detailed in **Table 2**.

Table 2: Sensitivity of the Area to Dust and Soiling Effects on People and Property

Activity	Sensitivity of Area to Dust and Soiling Effects
Demolition	High
Earthworks	High

Activity	Sensitivity of Area to Dust and Soiling Effects
Construction	High
Trackout	High

Step 5 – Sensitivity of the Area to Human Health Impacts

- 3.11. The 2019 Defra background PM₁₀ concentration for the Site was 18.7µg/m³. This is below the annual mean Air Quality Strategy (AQS) objective for PM₁₀ of 40ug/m³. There are estimated to be greater than 100 high sensitive receptors within 20m of the Site. Based on the above and Table 4.3 of the Construction and Demolition SPG, it is considered the area is of **medium** sensitivity to human health impacts.
- 3.12. The summary of the sensitivity of people to the health effects of particulate matter is detailed in **Table 3** below.

Table 3: Sensitivity of the Area to Human Health Effects

Activity	Sensitivity of Area to Human Health Effects
Demolition	Medium
Earthworks	Medium
Construction	Medium
Trackout	Medium

Step 6 – Risk of Impacts

- 3.13. Based on the dust emissions magnitude as set out in **Table 1** and taking account of the sensitivity of the area as detailed in **Tables 2** and **3**, the overall risk impacts have been identified and are presented in **Table 4**. The predicted risks are prior to, and do not take account of, mitigation applied.

Table 4: Summary of Risk

Potential Effect	Risk per Activity			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	High Risk	High Risk	High Risk	High Risk
Human Health	High Risk	Medium Risk	Medium Risk	Medium Risk

- 3.14. As outlined in **Table 4**, the Site is a **High** risk site, due to dust soiling and human health effects. Therefore, Site specific mitigation measures would be required to ensure that there are no adverse effects from the demolition / construction works.

4. Site Monitoring and Procedures

Monitoring Methodology

- 4.1. Monitoring would be undertaken in accordance with the Construction and Demolition SPG and the IAQM Guidance on Monitoring in the Vicinity of Demolition and Construction Sites 2018⁴. The final approach to dust monitoring would be discussed and agreed with LB Haringey.

Monitoring Equipment

- 4.2. Real-time dust monitoring would be undertaken using real-time dust monitors. To meet current best practice guidance, two monitors would be used. These monitors would be Monitoring Certification Scheme (MCERTS) certified and deliver accurate real-time measurement of PM₁₀, PM_{2.5}, PM₁ or Total Suspended Particulate (TSP) dust particles.
- 4.3. Remote access to the raw data could be given to LB Haringey through the web platform if required.

Monitor Locations

- 4.4. With reference to Chapter 6 of the Construction and Demolition SPG, monitoring equipment will be positioned to allow sufficient airflow around the monitoring head and installed in accordance with current guidance.
- 4.5. The two monitors would be located on a transect and to provide both an upwind and downwind location across the Site. The exact locations of the monitors would be agreed with LB Haringey and subject to the availability of a permanent source of power. Indicative locations are presented in **Figure 2**.

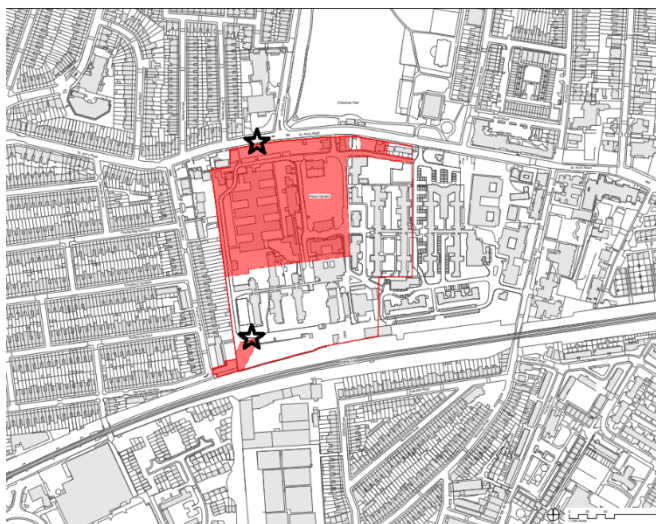


Figure 2: Indicative Monitoring Locations

- 4.6. Should any of the monitors need to be relocated, agreement will be made with LB Haringey setting out the rationale and the details of the new monitoring location. Once a revised location has been agreed with LB Haringey, the closure of an existing monitoring site and the setup of the new

⁴ IAQM. 2018. Guidance on Monitoring in the Vicinity of Demolition and Construction Sites (Version 1.1). October 2018

location will be undertaken in the same day to reduce the amount of time of lost monitoring. This change will also be undertaken during a period of low or no dusty work at the Site.

Action Levels

- 4.7. Action levels are typically used during monitoring on demolition / construction sites to implement mitigation measures in case of exceedances of the thresholds.
- 4.8. The IAQM Guidance on Monitoring in the Vicinity of Demolition and Construction Sites 2018⁵ presents a Site Action Level for demolition / construction projects, based on known health impacts and a study by King's College of measurement data from nine construction sites. The outcome of this research, and endorsed by the IAQM, is a PM₁₀ Site Action Level of 190µg/m³ measured as a 1-hour mean. Therefore, the following Site Action Levels have been set:

Early Warning Level - PM₁₀ concentrations: 170µg/m³ average over a 1-hour period;

Site Action Level - PM₁₀ concentrations: 190µg/m³ average over a 1-hour period;

- 4.9. 'Early Warnings' would be triggered at 170µg/m³, approximately 10% less than the Site Action Levels. The Early Warning Level would act as an alert to make the Applicant and relevant Contractors aware that dust levels could be high and prepare the incident response procedure.
- 4.10. The particulate monitors would be set up to send email alerts in case of exceedances of these thresholds.

Incident Response Procedure

- 4.11. All incidents that result in an exceedance of the Site action levels (as set out above), would be recorded in an incident log-book and the following incident response would be undertaken:
- 4.12. On Site activities will be inspected immediately to identify likely sources;
- 4.13. If on Site activities are identified as being responsible for exceeding the action level, the activities would be halted immediately until the implementation of appropriate and effective mitigation measures, including changes in the working practices are identified; and
- 4.14. The activity would be monitored to ensure there is no repeat incident and that the mitigation measures in place are working.

Dust Complaints

- 4.15. Any dust complaints received must be recorded in a complaints log (as set out in Section 5.1 on mitigation) which will be available to LB Haringey. If dust complaints are received from the surrounding area / members of the public that attribute the cause to the onsite works, the Site management upon receiving a complaint will immediately investigate. Following investigation, if it is determined that the complaint is valid and requires further controls (within industry best practice limits) these will be implemented by the contractor. These results and actions must be recorded in the complaints log.

Reporting to the Local Authority

- 4.16. The developer is expected to report to the local authority the following incidents:

⁵ IAQM. 2018. Guidance on Monitoring in the Vicinity of Demolition and Construction Sites (Version 1.1). October 2018

- Exceedance of the action level, a report will be issued to the LB Haringey within 24 hours if this occurs;
- Dust incident noticed by the contractor during the soiling inspections of surrounding areas undertaken as part of the project. Following identification of the incident the contractor will discuss the incident with LB Haringey. If it is determined that the incident is attributable to the works and requires further controls (within industry best practice limits) these will be implemented by the contractor and a report will be issued to LB Haringey within 24Hrs.
- The contractor will submit a short monthly summary that include any exceedances and include the number complaints received by the Site directly from members of the public.

General Maintenance and Calibration

- 4.17. The Principal Contractor is responsible for the technical maintenance, calibration, annual servicing and repairs of the real-time dust monitors. LB Haringey will be notified immediately should any of these activities be undertaken and which may result in a loss of monitoring.
- 4.18. The Dust Sentry monitor would be calibrated every 6 months by the manufacturer, LB Haringey will be notified in advance for the filter change.

Power Outage

- 4.19. Should the particulate monitor experience a power failure an alert will be sent from the monitor to the Applicant and the Principal Contractors. If the monitor remains offline for a duration of one-week LB Haringey will be contacted to check to see if any maintenance is being undertaken in the local area, which may result in the power being unavailable. If LB Haringey are not aware of any works which may affect power, contact will be made with LB Haringey's lamppost maintenance contractors directly for advice as well as a visit to the effected monitor and local area to identify the cause of the issue. Should the problem continue the particulate monitor supplier will be contacted to investigate the problem further. During this event LB Haringey will be continually informed and a hand-held analyser will be available should there be an outage of one of the particulate monitors.

Damaged and Vandalised Equipment

- 4.20. If any of the monitors are damaged or vandalised LB Haringey will be informed immediately. Depending on the type of damage replacements, repairs or replacement parts will be sought to ensure the monitor is back operating as soon as possible. During this event LB Haringey will be continually informed.

Records of Details and Action Taken in Response to Exceptional Incidents or Dust-Causing Episodes

- 4.21. The Site Manager will maintain records within the site diary where action was taken in response to exceptional incidents or dust-causing episodes.
- 4.22. Full details of any complaints in relation to dust will be recorded by the Site Management Team in a 'Environmental complaints / spills / incidents record' document.

Workforce Training in Best Practice Methods for Dust Suppression, Site Housekeeping, Reporting Procedures and Communication

- 4.23. Site operatives will receive training in the onsite pollution policy as part of site induction training, toolbox talks and through communication of relevant environmental risk assessments and method statements.

5. Dust and Emission Mitigation Measures

- 5.1. Further to the monitoring, the following measures were developed with reference to the IAQM guidance for **high**-risk sites to mitigate potential impacts during the demolition / construction phase. The mitigation measures are enforced through the planning conditions and cover:

Communications

- Develop and implement a stakeholder communications plan that includes community engagement before work commences on site.
- Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary.
- Display the head or regional office contact information.
- Make the Dust Management Plan available and ensure this is regularly updated.

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;
- Make the complaints log available to LB Haringey; and
- Record any exceptional incidents that cause dust and / or air emissions, either on- or offsite, and the action taken to resolve the situation in the log book.
- Hold regular liaison meetings with other high risk construction site within 500m of the site boundary, to ensure plans are co-ordinated and particulate matter emissions are limited.

Monitoring

- Undertake daily on Site and off Site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to LB Haringey. This should include regular dust soiling checks of surfaces such as street furniture, cars and window sills;
- Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to LB Haringey;
- 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; and
- Undertake the dust monitoring. The dust monitoring methodology would be written in accordance with the Construction and Demolition SPG and the IAQM guidance and would be agreed in consultation with LB Haringey.

Preparing and Maintaining the Site

- Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible;
- Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on Site;
- Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period;
- Avoid site runoff of water or mud;
- Keep site fencing, barriers and scaffolding clean using wet methods;
- Remove materials that have a potential to produce dust from Site as soon as possible, unless being re-used on Site. If they are being re-used on Site cover as described below; and
- Cover, seed or fence stockpiles to prevent wind whipping.

Operating Vehicle / Machinery and Sustainable Travel

- Ensure all on-road vehicles comply with the requirements of the London Low Emission Zone and the London Non-Road Mobile Machinery standards;
- Ensure all vehicles switch off engines when stationary - no idling vehicles;
- Avoid the use of diesel- or petrol-powered generators and use mains electricity or battery powered equipment where practicable;
- A maximum-speed-limit of 15 mph on surfaced and 10 mph on unsurfaced haul roads and work areas;
- Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials; and
- Implement a Travel Plan that supports and encourages sustainable travel.

Operations

- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems;
- Ensure an adequate water supply on the site for effective dust / particulate matter suppression / mitigation, using non-potable water where possible and appropriate;
- Use enclosed chutes and conveyors and covered skips;
- Minimise drop heights from shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate; and
- 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.

Waste Management

- Avoid bonfires and burning of waste materials.

Demolition

- Soft strip inside buildings before demolition (retaining walls and windows in the rest of the building where possible, to provide a screen against dust);
- Effective water suppression will be used during demolition operations, alongside dust extraction where there is intensive dust generation (such as saw cutting);
- Avoid explosive blasting, using appropriate manual or mechanical alternatives; and
- Bag and remove any biological debris or damp down such material before demolition.

Earthworks

- Exposed areas / soil stockpiles to be re-vegetated to stabilise surfaces as soon as practicable;
- Use of Hessian, mulches or tackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable; and
- Only remove the cover in small areas during work and not all at once.

Construction

- Avoid scabbling (roughening of concrete surfaces) if possible;
- Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place;
- Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery; and
- For smaller supplies of fine power materials ensure bags are sealed after use and stored appropriately to prevent dust.

Trackout

- Regularly use a water-assisted dust sweeper on the access and local roads, as necessary, to remove any material tracked out of the Site;
- Avoid dry sweeping of large areas;
- Ensure vehicles entering and leaving the Site are covered to prevent escape of materials during transport;
- Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as reasonably practicable;
- Record all inspections of haul routes and any subsequent action in a site log book;
- Install hard surfaced haul routes, which are regularly dampened down with fixed or mobile sprinkler systems, or a mobile water bowser and regularly cleaned;
- Implementation of a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable);
- An adequate area of hard surfaced road between the wheel wash facility and the Site exit;
- Public roads outside of the site will be regularly inspected for cleanliness and cleaned as necessary; and
- Access gates to be located at least 10m from receptors.

6. Non-Road Mobile Machinery (NRMM)

Overview

- 6.1. The Non-Road Mobile Machinery (NRMM) Practical Guide V.5⁶ provides guidance on the London NRMM Low Emission Zone (LEZ), including the processes and procedures that must be in place on all development sites to comply with the policy. It also signposts future changes to the policy.

Compliance

- 6.2. The current standards that need to be met depend on where the demolition / construction site is. NRMM on all sites within Greater London are required to meet Emission Stage IIIB as a minimum. NRMM on all sites within either the Central Activities Zone (CAZ) or Opportunity Areas (OAs) are required to meet Emission Stage IV as a minimum. OAs are brownfield land within London that have significant capacity for development. The impacts of these dense areas of redevelopment need to be minimised. Therefore, emission standards in these areas match those in the CAZ and Canary Wharf.
- 6.3. From 1st January 2025 the CAZ, Opportunity Areas and Greater London zones will no longer have different emission standards. All NRMM on all sites within Greater London will be required to meet Stage IV as a minimum. Constant speed engines will continue to be required to meet Stage V. The standards for the NRMM Low Emission Zone will get progressively tighter over time:
- From 1st January 2030 all NRMM within Greater London will need to meet Stage V as a minimum; and
 - The Mayor of London aims for London to be zero emissions from NRMM by 1st January 2040.
- 6.4. The Site is located within an Opportunity Area, therefore the construction machinery at the Site would need to adhere to the engine emission stage IV.
- 6.5. Appendix 1 of the NRMM Practical Guidance presents a compliance checklist flowchart.

Inventory

- 6.6. An inventory containing all NRMM used on Site is required to ensure regular servicing and service logs are undertaken and available. Types of NRMM include, but not limited to:
- Diesel Generators;
 - Bulldozers;
 - Pumps;
 - Construction Equipment;
 - Industrial trucks;
 - Forklifts; and
 - Mobile Cranes.
- 6.7. The NRMM inventory will remain on Site for inspection. Additionally, service logs should also be kept on Site for inspection. Service logs would provide evidence the machinery has been regularly serviced and detail proof of emission limits for all equipment. This documentation should be made available to local authority officers as required.

⁶ Mayor of London, Non-Road Mobile Machinery (NRMM) Practical Guide V.5, April 2022

Online Register

- 6.8. All machinery is required to be registered online using the register at nrmm.london.
- 6.9. The register is designed as a management tool to enable sites to keep a live record of machinery on Site during the course of the development.

Compliance by Retrofit

- 6.10. If machinery does not meet the appropriate emissions standard, it can be retrofitted with additional pollution control equipment as an alternative to replacing it. To ensure compliance, only retrofits listed on [Non-road mobile machinery certification - Energy Saving Trust](#) would be acceptable.
- 6.11. The full retrofit policy is available on the NRMM online register.

Exemptions

- 6.12. In certain circumstances the supply of compliant equipment can be limited and retrofit solutions are not available for all types and sizes of machine. Therefore, the GLA will continue to manage requests for exemptions on a case-by-case basis. The full exemption & retrofit policy is available on the NRMM online register. Exemptions currently include:
 - Viability Exemption – If unable to procure machinery of the required Emission Stage, a Viability Exemption should be applied for online. For the exemption to be granted the machine will have to meet the next best possible emission standard and reasonable justification must be given for why the required stage cannot be met; and
 - Short Term (Emergency) Exemption – A short-term exemption can be applied for enabling non-compliant NRMM to remain on Site for up to 30 days.

Our vision

“Engineering a better environment for people and the planet”

Our mission

“To solve complex problems for the benefit of clients, communities and the climate”

Our values

People orientated

Individually and collectively, people are our business. We strive to create environments for everyone to flourish and thrive.

Flexible

Pragmatic by nature and dedicated to getting the job done to the highest possible standard.

Professional

Operating at pace with integrity to deliver technical and robust solutions.

Environmentally aware

We understand our responsibility to the environment, it shapes our decision making and informs our practice.

Innovative

Our forensic questioning provides the ability to deliver appropriate innovations at every stage on every project.

Relationship focused

We value individuality and the benefits of working collaboratively to achieve positive outcomes for all.

