Curlew Development London Limited

BRITANNIA STREET CAR PARK, LONDON

Air Quality Assessment

AQ1
JANUARY 2025

PUBLIC

Curlew Development London Limited

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Air Quality Assessment

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1 INTRODUCTION

1.1.1. WSP UK Ltd has been commissioned by Curlew Development London Limited to carry out an assessment of the potential air quality impacts from a proposed development located on Britannia Street, London (hereafter referred to as 'the Proposed Development' or 'the Site').

1.1.2. The Site, which is 0.1 hectares in size, is located in the Kings Cross Ward of London Borough of Camden (LBC), bounded by Britannia Street to the north; the three storey 'Help Musicians Building' and six storey Derby Lodge buildings to the east; Wicklow Street to the south; and by London Underground railway lines (in a cutting) to the west. The Thames Link railway line also runs in a shallow tunnel beneath the western half of the Site. The location of the Site is shown in **Figure 1-1** below.

1.1.3. The Site is currently used as a car park and includes a ventilation shaft linked to the Thames Link railway tunnel running below the Site. The application for planning permission comprises redevelopment to provide Purpose-Built Student Accommodation and in addition to community floorspace.

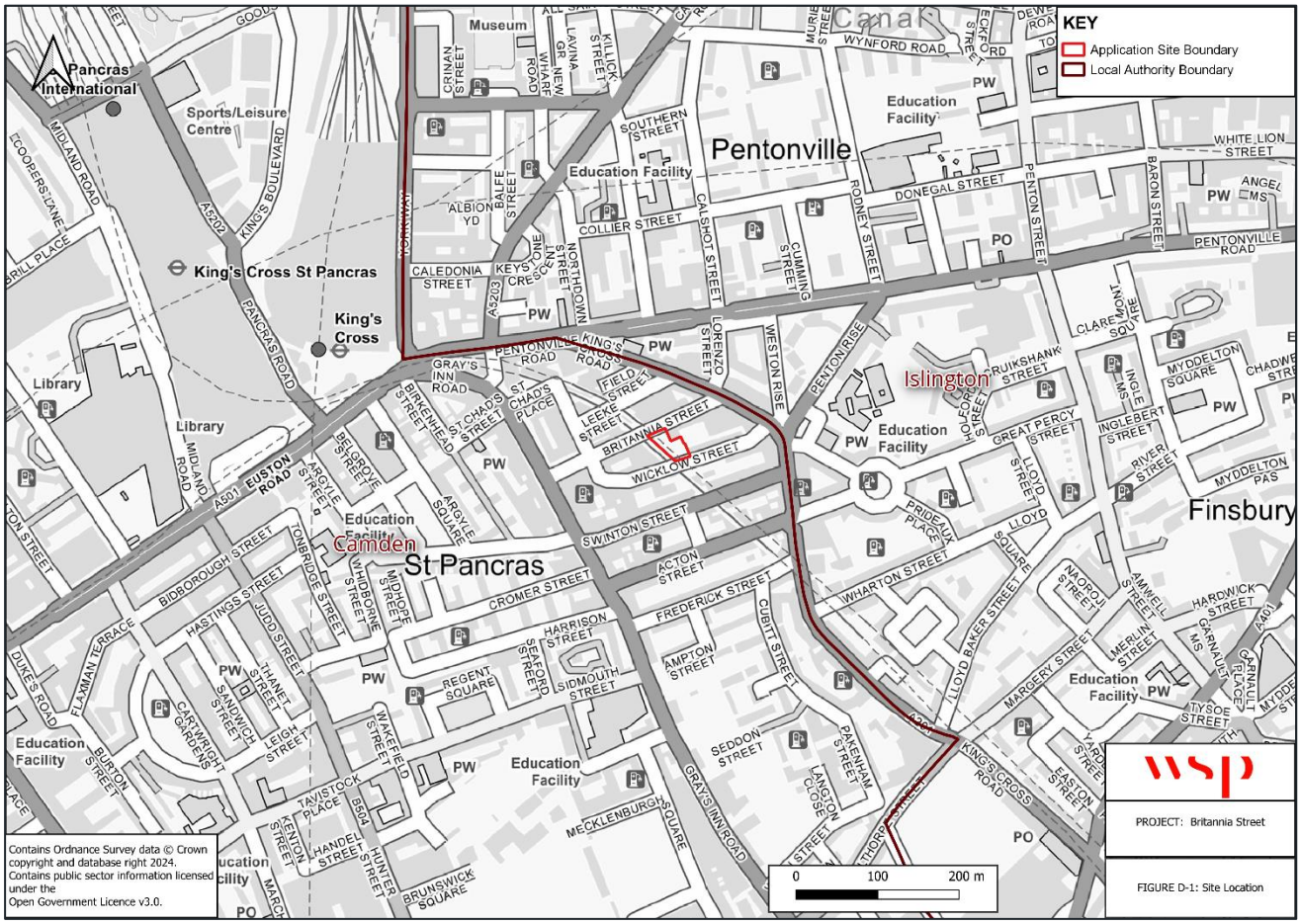
1.1.4. This report presents the findings of the assessment, which addresses the potential air quality impacts during both the construction and operational phases of the Proposed Development. For both phases, the type, source and significance of potential impacts are identified, and the measures that should be employed to minimise these proposed.

1.1.5. The report sets out the relevant legislation and policy context in **Section 2**. **Section 3** confirms the scope of the assessment before describing the assessment methodology and the criteria used to determine the significance of effects. Baseline conditions are reviewed in **Section 4**. Potential impacts are described in **Section 5**. **Section 6** sets out the requirements for mitigation and monitoring measures, and the residual effects. A summary of the assessment and its conclusions are given in **Section 7**.

1.1.6. This report is supported by the following appendices:

- Appendix A - Glossary
- Appendix B - Construction Dust Assessment Methodology
- Appendix C - Monitoring Data

Figure 1-1 - Site Location



2 LEGISLATION, POLICY AND GUIDANCE

ENVIRONMENTAL PROTECTION ACT 1990

2.1.1. Section 79 of the Environmental Protection Act 1990[1] gives the following definitions of statutory nuisance relevant to dust and particles:

- *"Any dust, steam, smell or other effluvia arising from industrial, trade or business premises or smoke, fumes or gases emitted from premises so as to be prejudicial to health or a nuisance"*
- *"Any accumulation or deposit which is prejudicial to health or a nuisance".*

2.1.2. Following this, Section 80 says that where a statutory nuisance is shown to exist, the local authority must serve an abatement notice. Failure to comply with an abatement notice is an offence and if necessary, the local authority may abate the nuisance and recover expenses.

2.1.3. Statutory nuisance provisions are relevant to, amongst other things, the control of dust from demolition and construction. There are no statutory limit values for dust deposition above which 'nuisance' is deemed to exist. Nuisance is a subjective concept, and its perception is highly dependent upon the existing conditions and the change that have occurred. The party responsible for the premises giving rise to the emissions is responsible for ensuring use of Best Practicable Means to avoid a statutory nuisance.

ENVIRONMENT ACT 1995

2.1.4. Part IV of the Environment Act 1995[2] required the Secretary of State to publish a national Air Quality Strategy[3,4] and set up a system of Local Air Quality Management (LAQM). The Environment Act 2021 was subsequently enshrined into law in November 2021[5]. Schedule 11 of this Act makes it clear that it remains a requirement for local authorities to periodically review and document local air quality within their area with the aim of meeting the air quality objectives defined in the Air Quality Regulations. Where the Air Quality Strategy objectives are not likely to be achieved, a local authority is required to designate an Air Quality Management Area (AQMA) and to draw up an Air Quality Action Plan to secure improvements in air quality.

[1] The National Archives (1990) *Environmental Protection Act 1990* [online]. Available at: https://www.legislation.gov.uk/ukpga/1990/43/contents [Accessed October 2024].
[2] The National Archives (1995) *Environment Act 1995 - Statutory Instrument No.25* [online]. Available at: https://www.legislation.gov.uk/ukpga/1995/25/contents [Accessed October 2024].
[3] Defra (2007) *The Air Quality Strategy for England, Scotland, Wales and Northern Ireland Volume 1* [online]. Available at: https://www.gov.uk/government/publications/the-air-quality-strategy-for-england-scotland-wales-and-northern-ireland-volume-1 [Accessed October 2024].
[4] Defra (2007) *The Air Quality Strategy for England, Scotland, Wales and Northern Ireland Volume 2* [online]. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69337/pb12670-air-quality-strategy-vol2-070712.pdf [Accessed October 2024].
[5] The National Archives (2021) *Environment Act 2021* [online]. Available at: https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted [Accessed October 2024].

ENVIRONMENT ACT 2021

2.1.5. The Environment Act 2021 passed into law in November 2021[5]. This Act sets a legally binding duty on the Secretary of State to bring forward air quality targets into secondary legislation; with specific regard to the annual mean level of $PM_{2.5}$ in ambient air.

2.1.6. In March 2022, and in response to this duty, the UK government proposed a legally binding target to reduce $PM_{2.5}$ concentrations across England to 10µg/m^3 and achieve a 35% reduction of population exposure (compared to 2018 levels) by 2040[6]. In addition to these targets, the government has published, as part of the Environmental Improvement Plan 2023[7], two new interim targets aimed at reducing population exposure to $PM_{2.5}$ by 22% (compared to 2018 levels) and reducing annual mean concentrations to 12µg/m^3 by the end of January 2028.

2.1.7. Schedule 11 of the Environment Act 2021 also provides amendments to the Environment Act 1995 regarding the duty of the Secretary of State to report on air quality in England, as well as the functions and duties of relevant public authorities, including but not limited to, the duty of a local authority to prepare an action plan for an AQMA *"…for the purpose of securing that air quality standards and objectives are achieved…"*.

AIR QUALITY REGULATIONS

2.1.8. The Air Quality (England) Regulations 2000[8] and the Air Quality (England) (Amendment)[9] Regulations 2002 set objectives for ambient pollutant concentrations. The objective for human health applies where there is relevant exposure *"…the quality of air at locations which are situated outside of buildings or other natural or man-made structures, above or below ground, and where members of the public are regularly present…"*.

2.1.9. The Air Quality Standards Regulations 2010[10] (as amended)[11], the Air Quality (Amendment of Domestic Regulations) (EU Exit) Regulations 2019[12], and the Environment (Miscellaneous Amendments) (EU Exit) Regulations 2020[13] establish set legally binding limit values for concentrations of major air pollutants that affect public health in outdoor air, such as NO_2, PM_{10} and $PM_{2.5}$. The limit values are numerically equivalent to the objectives.

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[6] Defra (2022) *Air Quality Targets in the Environment Act* [online]. Available at: Development of the Environment Act Targets - Defra, UK [Accessed October 2024].
[7] Defra (2023) Environmental Improvement Plan 2023 [online]. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1133077/environmental-improvement-plan-2023.pdf [Accessed October 2024].
[8] The National Archives (2000) *The Air Quality (England) Regulations 2000 - Statutory Instrument 2000 No.928* [online]. Available at: https://www.legislation.gov.uk/uksi/2000/928/contents/made [Accessed October 2024].
[9] The National Archives (2002) *The Air Quality (England) (Amendment) Regulations 2002 - Statutory Instrument 2002 No.3043* [online]. Available at: https://www.legislation.gov.uk/uksi/2002/3043/contents/made [Accessed October 2024].
[10] The National Archives (2010) *The Air Quality Standards Regulations 2010 - Statutory Instrument 2010 No.1001* [online]. Available at: https://www.legislation.gov.uk/uksi/2010/1001/contents/made [Accessed October 2024].
[11] The National Archives (2016) *The Air Quality Standards (Amendment) Regulations 2016 - Statutory Instrument 2016 No.1184* [online]. Available at: https://www.legislation.gov.uk/uksi/2016/1184/contents/made [Accessed October 2024].
[12] The National Archives (2019) *The Air Quality (Amendment of Domestic Regulations) (EU Exit) Regulations 2019 No.74* [online]. Available at: https://www.legislation.gov.uk/uksi/2019/74/contents/made [Accessed October 2024].
[13] The National Archives (2020) *The Environment (Miscellaneous Amendments) (EU Exit) Regulations 2020 - Statutory Instrument 2020 No.1313* [online]. Available at: https://www.legislation.gov.uk/uksi/2020/1313/contents/made [Accessed October 2024].

2.1.10. The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023[14] enact new long-term targets for $PM_{2.5,}$ aiming to combat air pollution and safeguard public health. These regulations outline the following objectives:

- Annual Mean Concentration Target: By 2040, achieve of a maximum annual mean concentration of 10µg/m^3 of $PM_{2.5}$ across England. This target sets a clear benchmark for air quality improvement, ensuring that the air we breathe meets stringent standards for particulate matter.
- Population Exposure Reduction Target: Aim for a substantial 35% reduction in population exposure to $PM_{2.5}$ by 2040, compared to a base year of 2018. This reduction target emphasises the importance of minimising the health risks associated with prolonged exposure to fine particulate matter, thereby enhancing the well-being of communities nationwide.

2.1.11. By implementing these targets, policymakers are taking proactive measures to address the adverse effects of air pollution on public health and the environment. It's akin to setting waypoints on a journey towards cleaner air, ensuring that we stay on course to achieve tangible improvements in air quality for generations to come.

2.1.12. The national air quality standards in terms of objectives, limit values and targets relevant to this assessment are given in **Table 2-1**.

Table 2-1 - National Air Quality Standards Set for the Protection of Human Health

Pollutant	Concentration in micrograms per cubic metre (µg/m^3)	Measured as	Objective
Nitrogen dioxide (NO_2)	40	Annual mean	Limit value not to be exceeded.
	200	1-hour mean	Not to be exceeded more than 18 times a year.
Particulate matter less than 10 micrometres in diameter (PM_{10})	40	Annual mean	Limit value not to be exceeded.
	50	24-hour mean	Not to be exceeded more than 35 times a year.
Particulate matter less than 2.5 micrometres in diameter ($PM_{2.5}$)	20	Annual mean	Limit value not to be exceeded.
	12	Annual mean	Interim target concentration not to be exceeded by the end of January 2028.

[14] The National Archives (2023). *The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 – Statutory Instrument No. 96* [online]. Available at: https://www.legislation.gov.uk/uksi/2023/96/contents/made [Accessed October 2024].

Pollutant	Concentration in micrograms per cubic metre (µg/m^3)	Measured as	Objective
	10	Annual mean	Target concentration not to be exceeded by the end of 2040.

2.2 PLANNING POLICY

NATIONAL PLANNING POLICY

National Planning Policy Framework

2.2.1. The Government's overall planning policies for England are described in the National Planning Policy Framework (NPPF)[15]. Paragraph 199 concerns air quality:

2.2.2. *"Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications. Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan."*

CLEAN AIR STRATEGY 2019

2.2.3. The Department for Environment, Food and Rural Affairs (Defra) published the Government's Clean Air Strategy in 2019[16]. This strategy outlines measures aimed at reducing emissions from all sources of air pollution, thereby improving air quality, safeguarding natural environments, and stimulating economic growth. Additionally, the Strategy sets specific goals to reduce to reduce public exposure to airborne particulate matter in alignment with recommendation made from the World Health Organisation.

2.2.4. Moreover, the Strategy affirms the Government's commitment to enacting new legislation to "… create *a stronger and a more coherent framework for action to tackle air pollution. This will be underpinned by new England-wide powers to control major sources of air pollution, in line with the risk they pose to public health and the environment, plus new local powers to take action in areas with an air pollution problem. These will support the creation of Clean Air Zones to lower emissions*

[15] Ministry of Housing, Communities and Local Government (2024) *National Planning Policy Framework* [online]. Available at: https://assets.publishing.service.gov.uk/media/65a11af7e8f5ec000f1f8c46/NPPF_December_2024.pdf [Accessed January 2025].
[16] Defra (2019) Clean Air Strategy 2019 [online]. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/770715/clean-air-strategy-2019.pdf [Accessed October 2024].

from all sources of air pollution, backed up with clear enforcement mechanism." New enforcement powers will also be given at a national and local level, across all sectors of society.

UK AIR QUALITY STRATEGY FOR LOCAL AUTHORITY DELIVERY

2.2.5. The Government's policy on air quality within the UK is set out in the Air Quality Strategy for England, Scotland, Wales and Northern Ireland[17]. The Air Quality Strategy provides a framework for reducing air pollution in the UK to meet its objectives.

THE LONDON PLAN 2021: THE SPATIAL DEVELOPMENT STRATEGY FOR GREATER LONDON

2.2.6. Policy SI 1 of the London Plan[18] is the key policy specific to the improvement of air quality within Greater London, and it states:

"*A Development Plans, through relevant strategic, site-specific and area-based policies, should seek opportunities to identify and deliver further improvements to air quality and should not reduce air quality benefits that result from the Mayor's or boroughs' activities to improve air quality.*

B To tackle poor air quality, protect health and meet legal obligations the following criteria should be addressed:

1) *Development proposals should not:*
   - *Lead to further deterioration of existing poor air quality;*
   - *Create any new areas that exceed air quality limits, or delay the date at which compliance will be achieved in areas that are currently in exceedance of legal limits; and*
   - *Create unacceptable risk of high levels of exposure to poor air quality.*
2) *In order to meet the requirements in Part 1, as a minimum:*
   - *Development proposals must be at least Air Quality Neutral;*
   - *Development proposals should use design solutions to prevent or minimise increased exposure to existing air pollution and make provision to address local problems of air quality in preference to post-design or retro-fitted mitigation measures;*
   - *Major development proposals must be submitted with an Air Quality Assessment. Air quality assessments should show how the development will meet the requirements of B1; and*
   - *Development proposals in Air Quality Focus Areas or that are likely to be used by large numbers of people particularly vulnerable to poor air quality, such as children or older people should demonstrate that design measures have been used to minimise exposure.*

C Masterplans and development briefs for large-scale development proposals subject to an Environmental Impact Assessment should consider how local air quality can be improved across the

[17] Defra and the Devolved Administrations (2023) Air quality strategy: framework for local authority delivery [online]. Available at: https://www.gov.uk/government/publications/the-air-quality-strategy-for-england. [Accessed October 2024].
[18] Mayor of London (2021) *The London Plan - The Spatial Development Strategy for Greater London* [online]. Available at: https://www.london.gov.uk/what-we-do/planning/london-plan/new-london-plan/london-plan-2021 [Accessed October 2024].

area of the proposal as part of an air quality positive approach. To achieve this a statement should be submitted demonstrating:

1) *How proposals have considered ways to maximise benefits to local air quality; and*
2) *What measures or design features will be put in place to reduce exposure to pollution, and how they will achieve this.*

D In order to reduce the impact on air quality during the construction and demolition phase development proposals must demonstrate how they plan to comply with the Non-Road Mobile Machinery Low Emission Zone and reduce emissions from the demolition and construction of buildings following best practice guidance.

E Development proposals should ensure that where emissions need to be reduced to meet the requirements of Air Quality Neutral or to make the impact of development on local air quality acceptable, this is done on-site. Where it can be demonstrated that emissions cannot be further reduced by on-site measures, off-site measures to improve local air quality may be acceptable, provided that equivalent air quality benefits can be demonstrated within the area affected by the development."

2.2.7. Policy D3 Optimising site capacity through the design-led approach is also relevant and says that new development should be designed such that it helps *"…prevent or mitigate the impacts of noise and poor air quality".*

2.2.8. Policy GG3 'Creating a healthy city' is also relevant to air quality and the Proposed Development. This policy requires developers to *"…seek to improve London's air quality, reduce public exposure to poor air quality and minimise inequalities in levels of exposure to air pollution".*

LOCAL PLANNING POLICY

Camden Local Plan 2017

2.2.9. The Camden Local Plan[19] was adopted in 2010 and includes policy CC4 Air quality:

"The Council will ensure that the impact of development on air quality is mitigated and ensure that exposure to poor air quality is reduced in the borough. The Council will take into account the impact of air quality when assessing development proposals, through the consideration of both the exposure of occupants to air pollution and the effect of the development on air quality. Consideration must be taken to the actions identified in the Council's Air Quality Action Plan.

Air Quality Assessments (AQAs) are required where development is likely to expose residents to high levels of air pollution. Where the AQA shows that a development would cause harm to air quality, the Council will not grant planning permission unless measures are adopted to mitigate the impact. Similarly, developments that introduce sensitive receptors (i.e. housing, schools) in locations of poor air quality will not be acceptable unless designed to mitigate the impact.

[19] LBC (2017). Camden Local Plan 2017 [online]. Available at: https://www.camden.gov.uk/documents/20142/4820180/Local+Plan.pdf/ce6e992a-91f9-3a60-720c-70290fab78a6 [Accessed October 2024].

Development that involves significant demolition, construction or earthworks will also be required to assess the risk of dust and emissions impacts in an AQA and include appropriate mitigation measures to be secured in a Construction Management Plan."

2.3 GUIDANCE

National Planning Practice Guidance 2019 – Air Quality

2.3.1. This guidance[20] provides several guiding principles on how the planning process can consider the impact of new development on air quality. It explains the level of detail required in air quality assessments for proposed developments, and how impacts on air quality can be mitigated. This guidance also offers information on how Local Authorities account for air quality in both the broader planning context of Local Plans and neighbourhood planning, as well as in individual cases where air quality is a factor in a planning decision.

Local Air Quality Management Review and Assessment Technical Guidance 2022

2.3.2. The Defra has published technical guidance for use by local authorities in their review and assessment work. This guidance, referred to in this document as LAQM.TG(22)[21], has been utilised in the assessment presented hereunder.

London Local Air Quality Management Technical Guidance

2.3.3. The Mayor of London has published guidance for use by the London Boroughs in their review and assessment work[22]. This guidance, referred to in this document as LLAQM.TG(19), has been used where appropriate in the assessment presented hereunder.

Mayor of London's Supplementary Planning Guidance for the Control of Dust and Emissions During Construction and Demolition

2.3.4. The Supplementary Planning Guidance[23] sets out how emissions from proposed demolition and construction activities should be assessed and mitigated. It largely draws on guidance produced by the Institute of Air Quality Management (IAQM).

London Plan Guidance: Air Quality Neutral 2023

2.3.5. The Greater London Authority's (GLA) London Plan Guidance on Air Quality Neutral[24] sets benchmarks for all development to ensure that transport and building emissions do not worsen air

[20] Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government (2019). *National Planning Practice Guidance – Air quality* [online]. Available at: https://www.gov.uk/guidance/air-quality--3 [Accessed October 2024]
[21] Defra (2022). *Part IV of the Environment Act 1995 as amended by the Environment Act 2021 Environment (Northern Ireland) Order 2002 Part III Local Air Quality Management Technical Guidance (TG22)* [online]. Available at: https://laqm.defra.gov.uk/wp-content/uploads/2022/08/LAQM-TG22-August-22-v1.0.pdf [Accessed October 2024].
[22] Mayor of London (2019) *London Local Air Quality Management (LLAQM) Technical Guidance (LLAQM.TG(19))* [online]. Available at: https://www.london.gov.uk/programmes-and-strategies/environment-and-climate-change/pollution-and-air-quality/working-london-boroughs [Accessed October 2024].
[23] Mayor of London (2014) *The control of dust and emissions during construction and demolition – Supplementary Planning Guidance* [online]. Available at: https://www.london.gov.uk/what-we-do/planning/implementing-london-plan/london-plan-guidance-and-spgs/control-dust-and [Accessed October 2024].
[24] Greater London Authority (2023) *London Plan Guidance: Air Quality Neutral* [online]. Available at: Air Quality Neutral LPG (london.gov.uk) [Accessed October 2024].

quality in London. There are two benchmarks that cover the two main sources of air pollution from new developments; they are:

- Building Emissions Benchmark – emissions from equipment used to supply heat and energy to the buildings; and
- Transport Emissions Benchmark – emissions from private vehicles travelling to and from the development.

2.3.6. Developments that do not exceed these benchmarks (considered separately) will be considered to be 'air quality neutral', whilst developments that exceed the benchmarks will be required to amend the details of the development in the first instance before seeking agreement with the local planning authority to offset any excess in emissions with on or off-site mitigation measures. This can be achieved by providing oxides of nitrogen (NOx) and particulate matter abatement measures in the vicinity of the development, such as: green planting/walls and screens, with special consideration given to planting that absorbs or supresses pollutants; upgrade or abatement work to combustion plant; retrofitting abatement technology for vehicles and flues; and exposure reduction. These measures can be secured by condition or Section 106 contribution. Air quality monitoring is not eligible for funding as it is not considered to contribute to actual air quality improvements.

Land-use Planning & Development Control: Planning for Air Quality

2.3.7. Environmental Protection UK (EPUK) and the IAQM have published guidance[25] that offers comprehensive advice on several aspects:

- when an air quality assessment may be required;
- what should be included in such an assessment;
- how to determine the significance of any air quality impacts associated with a development; and
- the potential mitigation measures that may be implemented to minimise these impacts.

Guidance on the Assessment of Dust from Demolition and Construction 2024

2.3.8. This document, published by the IAQM[26], offers guidance to developers, consultants and environmental health officers on assessing the impacts of construction activities. The methodology emphasis classifying sites based on to risk of impacts including dust nuisance, PM_{10} impacts on public exposure, impacts on sensitive ecological receptors. It also aims to identify mitigation measures appropriate to the level of risk identified.

Camden Planning Guidance – Air Quality

2.3.9. This guidance was produced by LBC[27] and supports the policies in the Camden Local Plan 2017. The guidance sets out the requirements for air quality assessment for planning applications. Under the guidance Camden has adopted the World Health Organisations (WHO) 2005 guideline limits for

[25] EPUK / IAQM (2017). *Land-Use Planning & Development Control: Planning For Air Quality* [online]. Available at: https://iaqm.co.uk/text/guidance/air-quality-planning-guidance.pdf [Accessed October 2024].
[26] IAQM (2024). *Guidance on the assessment of dust from demolition and construction Version 2.2* [online]. Available at: https://iaqm.co.uk/wp-content/uploads/2013/02/Construction-Dust-Guidance-Jan-2024.pdf [Accessed October 2024].

[27] LBC (2021). Camden Planning Guidance Air quality [online]. Available at: https://www.camden.gov.uk/planning-policy-documents [Accessed October 2024].

NO_2 (40µg/m^3), PM_{10} (20µg/m^3) and $PM_{2.5}$ (10µg/m^3) and Camden's overarching objective is to achieve these WHO limits by 2030.

3 SCOPE AND METHODOLOGY

3.1 SCOPE

3.1.1. The scope of the assessment has been determined by:

- reviewing the latest Air Quality Annual Status Report (ASR) report and air quality monitoring data published by LBC[28] and London Borough of Islington (LBI)[29];
- examining the air quality data for the area surrounding the Site, including monitoring data from LBC, LBI, Greater London Authority (GLA)[30], Defra[31] and the Environment Agency Public Register for Permitted Installations[32];
- a desk study to confirm the locations of nearby existing receptors sensitive to changes in local air quality, and a review of the plans for the Proposed Development to identify the location of new sensitive receptors; and
- reviewing the traffic data for the Proposed Development.

3.1.2. The impacts scoped in and out of this assessment are given in **Table 3-1**.

Table 3-1 - Impacts Scoped In or Out of the Assessment

Impact	Scoped in or out?	Justification
Construction Phase		
Fugitive dust emissions from construction activities affecting amenity.	In	There are sensitive human receptors within 250m of construction activities and within 50m of the routes to be used by construction vehicles on the public highway, up to 250m from the Site entrance. The determination of the risk of dust impacts from the Proposed Development will guide the identification of proposed mitigation measures proportionate to the identified risk. Dust risk beyond 250m of construction activities is expected to be negligible and any effects deemed insignificant.

[28] LBC (2024) London Borough of Camden, Annual Status Report for 2023 [online]. Available at: https://www.camden.gov.uk/air-quality#mczc [Accessed October 2024].
[29] LBI (2023) London Borough of Islington, Annual Status Report for 2023 [online]. Available at: https://www.islington.gov.uk/environment-and-energy/pollution/air-quality/what-we-are-doing/air-quality-strategy-documents [Accessed October 2024].
[30] GLA (2019) Greater London Authority, London Atmospheric Emissions Inventory (LAEI) 2019 [online]. Available at: https://data.london.gov.uk/dataset/london-atmospheric-emissions-inventory--laei--2019 [Accessed October 2024].
[31] Defra (2020) *Background Mapping data for local authorities – 2018* [online]. Available at: https://uk-air.defra.gov.uk/data/laqm-background-maps?year=2018 [Accessed October 2024].
[32] Environment Agency (2023). *Environmental Permitting Regulations – Installations* [online]. Available at: https://environment.data.gov.uk/public-register/view/search-industrial-installations [Accessed October 2024].

Impact	Scoped in or out?	Justification
Emissions of NO_X, PM_{10} and $PM_{2.5}$ from non-road mobile machinery (NRMM) affecting local air quality at existing receptors.	Out	As operation of NRMM will be limited to working hours and where required within the Site, the exhaust emissions are unlikely to have a substantial impact on pollutant concentrations at receptors. In line with paragraph 7.30 of LAQM.TG(22), this has been scoped out.
Emissions of NO_X, PM_{10} and $PM_{2.5}$ from construction traffic affecting local air quality at existing receptors.	Out	The data provided by the Transport Consultant show that the daily average trips during the construction period is predicted to be 30 movements in total, with 22 of those being heavy duty vehicles (HDVs). Consequently, the expected changes in traffic flows do not exceed the EPUK/IAQM Land-Use Planning Guidance indicative scoping criteria for air quality assessment for locations within an AQMA. This element has been scoped out.
Operational Phase		
Emissions of NO_X, PM_{10} and $PM_{2.5}$ from operational traffic affecting local air quality at existing receptors.	Out	The Proposed Development is car-free and therefore, an assessment of impacts related to traffic emissions has been scoped out.
Air quality neutral assessment.	Out	Heating and cooling for the Proposed Development will be provided by an all-electric strategy using air source heat pumps. Therefore, in accordance with the London Plan Air Quality Neutral guidance, the Proposed Development is air quality neutral in terms of building emissions and is not considered further within this report. The Proposed Development includes an emergency generator. As per the Air Quality Neutral guidance, backup plant for emergency and life-safety power supply may be excluded from air quality neutral assessments. The Proposed Development is car-free. Therefore, in line with the Air Quality Neutral guidance, the development will meet the TEB and is therefore air quality neutral in terms of transport emissions and is not considered further within this report.
Exposure of future receptors (building occupants) to emissions of NO_X and PM_{10}.	In	The Proposed Development will introduce new receptors into an AQMA. Therefore, a qualitative assessment of the potential exposure of future users to NO_2, PM_{10} and $PM_{2.5}$ has been scoped into the assessment in line with Camden Planning Policy air quality guidance.

3.2 ASSESSMENT METHODOLOGY

BASELINE DATA COLLECTION

3.2.1. The following information has been used to define baseline conditions within 1km of the Proposed Development:

- Environment Agency's Public Registers: Installation Permits[32];
- LBC 2024 and LBI 2023 Air Quality ASR;
- Spatial data for AQMAs as published by Defra[33];
- National forecasts for background pollutant concentrations based on Pollution Climate Mapping (PCM) model data published by Defra[34];
- London Atmospheric Emissions Inventory (LAEI) 2019 data published by GLA; and
- Multi-Agency Geographic Information for the Countryside (MAGIC) website[35] for locations of statutory designated (ecological) sites.

CONSTRUCTION DUST ASSESSMENT

3.2.2. Dust comprises particles typically in the size range 1-75 micrometres (µm) in aerodynamic diameter and is created through the action of crushing and abrasive forces on materials. The larger dust particles fall out of the atmosphere quickly after initial release and therefore tend to be deposited in close proximity to the source of emission. Dust, therefore, is unlikely to cause long-term or widespread changes to local air quality; however, its deposition on property and cars can cause 'soiling' and discolouration. This may result in complaints of nuisance through amenity loss or perceived damage caused, which is usually temporary.

3.2.3. The smaller particles of dust (less than 10µm in aerodynamic diameter) are known as particulate matter (PM_{10}) and represent only a small proportion of total dust released; this includes a finer fraction, known as $PM_{2.5}$ (with an aerodynamic diameter less than 2.5µm). As these particles are at the smaller end of the size range of dust particles, they remain suspended in the atmosphere for a longer period of time than the larger dust particles and can therefore be transported by wind over a wider area. PM_{10} and $PM_{2.5}$ are small enough to be drawn into the lungs during breathing, which could have a potential impact on health in sensitive individuals.

3.2.4. An assessment of the likely impacts on local air quality due to the generation and dispersion of dust and PM_{10} during the construction phase has been undertaken with reference to:

- The Mayor of London's SPG for the control of dust and emissions during construction and demolition;
- The available information for this phase of the Proposed Development provided by the Client and Project Team; and
- Professional judgement.

3.2.5. The Mayor of London's SPG requires a dust risk assessment to be undertaken following the methodology published by the IAQM, which assesses the risk of potential dust and PM_{10} impacts from the following four sources: demolition; earthworks; general construction activities and track-out. It takes into account the nature and scale of the activities undertaken for each source and the sensitivity of the area to an increase in dust and PM_{10} levels to assign a level of risk. Risks are

[33] Defra (2023). *Local Authority Details – London Borough of Camden* [online]. Available at: Local Authority Details - Defra, UK [Accessed October 2024].
[34] Defra (2020) Background Mapping data for local authorities – 2018 [online]. Available at: https://uk-air.defra.gov.uk/data/laqm-background-maps?year=2018 [Accessed October 2024].
[35] Natural England (2024) *MAGIC* [online]. Available at: https://magic.defra.gov.uk/ [Accessed October 2024].

described in terms of there being a low, medium or high risk of dust impacts. Once the level of risk has been ascertained, then site specific mitigation proportionate to the level of risk is identified, and the significance of residual effects determined. A summary of the IAQM assessment methodology is provided in **Appendix B**.

OPERATIONAL PHASE HUMAN EXPOSURE ASSESSMENT

3.2.6. A qualitative air quality assessment of the impacts of the local area's emissions on the Proposed Development was undertaken following Camden Planning Policy air quality guidance. The assessment evaluated the exposure that future residents/users might experience, considering the following:

- The background and future baseline air quality, and whether this will be likely to approach, or exceed, the threshold values set by the air quality objectives;
- The presence and location of AQMAs as an indicator of local hotspots where the air quality objective thresholds may be exceeded;
- The presence of any heavily trafficked roads, with emissions that could give rise to significantly higher concentrations of pollutants (e.g., NO_2), that would cause unacceptably high exposure for users of the new development; and
- The presence of a source of odour and/or dust that may affect amenity of future occupants of the development.

4 BASELINE CONDITIONS

4.1 LBC REVIEW & ASSESSMENT OF AIR QUALITY

4.1.1. LBC has designated the whole borough as an AQMA for exceedances of the air quality objectives for annual mean concentrations of NO_2 and 24-hour mean concentrations of PM_{10}. The Site lies within the AQMA.

AIR QUALITY FOCUS AREAS

4.1.2. The GLA designated ten Air Quality Focus Areas (AQFA) within the administrative areas of LBC and LBI; three of which are within 1km of the Site boundary, namely:

- King's Cross/Caledonian Road area (the Site lies within this AQFA); and
- Marylebone Road from Marble Arch/Euston/King's Cross Junction (located approximately 180m west of the Site).
- Angel Town Centre (located approximately 500m northeast of the Site).

4.2 LOCAL EMISSION SOURCES

4.2.1. The Site is located in an area where air quality is mainly influenced by emissions from road transport using the local road network including Britannia Street, Wicklow Street, King Cross Road (A201) and Pentonville Road (A501).

4.2.2. London Underground train line is present to the west of the Site. The line is powered by electricity; hence, it does not contribute significantly to air quality.

4.2.3. According to the Environment Agency's public register for permitted installations[36], there is one large scale permitted installation within 1km of the Site boundary: The Francis Crick Institute Limited (permit number: EPR/GP3036JF), located approximately 0.7km northwest of the Site. It is unlikely that controlled emissions will substantially contribute to ambient pollutant levels at the Site.

4.3 AIR QUALITY MONITORING DATA

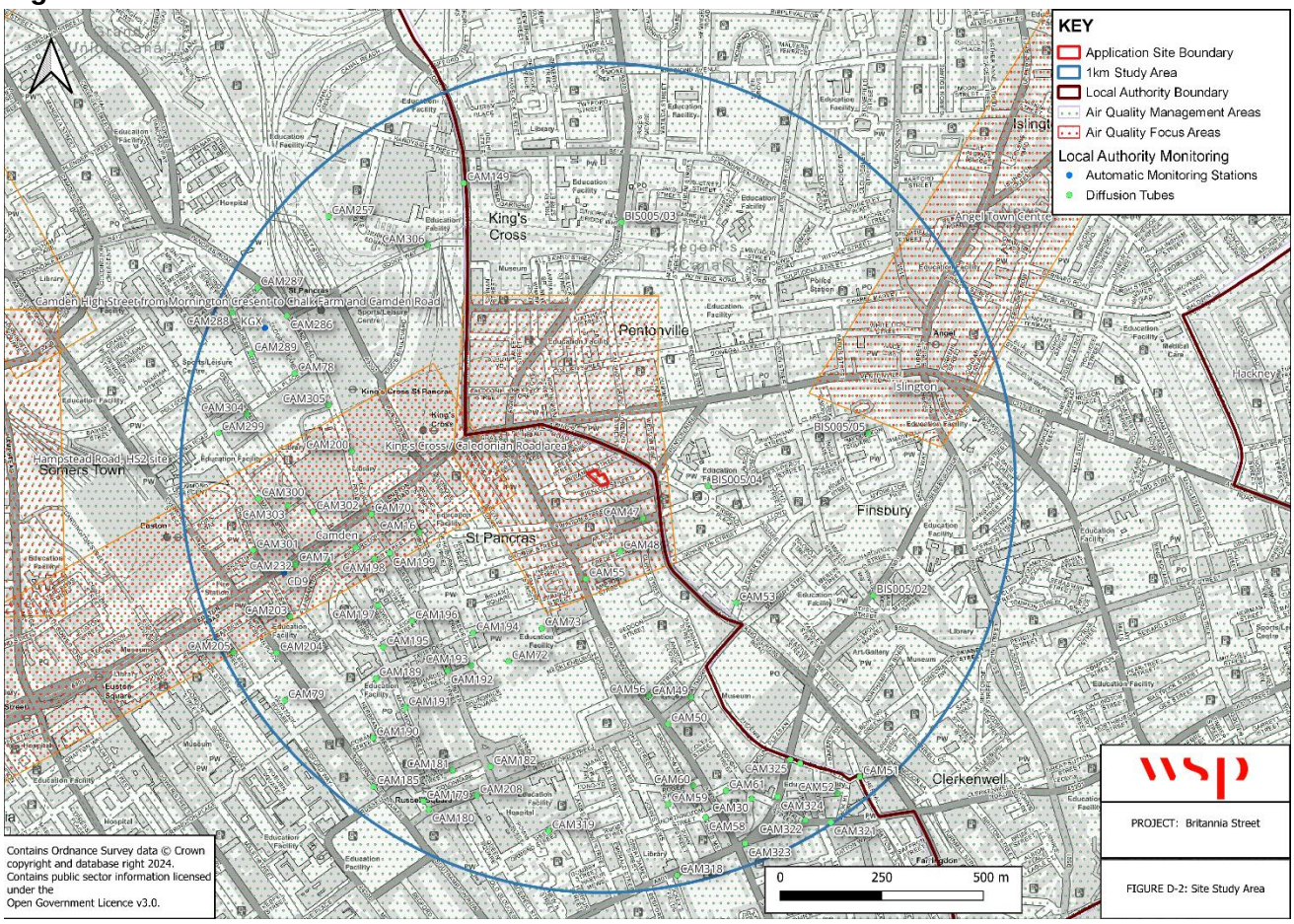
4.3.1. There are two local authority boundaries within 1km of the Site; LBC and LBI. These councils undertake air quality monitoring using both automatic and passive (i.e., diffusion tubes) monitoring techniques at a number of roadside and background locations within their jurisdiction.

CONTINUOUS MONITORING

4.3.2. LBC operates five and LBI operates two continuous automatic monitoring sites (CMS) within their administrative area for monitoring ambient NO_2, PM_{10} and $PM_{2.5}$. Two CMS locations were identified within 1km of the Site. The nearest CMS is the roadside site CD9 (Euston Road), which is located approximately 0.8km west of the Site. The monitors within 1km of the Site are shown in **Figure 4-1**.

[36] Environment Agency (2022) *Environmental Permitting Regulations – Installations* [online]. Available at: https://environment.data.gov.uk/public-register/view/search-industrial-installations [Accessed August 2024].

Figure 4-1 - Baseline Conditions



4.3.3. **Table 4-1** below summarises the data collected over the five-year period from 2019 to 2023 from the CMS within 1km of the Site. The data indicates that annual mean NO_2 concentrations at CD9 exceeded the annual mean air quality standard throughout this period. Although no real trend can be identified, overall, there has been a decrease in annual mean NO_2 concentrations measured. It should be noted that CD9 is located on a busy A-road (A501) and is not considered representative of conditions at the Site.

Table 4-1 – Annual Mean NO_2 Continuous Monitoring Data

Site ID	Site Name	Type	X, Y	Distance to Site (km)	Annual mean NO_2 concentration (number of hours 1-hour mean concentrations exceed 200µg/m^3)				
					2019	2020*	2021*	2022	2023
CD9	Euston Road	Roadside	529878, 182648	0.8	**70** (7)	**43** (0)	**48** (1)	**45** (2)	**46** (0)

Site ID	Site Name	Type	X, Y	Distance to Site (km)	Annual mean NO_2 concentration (number of hours 1-hour mean concentrations exceed 200µg/m^3)				
					2019	2020*	2021*	2022	2023

Notes:

Where a concentration is shown in **bold** the air quality standard (40µg/m^3) is exceeded.

Data for the LBC were obtained from the Air Quality Annual Status Report 2024.

*2020 and 2021 monitoring data are not considered to be representative of normal conditions nor when making comparisons of long-term trends due to national lockdown restrictions attributed to the COVID-19 pandemic.

4.3.4. The data in **Table 4-2** indicates that there has been a general decrease in annual mean PM_{10} concentrations measured at all the monitoring sites within 1km of the Site over the five- year period. Annual mean PM_{10} concentrations measured were compliant with the annual and 24-hour mean air quality standards over the five-year period. Furthermore, the 2023 annual mean PM_{10} concentrations are below Camden's adopted WHO limit of 20µg/m^3.

Table 4-2 - Annual Mean PM_{10} Continuous Monitoring Data

Site ID	Site Name	Type	X, Y	Distance from Site (km)	Annual mean PM_{10} concentration (number of hours 24-hour mean concentrations exceed 50µg/m^3)				
					2019	2020*	2021*	2022	2023
CD9	Euston Road	Roadside	529878, 182648	0.8	22 (8)	18 (2)	19 (2)	21 (6)	18 (4)
KGX	Coopers Lane	Urban Background / Industrial	529831, 183250	0.9	15 (5)	13 (1)	13 (0)	15 (5)	14 (1)

Notes:

Data for the LBC were obtained from the Air Quality Annual Status Report 2024.

*2020 and 2021 monitoring data are not considered to be representative of normal conditions nor when making comparisons of long-term trends due to national lockdown restrictions attributed to the COVID-19 pandemic.

4.3.1. The data in **Table 4-3** indicates that there has been a general decrease in annual mean $PM_{2.5}$ concentrations measured at all the sites within 1km of the Site over the five-year period. Annual mean $PM_{2.5}$ concentrations measured were compliant with the annual mean air quality standard of 20µg/m^3 over the five-year period. Furthermore, the 2023 annual mean $PM_{2.5}$ concentration is compliant with both the interim target concentration of 12µg/m^3 and the stricter target of 10µg/m^3.

Table 4-3 - Annual Mean $PM_{2.5}$ Continuous Monitoring Data

Site ID	Site Name	Type	X, Y	Distance from Site (km)	Annual mean $PM_{2.5}$ concentration				
					2019	2020*	2021*	2022	2023
CD9	Euston Road	Roadside	529878, 182648	0.8	14	11	11	12	9
KGX	Coopers Lane	Urban Background / Industrial	529831, 183250	0.9	-	-	-	10	8

Notes:

Data for the LBC were obtained from the Air Quality Annual Status Report 2024 respectively.

*2020 and 2021 monitoring data are not considered to be representative of normal conditions nor when making comparisons of long-term trends due to national lockdown restrictions attributed to the COVID-19 pandemic.

PASSIVE MONITORING

4.3.2. Recent monitoring results from those NO_2 diffusion tubes operated by the LBC and LBI located within a 1km radius of the Site are presented in **Table C-1** in **Appendix C**. Their location relative to the Site is illustrated in **Figure 4-1.**

4.3.3. The data in **Table C-1** shows that annual mean NO_2 concentrations have been compliant with the annual mean air quality standard at the majority of monitoring sites within 1km of the Site. The monitoring site nearest to the Site and expected to be most representative, is the roadside site CAM47, located approximately 150m southeast of the Site boundary. **Table C-1** shows that annual mean NO_2 concentrations at CAM47 exceeded annual mean air quality standard in 2019, however, concentrations have remained below the objective since 2019.

4.3.4. Monitored NO_2 concentrations have exceeded 60µg/m^3 at CAM70, CAM71, CAM232 and CAM185 in 2019, suggesting that it is likely that there would be an exceedance of the 1-hour mean air quality standard at these locations. However, there have been no exceedances of 60µg/m^3 since 2019. Hence it is unlikely that there would be any exceedances of the 1-hour mean air quality standard over the last four years.

4.4 DEFRA BACKGROUND AIR QUALITY DATA

4.4.1. Defra publishes estimates of background pollutant concentrations for current and projected future years on its website. These concentrations are provided in 1km x 1km grid squares across the UK and combine measured data with modelled. The latest maps (based on a 2018 reference year) provide annual mean concentration estimates of pollutants up to 2030. **Table 4-4** presents the background pollutant concentrations for NO_2, PM_{10} and $PM_{2.5}$ relevant for the Site's location for 2024.

4.4.2. **Table 4-4** shows that all annual mean background concentrations are below the relevant annual mean air quality standard. Also, the annual mean background $PM_{2.5}$ concentration is compliant with

the interim target concentration of 12µg/m^3, however, exceeding the stricter target of 10µg/m^3 to be achieved by 2030.

Table 4-4 – Defra Annual Mean Background Concentrations (µg/m^3) for 2024

Grid Square	NO_2	PM_{10}	$PM_{2.5}$
530500,182500	34.1	18.8	11.9

4.5 LONDON ATMOSPHERIC EMISSIONS INVENTORY

4.5.1. The LAEI[38] model annual mean concentrations for NO_2, PM_{10} and $PM_{2.5}$ for the Greater London area (up to the M25 motorway) at a grid resolution of 20m by 20m. The closest grid point to the Site is located 0.5m from the façade of the building on Britannia Street.

4.5.2. **Table 4-5** summarises the annual mean LAEI data for 2019, 2025 and 2030 from the closest grid point, which is representative of worst case future receptor locations. The table shows that the current relevant air quality standards are expected to be met at the Site. The 2030 $PM_{2.5}$ annual mean concentration is predicted to be marginally above the 2030 target of 10µg/m^3.

Table 4-5 – LAEI Pollutant Concentrations (µg/m^3)

Pollutant	Air Quality Standard	2019	2025	2030
NO_2	40	37.6	27.2	21.7
PM_{10}	40	22.1	18.6	17.1
$PM_{2.5}$	20	12.8	11.3	10.2

4.6 SUMMARY

4.6.1. LBC has designated the whole borough as an AQMA. Local air quality is primarily influenced by road traffic emissions from vehicles using Britannia Street, Wicklow Street, King Cross Road (A201) and Pentonville Road (A501). The available monitoring data are considered sufficient to characterise current air quality conditions at the Site.

[38] London Atmospheric Emissions Inventory (LAEI) 2019 [online] https://data.london.gov.uk/dataset/london-atmospheric-emissions-inventory--laei--2019 [Accessed October 2024]

4.6.2. The LBC and LBI local air quality monitoring data show that the annual mean NO_2 air quality standard has been met at majority of the sites within 1km of the Site over the five-year period of 2019-2023.

4.6.3. Background concentrations of NO_2, PM_{10} and $PM_{2.5}$ are predicted to be well below the current air quality standards.

4.6.4. In summary, air quality in the vicinity of the Proposed Development can be considered to be improving for NO_2, PM_{10} and $PM_{2.5}$.

5 ASSESSMENT OF IMPACTS

5.1 CONSTRUCTION PHASE

DUST PM_{10} AND $PM_{2.5}$ ARISING FROM ON-SITE ACTIVITIES

5.1.1. Construction activities can generate and/or re-suspend dust and PM_{10}. The following activities have the potential to create dust:

- Site clearance and preparation: This includes demolition activities;
- Preparation of access routes: This covers temporary access and egress points for the Proposed Development;
- Earthworks: This includes excavation and soil movement;
- Materials handling: This includes storage, stockpiling, spillage and disposal of construction materials;
- Vehicles movement: This includes movement of excavators and dumper trucks, and other construction vehicles within the Site;
- Crushing and screening equipment: This includes the use of equipment that crushes or screens materials;
- Plant emissions: Exhaust emissions from construction equipment can contribute to dust, especially when operating at full capacity or during breakdowns;
- Construction activities: Building construction, hardstanding creation, and fabrication processes can also generate dust;
- Finishing and refurbishment: Internal and external finishing can create dust; and
- Landscaping: Site landscaping after construction completion can also generate dust.

5.1.2. Most dust generation is likely to occur during the 'working week'. However, for some activities, like significant earthwork with exposed soil, can potentially generate dust 24/7 if no dust control measures are implemented during the construction period.

ASSESSMENT OF POTENTIAL DUST EMISSION MAGNITUDE

5.1.3. The IAQM assessment methodology has been used to determine the potential dust emission magnitude for the following four different dust, PM_{10} and $PM_{2.5}$ sources: demolition; earthworks; construction; and trackout.

5.1.4. At this stage, specific details on the construction of the Proposed Development are not known. As such, the construction assessment has been completed using the information that is available and professional judgement where appropriate. The findings of the assessment are presented below.

Demolition

5.1.5. No demolition activities will occur at the Site apart from the tunnel vent shaft. Therefore, consideration of the impact of this source on dust soiling and ambient PM_{10} is not required.

Earthworks

5.1.6. The total area of the Site is 990m^2 and the soil comprises loamy and clayey soil type[39], which will be prone to suspension when dry. As a result, it is considered that the earthworks have the potential to create dusty conditions which may impact the PM_{10} concentrations in the local area. Hence, the potential dust emission magnitude for earthwork activities is 'medium'.

Construction

5.1.7. Estimated total construction volume is less than 75,000m^3 with potentially dusty materials being used, such as concrete. Therefore, the potential dust emission magnitude is considered to be 'medium' for construction activities.

Trackout

5.1.8. Traffic information received by the transport consultant suggest that there will be less than 20 HDV outward movements in any one day, travelling over dusty surface material. Based on the size of the development, it is expected that the unpaved road length in the Site will be less than 50m. Therefore, the potential dust emission magnitude of is 'small' for trackout.

5.1.9. **Table 5-1** provides a summary of the potential dust emission magnitude determined for each construction activity considered.

Table 5-1 – Potential Dust Emission Magnitude

Activity	Dust Emission Magnitude
Demolition	N/A
Earthworks	Medium
Construction Activities	Medium
Trackout	Small

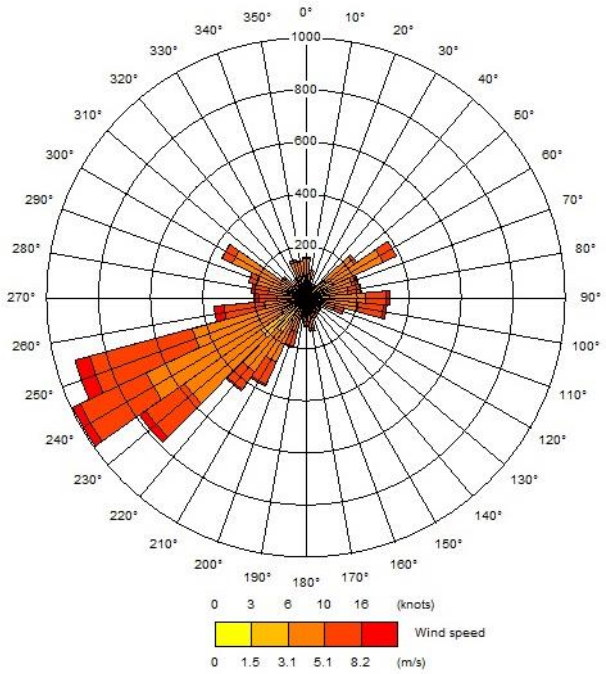
Assessment of Sensitivity of the Study Area

5.1.10. A wind rose for the 2023 meteorological data from London City Airport is presented in **Figure 5-1**. It shows that the prevailing wind direction is from the south-west. London City Airport is the closest station to the site, making it the most representative of local conditions. Therefore, receptors primarily located to the north-east of the Site are more likely to be affected by dust and particulate matter emitted and re-suspended during the construction phase. The Site is surrounded by residential and commercial properties.

[39] Cranfield University (2023) *Soilscapes Map*. [online] Available from: https://www.landis.org.uk/soilscapes/# [Accessed Octobert 2024].

5.1.11. According to the IAQM Construction Dust guidance, residential properties would be considered 'high sensitivity' receptors for both dust and particulate matter. Places of work, where exposure would be short-term are assumed to be medium sensitivity for dust and 'low' to 'medium' sensitivity for PM_{10}.

Figure 5-1 - 2023 Windrose from London City Airport



5.1.12. **Figure 5-2** illustrates the area of the Site and those land uses present within a 250m radius of the Site boundary.

5.1.13. Given the nature of construction phase emissions, it is likely that the majority of dust would be deposited in close proximity to the source. The closest high sensitivity receptors to the Site are residential properties at Derby Lodge located immediately to the east and are within 20m from the Site boundary.

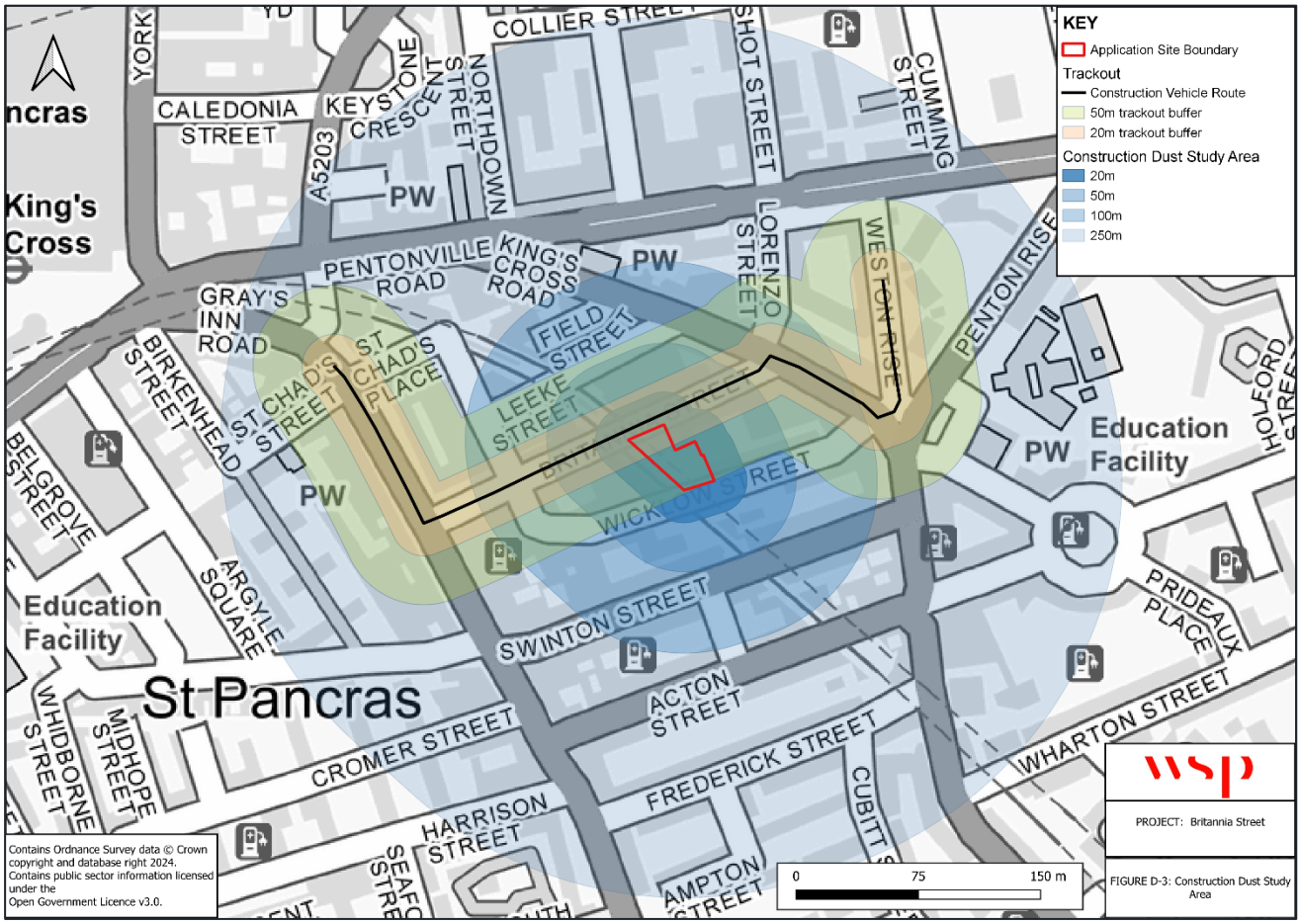
5.1.14. There are no ecological receptors within 250m of the Site, therefore the impacts of construction dust on this ecological receptor can be scoped out and is not considered further in this assessment.

5.1.15. shows that background PM_{10} concentrations are currently about 18.8µg/m^3 at the Site and are likely to improve, i.e., decrease, over time.

5.1.16. There are between 10 to 100 highly sensitive receptors within 20m of the Site boundary. These receptors include residential apartments on Wicklow Street and Britannia Street. Consequently, the sensitivity of the area to dust soiling and human health impacts (considered in conjunction with the predicted background PM_{10} concentration), is classed as high and low respectively.

5.1.17. There are more than 100 highly sensitive residential receptors within 20m of construction traffic routes up to 250m from the Site. These receptors include residential premises that front on to the Britannia Street, A201 King's Cross Road, Weston Rise Road and A501. Hence, for trackout, the sensitivity of the area to dust soiling and human health impacts is classed as high and medium respectively.

Figure 5-2 - Construction Dust Study Area



5.1.18. Taking the above into account and following the IAQM assessment methodology, the sensitivity of the area to changes in dust, PM_{10} and $PM_{2.5}$ has been derived for each of the construction activities considered. The results are shown in **Table 5-2**.

Table 5-2 - Sensitivity of the Study Area

Potential Impact	Demolition	Earthworks	Construction	Trackout
Dust Soiling	N/A	High	High	High
Human Health	N/A	Low	Low	Medium

RISK OF IMPACTS

5.1.19. The predicted dust emission magnitude has been combined with the defined sensitivity of the area to determine the risk of impacts during the construction phase, prior to mitigation. Table 5-3 provides a summary of the risk of dust impacts for the Proposed Development. The risk category identified for each construction activity has been used to determine the level of mitigation required.

Table 5-3 – Summary of Dust Risk

Potential Impact	Demolition	Earthworks	Construction	Trackout
Dust Soiling	N/A	Medium Risk	Medium Risk	Low Risk
Human Health	N/A	Low Risk	Low Risk	Low Risk

5.1.20. The results of the dust risk assessment indicate that there is a **medium risk** of impacts on dust soiling during construction of the Proposed Development and there is a **low risk** of impacts in relation to human health.

5.2 OPERATIONAL PHASE

Exposure of Future Occupants

5.2.1. As shown in **Table 4-5**, the LAEI data, which are considered representative of future receptor locations, are generally below the relevant air quality standards. The 2030 LAEI annual mean $PM_{2.5}$ concentration marginally exceed the target of 10µg/m^3. However, this will be mitigated by mechanical ventilation with inlet points on the roof of the building away from pollution sources. Therefore, exposure to poor air quality is unlikely and the Site is suitable for the Proposed Development.

6 MITIGATION AND RESIDUAL EFFECTS

6.1 CONSTRUCTION PHASE

MITIGATION

6.1.1. Based on the assessment results, mitigation will be required. Recommended mitigation measures are given below. General mitigation measures have been derived and recommended based on the highest dust risk category identified in **Table 5-3**.

General Measures

Site management

- Develop and implement a stakeholder communications plan that includes community engagement before work commences on site.
- Develop a Dust Management Plan (DMP).
- Name and contact details of person(s) accountable for air quality pollutant emissions and dust issues should be displayed on the site boundary.
- Display the head or regional office contact information.
- Record and respond to all dust and air quality pollutant emissions complaints.
- Make complaints log available to the local authority when asked.
- Carry out regular dust soiling checks of buildings within 100m of site boundary providing cleaning if necessary.
- Carry out regular site inspections to monitor compliance with air quality and dust control procedures, record inspection results, and make the inspection log available to the local authority when asked.
- Increase the frequency of site inspections by those accountable for dust and air quality pollutant emissions issues when activities with a high potential to produce dust and emissions are being carried out, and during prolonged dry or windy conditions.
- Record any exceptional incidents that cause dust and air pollutant emissions, either on or off the site, and the action taken to resolve the situation is to be recorded in the log book.

Preparing and maintaining the site

- Plan site layout: machinery and dust causing activities should be located away from receptors.
- Erect solid screens or barriers around dust activities or the site boundary that are at least as high as any stockpiles on site.
- Fully enclose the site or specific operations where there is a high potential for dust production and/or activities will last for extensive periods.
- Avoid site runoff of water or mud.
- Keep site fencing, barriers and scaffolding clean using wet methods.
- Remove materials from site as soon as possible.
- Cover, seed or fence stockpiles to prevent wind whipping.
- Agree monitoring locations with LBC, if required.
- Where possible, and if required by LBC, commence baseline monitoring at least three months before the construction phase begins. Real-time dust and air quality pollutant monitors installed on-site should be regularly maintained in line with manufacturer recommendations.

Operating vehicle/machinery and sustainable travel

- Ensure all NRMM comply with the standards set out within the SPG guidance, including:
- NRMM with compression ignition engines of net power between 37kW and 560 kW should meet Stage IV of EU Directive 97/68/EC for both NO_X and particulate matter.
- An inventory of all NRMM should be kept on-site stating the emission limits for all equipment. All machinery should be regularly serviced, and service logs kept on-site for inspection. This documentation should be made available to Local Authority officers as required.
- All NRMM should be registered on the Greater London Authority's NRMM website (http://nrmm.london/).
- Ensure all on-road vehicles comply with the requirements of the London Low Emission Zone.
- 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 possible.
- Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials.
- Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing).

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 mitigation (using recycled water where possible).
- Use enclosed chutes, conveyors and covered skips.
- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.
- Ensure equipment is readily available on site to clean any dry spillages and clean up spillages as they occur.

Waste management

- Reuse and recycle waste to reduce dust from waste materials.
- Avoid bonfires and burning of waste materials.

Measures specific to earthworks

- Re-vegetate earthworks and exposed areas or soil stockpiles to stabilise surfaces as soon as practicable.
- Use Hessian, mulches or tackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable.
- Only remove secure covers in small areas during work and not all at once.

Measures specific to 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.
- For smaller supplies of fine powder materials ensure bags are sealed after use and stored appropriately to prevent dust.
- All construction plant and equipment should be maintained in good working order and not left running when not in use.

Measures specific to 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 sites are securely covered to prevent escape of materials during transport.
- Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems and regularly cleaned.
- Inspect haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable.
- Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).
- Record all inspections of haul routes and any subsequent action in a site log book.
- Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits.
- Access gates to be located at least 10m from receptors where possible.

6.1.2. Detailed mitigation measures to control construction traffic should be discussed with the LBC to establish the most suitable access routes for the site traffic and will be captured in the Construction Logistics Plan following consultation. The most effective mitigation will be achieved by ensuring that construction traffic does not pass along sensitive roads (residential roads, congested roads, via unsuitable junctions, etc.) where possible, and that vehicles are kept clean (through the use of wheel washers, etc.) and sheeted when on public highways. Timing of large-scale vehicle movements to avoid peak hours on the local road network will also be beneficial.

6.1.3. Prior to work commencing, the appointed contractor should prepare a method statement and a comprehensive, site specific DMP, and agree the DMP with the LBC. The measures in the DMP may differ from the mitigation measures recommended above due to the specific methods to be used on-site and/or measures related to activities that will not take place on the site do not need to be included.

RESIDUAL EFFECTS

6.1.4. With the implementation of the mitigation measures described above and good site practices, the residual effects of dust and PM_{10} generated by construction activities are expected to be **not significant**.

6.2 OPERATIONAL PHASE

MITIGATION

6.2.1. New receptors that are introduced by the Proposed Development will not be exposed to NO_2 and PM_{10} concentrations exceeding air quality standards. It is acknowledged that the 2030 LAEI $PM_{2.5}$ annual mean concentrations are predicted to marginally exceed the 2030 target. However, the Proposed Development will include mechanical ventilation with overall ventilation inlet point being located at roof level away from pollution sources.

7 CONCLUSIONS

7.1.1. A qualitative assessment of the potential impacts on local air quality during the construction and operational phases of the Proposed Development at Britannia Street, London has been undertaken with reference to relevant guidance.

7.1.2. A review of roadside monitoring data collected by the local authority, LBC and LBI, over the past five years shows that air quality levels have improved in recent years. Defra's background mapping data are below the relevant air quality standards. Overall, the Site is suitable for the Proposed Development and is unlikely to expose new receptors to poor air quality.

7.1.3. A qualitative assessment using the IAQM methodology identified a medium risk of dust soiling and a low risk to human health due to increased particulate matter concentrations from construction activities. However, the impact of dust, PM_{10}, and $PM_{2.5}$ emissions can be significantly reduced through good site practices and the implementation of mitigation measures. Since construction activities are temporary and intermittent, the residual effects of dust, PM_{10}, and $PM_{2.5}$ on air quality will be insignificant.

7.1.4. The predicted changes in traffic flows during the construction and operational phases fall below the EPUK/IAQM Land-Use Planning Guidance 2017 traffic screening criteria that would trigger a quantitative assessment for locations inside an AQMA. Consequently, it is anticipated that the Proposed Development will not have a significant effect on local air quality, and the assessment of air quality impacts associated with its construction and operation has been scoped out.

7.1.5. For the operational phase exposure assessment, the predicted future year concentrations are generally below the relevant air quality standards. However, the $PM_{2.5}$ annual mean concentrations are predicted to marginally exceed the 2030 target. However, mechanical ventilation with inlets at roof level is proposed. Therefore, exposure of future site users to concentrations above the air quality standards is not anticipated.

7.1.6. Overall, the Proposed Development is anticipated to have a minimal impact on local air quality. The assessment has demonstrated that the development aligns with national and local air quality policies and that appropriate mitigation measures are in place to address potential issues related to construction activities.

Appendix A

GLOSSARY

Acronym or Term	Definition
Air quality objective	Policy targets generally expressed as a maximum ambient concentration to be achieved, either without exception or with a permitted number of exceedances within a specific timescale (see also air quality standard).
Air quality standard	The concentrations of pollutants in the atmosphere which can broadly be taken to achieve a certain level of environmental quality. The standards are based on the assessment of the effects of each pollutant on human health including the effects on sensitive subgroups (see also air quality objective).
Ambient air	Outdoor air in the troposphere, excluding workplace air.
Annual mean	The average (mean) of the concentrations measured for each pollutant for one year.
AQMA	Air Quality Management Area
Conservative	Tending to over-predict the impact rather than under-predict.
Data capture	The percentage of all the possible measurements for a given period that were validly measured.
Defra	Department for Environment, Food and Rural Affairs.
Dust	Dust comprises particles typically in the size range 1-75 micrometres (µm) in aerodynamic diameter and is created through the action of crushing and abrasive forces on materials.
Emission rate	The quantity of a pollutant released from a source over a given period of time.
Exceedance	A period of time where concentrations of a pollutant is greater than the appropriate air quality standard.
Fugitive emissions	Emissions arising from the passage of vehicles that do not arise from the exhaust system.
GLA	Greater London Authority
LAQM	Local Air Quality Management.
LBC	London Borough of Camden
LBI	London Borough of Islington
NO_2	Nitrogen dioxide
NOx	Oxides of nitrogen (NO + NO_2)
PM_{10}	Particulate matter with an aerodynamic diameter of less than 10 micrometres.
$PM_{2.5}$	Particulate matter with an aerodynamic diameter of less than 2.5 micrometres.
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. This arises when heavy duty vehicles (HDV) leave

Acronym or Term	Definition
	the construction / demolition site with dusty materials, which may then spill onto the road, and/or when HDV transfer dust and dirt onto the road having travelled over muddy ground on site.
µg/m^3	Micrograms per cubic metre. A measure of concentration in terms of mass per unit volume. A concentration of 1µg/m^3 means that one cubic metre of air contains one microgram (millionth of a gram) of pollutant.

Appendix B

IAQM CONSTRUCTION DUST METHODOLOGY

Step 1 – Screening the need for a Detailed Assessment

An assessment will normally be required where there are:

- 'Human receptors' within 250m of the site boundary; or within 50m of the route(s) used by construction vehicles on the public highway, up to 250m from the site entrance(s); and/or
- 'Ecological receptors' within 50m of the site boundary; or within 50m of the route(s) used by construction vehicles on the public highway, up to 250m from the site entrance(s).

Where the need for a more detailed assessment is screened out, it can be concluded that the level of risk is "negligible".

Step 2A – Define the Potential Dust Emission Magnitude

The following are examples of how the potential dust emission magnitude for different activities can be defined (note that not all the criteria need to be met for a particular class). Other criteria may be used if justified in the assessment.

Table 2A: Definitions of Dust Emission Magnitudes

Dust Emission Magnitude	Activity	
Large	Demolition	>75,000m^3 building demolished, dusty material (e.g. concrete), on-site crushing/screening, demolition >12m above ground level
	Earthworks	>110,000m^2 site area, dusty soil type (e.g. clay) >10 earth moving vehicles active simultaneously >6m high bunds formed
	Construction	>75,000m^3 building volume, on site concrete batching, sandblasting
	Trackout	>50 HDVs out / day, dusty surface material (e.g. clay) >100m unpaved roads
Medium	Demolition	12,000 - 75,000m^3 building demolished, dusty material (e.g. concrete) 6-12m above ground level
	Earthworks	18,000 - 110,000m^2 site area, moderately dusty soil (e.g. silt), 5-10 earth moving vehicles active simultaneously, 3m - 6m high bunds
	Construction	12,000 - 75,000m^3 building volume, dusty material e.g. concrete, on- site concrete batching

Dust Emission Magnitude	Activity	
	Trackout	20 - 50 HDVs out / day, moderately dusty surface material (e.g. clay) 50 -100m unpaved roads
Small	Demolition	<12,000m^3 building demolished, non-dusty material (e.g. metal cladding), <6m above ground level, work during wetter months
	Earthworks	<18,000m^2 site area, soil with large grain size (e.g. sand), <5 earth moving vehicles active simultaneously, <3m high bunds,
	Construction	<12,000m^3, non-dusty material (e.g. metal cladding or timber)
	Trackout	<20 HDVs out / day, non-dusty soil <50m unpaved roads

STEP 2B – DEFINE THE SENSITIVITY OF THE AREA

The tables below present the IAQM assessment methodology to determine the sensitivity of the area to dust soiling, human health and ecological impacts respectively. The IAQM guidance provides guidance to allow the sensitivity of individual receptors to dust soiling and health effects to assist in the assessment of the overall sensitivity of the study area.

Table 2Ba: Sensitivity of the Area to Dust Soiling Effects

Receptor Sensitivity	Number of Receptors	Distance from the Source (m)			
		<20	<50	<100	<250
High	>100	High	High	Medium	Low
	10-100	High	Medium	Low	Low
	1-10	Medium	Low	Low	Low
Medium	>1	Medium	Low	Low	Low
Low	>1	Low	Low	Low	Low

Table 2Bb: Sensitivity of the Area to Human Health Impacts

Receptor Sensitivity	Annual Mean PM_{10} Concentration ($\mu g/m^3$)	Number of Receptors	Distance from the Source (m)			
			<20	<50	<100	<250
High	>32	>100	High	High	High	Medium
		10-100	High	High	Medium	Low
		1-10	High	Medium	Low	Low
	28-32	>100	High	High	Medium	Low
		10-100	High	Medium	Low	Low
		1-10	High	Medium	Low	Low
	24-28	>100	High	Medium	Low	Low
		10-100	High	Medium	Low	Low
		1-10	Medium	Low	Low	Low
	<24	>100	Medium	Low	Low	Low
		10-100	Low	Low	Low	Low
		1-10	Low	Low	Low	Low
Medium	>32	>10	High	Medium	Low	Low
		1-10	Medium	Low	Low	Low
	28-32	>10	Medium	Low	Low	Low
		1-10	Low	Low	Low	Low
	24-28	>10	Low	Low	Low	Low
		1-10	Low	Low	Low	Low

Receptor Sensitivity	Annual Mean PM_{10} Concentration ($\mu g/m^3$)	Number of Receptors	Distance from the Source (m)			
			<20	<50	<100	<250
	<24	>10	Low	Low	Low	Low
		1-10	Low	Low	Low	Low
Low	-	>1	Low	Low	Low	Low

Table 2Bc: Sensitivity of the Area to Ecological Impacts

Receptor Sensitivity	Distance from the Sources (m)	
	<20	<50
High	High	Medium
Medium	Medium	Low
Low	Low	Low

Step 2C – Define the Risk of Impacts

The dust emissions magnitude determined at Step 2A should be combined with the sensitivity of the area determined at Step 2B to determine the risk of impacts without mitigation applied. For those cases where the risk category is 'negligible' no mitigation measures beyond those required by legislation will be required.

Table 2C: Risk of Dust Impacts

Sensitivity of surrounding area	Dust Emission Magnitude		
	Large	Medium	Small
Demolition			
High	High Risk	Medium Risk	Medium Risk
Medium	High Risk	Medium Risk	Low Risk

Sensitivity of surrounding area	Dust Emission Magnitude		
	Large	Medium	Small
Low	Medium Risk	Low Risk	Negligible
Earthworks and Construction			
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible
Trackout			
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible

Step 3 –Site Specific Mitigation

Having determined the risk categories for each of the four activities it is possible to determine the site-specific measures to be adopted. These measures will be related to whether the site is considered to be a low, medium or high-risk site. The IAQM guidance details the mitigation measures required for high, medium and low risk sites as determined in Step 2C.

Step 4 – Determine Significant Effects

Once the risk of dust impacts has been determined in Step 2C and the appropriate dust mitigation measures identified in Step 3, the final step is to determine whether there are significant effects arising from the construction phase. For almost all construction activities, the application of effective mitigation should prevent any significant effects occurring to sensitive receptors and therefore the residual effect will normally be negligible.

Appendix C

MONITORING DATA

Table C-1 - Local Authority Passive Air Quality Monitoring Data

Site ID	Site Name	Type	X, Y	LA	Distance to Site (km)	Annual mean NO_2 concentrations (µg/m^3)				
						2019	2020*	2021*	2022	2023
CAM47	Farringdon 1 - Acton Street	Roadside	530760,182782	LBC	0.1	**48.27**	30.91	34.82	32.26	36.39
CAM48	Farringdon 2 - Frederick Street	Roadside	530705,182701	LBC	0.2	32.93	23.97	23.88	24.48	25.37
CAM55	Farringdon 9 - Grays Inn Road North	Roadside	530620,182633	LBC	0.2	-	28.35	30.11	30.21	33.18
BIS005/04	Percy Circus	Urban Background	530921,182861	LBI	0.3	32.0	23.0	22.0	19.0	-
CAM73	St. George's Gardens East	Urban Background	530512,182511	LBC	0.4	28.31	22.47	17.23	19.21	17.74
CAM53	Farringdon 7 - Lloyd Baker Street	Roadside	530990,182574	LBC	0.5	37.01	26.27	25.09	23.85	27.93
CAM16	HSS Phase 4&5 4 -Argyle Primary School -Tonbridge Street	Roadside	530210,182748	LBC	0.5	-	-	24.91	24.22	25.71

Site ID	Site Name	Type	X, Y	LA	Distance to Site (km)	Annual mean NO_2 concentrations (µg/m^3)				
						2019	2020*	2021*	2022	2023
CAM194	Torrington-Tavistock/Midland-Judd 16 - Tavistock Place/Regent's Square	Roadside	530343,182500	LBC	0.5	**41.15**	28.63	27.95	26.66	29.89
CAM72	St. George's Gardens (prev. 'Wakefield Gardens')	Urban Background	530430,182430	LBC	0.5	25.22	-	-	-	-
CAM199	Torrington-Tavistock/Midland-Judd 21 - Judd Street	Roadside	530138,182696	LBC	0.5	**42.17**	31.74	-	-	-
CAM56	Farringdon 10 - Grays Inn Road/Wren Street	Roadside	530775,182346	LBC	0.5	-	25.57	24.26	23.08	28.34
CAM193	Torrington-Tavistock/Midland-Judd 15 - Handel Street	Roadside	530338,182420	LBC	0.6	36.2	26.79	-	-	-

Site ID	Site Name	Type	X, Y	LA	Distance to Site (km)	Annual mean NO_2 concentrations ($\mu g/m^3$)				
						2019	2020*	2021*	2022	2023
CAM70	Euston Road	Kerbside	530093,182792	LBC	0.6	**70.65**	**53.68**	**56.9**	**50.64**	**51.57**
CAM196	Torrington-Tavistock/Midland-Judd 18 - Leigh Street	Roadside	530193,182529	LBC	0.6	38.61	30.07	27.2	26.21	28.47
CAM49	Farringdon 3 - Calthorpe Street	Roadside	530879,182342	LBC	0.6	37.79	25.98	24.07	27.77	30.33
CAM198	Torrington-Tavistock/Midland-Judd 20 - Hastings Street	Roadside	530100,182682	LBC	0.6	37.74	26.85	-	-	-
CAM192	Torrington-Tavistock/Midland-Judd 14 - Hunter Street	Roadside	530280,182407	LBC	0.6	**41.05**	30.41	-	-	-
CAM200	Torrington-Tavistock/Midland-Judd 22 - Midland Road	Roadside	530044,182947	LBC	0.6	**57.86**	39.85	35.17	35.09	38.47

Site ID	Site Name	Type	X, Y	LA	Distance to Site (km)	Annual mean NO_2 concentrations ($\mu g/m^3$)				
						2019	2020*	2021*	2022	2023
CAM201	Torrington-Tavistock/Midland-Judd 23 - Bidborough Street	Roadside	530054,182710	LBC	0.6	**41.84**	28.07	-	-	-
CAM197	Torrington-Tavistock/Midland-Judd 19 - Sandwich Street	Roadside	530109,182567	LBC	0.6	36.89	27.54	-	-	-
CAM50	Farringdon 4 - Grays Inn Road/Calthorpe Street	Roadside	530822,182276	LBC	0.6	**46.62**	27.96	29.35	29.69	36.25
BIS005/03	Caledonian Road	Roadside	530708,183510	LBI	0.6	39	29.0	29.0	26.0	-
CAM195	Torrington-Tavistock/Midland-Judd 17 - Marchmont Street	Roadside	530122,182465	LBC	0.7	37.89	32.3	-	-	-
BIS005/05	Myddelton Square	Urban Background	531315,182991	LBI	0.7	28	21.0	20.0	20.0	-

Site ID	Site Name	Type	X, Y	LA	Distance to Site (km)	Annual mean NO_2 concentrations (µg/m^3)				
						2019	2020*	2021*	2022	2023
CAM305	Somers Town 20 - Francis Crick Institute/Midland Road	Roadside	529987,183060	LBC	0.7	-	-	-	32.09	33.31
CAM202	Torrington-Tavistock/Midland-Judd 24 - Mabledon Place	Roadside	529985,182674	LBC	0.7	**47.56**	36.25	-	-	-
CAM302	Somers Town 17 - Ossulston Street South	Roadside	529949,182798	LBC	0.7	-	-	-	25.15	26.09
CAM306	Somers Town 21 - Goods Way	Roadside	530231,183453	LBC	0.7	-	-	-	30.48	28.60
BIS005/02	Rosebery Avenue	Roadside	531327,182592	LBI	0.7	**44**	31.0	30.0	30.0	-
CAM189	Torrington-Tavistock/Midland-Judd 11 - Tavistock Place	Roadside	530104,182388	LBC	0.7	39.95	32.22	29.64	29.67	32.50

Site ID	Site Name	Type	X, Y	LA	Distance to Site (km)	Annual mean NO_2 concentrations (µg/m^3)				
						2019	2020*	2021*	2022	2023
CAM191	Torrington-Tavistock/Midland-Judd 13 - Marchmont Street	Roadside	530177,182316	LBC	0.7	**40.05**	32.09	-	-	-
CAM182	Torrington-Tavistock/Midland-Judd 4 - Grenville Street	Roadside	530386,182171	LBC	0.8	**43.83**	31.97	27.61	29.57	30.10
CAM303	Somers Town 18 - Levita House	Roadside	529887,182813	LBC	0.8	-	-	-	23.76	22.64
CAM71	Euston Road LAQN colocation	Roadside	529907,182670	LBC	0.8	**65.28**	**46.57**	**46.49**	**43.15**	**47.52**
CAM232	WEP 17 - Euston Road (137)	Roadside	529905,182667	LBC	0.8	**69.6**	**47.21**	**46.08**	-	-
CAM60	Grays Inn Road South 3 -Roger Street	Roadside	530884,182124	LBC	0.8	-	-	27.86	30.53	31.95
CAM78	Brill Place	Roadside	529904,183138	LBC	0.8	**44.12**	**43.89**	34.19	33.13	35.08

Site ID	Site Name	Type	X, Y	LA	Distance to Site (km)	Annual mean NO_2 concentrations (µg/m^3)				
						2019	2020*	2021*	2022	2023
CAM149	York Way 3 - York Way Art House	Roadside	530320,183606	LBC	0.8	-	29.66	31.45	28.66	29.85
CAM181	Torrington-Tavistock/Midland-Judd 3 - Bernard Street	Roadside	530292,182162	LBC	0.8	**41.53**	31.02	-	-	
CAM59	Grays Inn Road South 2 -John Street	Roadside	530823,182079	LBC	0.8	-	-	25.29	26.31	29.51
CAM61	Grays Inn Road South 4 - Elm Street	Roadside	530965,182112	LBC	0.8	-	-	27.3	28.69	28.63
CAM203	Torrington-Tavistock/Midland-Judd 25 - Duke's Road	Roadside	529893,182540	LBC	0.8	**42.3**	31	-	-	-
CAM208	Torrington-Tavistock/Midland-Judd 30 - Guildford Street	Roadside	530352,182100	LBC	0.8	**46.49**	31.39	-	-	-

Site ID	Site Name	Type	X, Y	LA	Distance to Site (km)	Annual mean NO_2 concentrations ($\mu g/m^3$)				
						2019	2020*	2021*	2022	2023
CAM325	Clerkenwell 6 - Rosebery Ave/Warner St	Roadside	531123,182188	LBC	0.8	-	-	-	-	31.95
CAM300	Somers Town 15 - Chalton Street South	Roadside	529815,182830	LBC	0.8	-	-	-	23.05	22.47
CAM190	Torrington-Tavistock/Midland-Judd 12 - Coram Street	Roadside	530097,182242	LBC	0.8	**45.74**	37.09	-	-	-
CAM54	Farringdon 8 - Warner Street	Roadside	531147,182179	LBC	0.9	36.01	24.66	23.9	24.95	25.04
CAM286	Somers Town 1 - Midland Road/Pancras Road	Roadside	529885,183280	LBC	0.9	-	-	-	38.49	**40.39**
CAM301	Somers Town 16 - Churchway	Roadside	529802,182703	LBC	0.9	-	-	-	27.86	27.17

Site ID	Site Name	Type	X, Y	LA	Distance to Site (km)	Annual mean NO_2 concentrations ($\mu g/m^3$)				
						2019	2020*	2021*	2022	2023
CAM30	HSS Phase 4&5 18 -Christopher Hatton - Mount Pleasant	Roadside	531028,182092	LBC	0.9	-	-	33.33	33.7	32.48
CAM58	Grays Inn Road South 1 - Northington Street / King's Mews	Roadside	530915,182046	LBC	0.9	-	-	23.53	24.59	26.92
CAM319	Holborn 10 - Great Ormond Street	Roadside	530529,182013	LBC	0.9	-	-	-	-	31.50
CAM304	Somers Town 19 - Ossulston Street North	Roadside	529786,183038	LBC	0.9	-	-	-	27.53	26.14
CAM324	Clerkenwell 5 - Rosebery Ave/Laystall St	Roadside	531092,182097	LBC	0.9	-	-	-	-	39.23
CAM204	Torrington-Tavistock/Midland-Judd 26 - Upper Woburn Place	Roadside	529860,182451	LBC	0.9	**59.37**	**43.16**	37.01	37.27	-

Site ID	Site Name	Type	X, Y	LA	Distance to Site (km)	Annual mean NO_2 concentrations ($\mu g/m^3$)				
						2019	2020*	2021*	2022	2023
CAM179	Torrington-Tavistock/Midland-Judd 1 - Herbrand Street	Roadside	530221,182086	LBC	0.9	**49.02**	34.71	-	-	-
CAM289	Somers Town 4 - Edith Neville Primary School	Roadside	529797,183187	LBC	0.9	-	-	-	22.36	22.50
CAM180	Torrington-Tavistock/Midland-Judd 2 - Guildford Street (west end)	Roadside	530234,182066	LBC	0.9	**54.13**	36.64	-	-	-
CAM257	Canal Location 5 - Granary Square	Roadside	529988,183524	LBC	0.9	-	-	23.42	23.59	24.36
CAM185	Torrington-Tavistock/Midland-Judd 7 - Woburn Place	Roadside	530098,182122	LBC	0.9	**64.49**	**43.26**	-	-	-
CAM299	Somers Town 14 - Chalton Street	Roadside	529717,182992	LBC	0.9	-	-	-	22.91	22.60

Site ID	Site Name	Type	X, Y	LA	Distance to Site (km)	Annual mean NO_2 concentrations ($\mu g/m^3$)				
						2019	2020*	2021*	2022	2023
	North/Phoenix Road									
CAM79	Tavistock Gardens	Urban Background	529880,182334	LBC	0.9	33.9	26.78	22.2	23.91	21.30
CAM287	Somers Town 2 - Chenies Place East	Roadside	529813,183349	LBC	1.0	-	-	-	25.91	23.47
CAM323	Clerkenwell 4 - Clerkenwell Road at junction with Rosebery Avenue	Roadside	531012,181982	LBC	1.0	-	-	-	-	41.16
CAM52	Farringdon 6 - Summers Street	Roadside	531239,182105	LBC	1.0	32.7	23.77	22.22	23.46	25.35
CAM51	Farringdon 5 - Ray Street/Herbal Hill	Roadside	531294,182146	LBC	1.0	33.42	22.9	23.04	22.53	25.07
CAM322	Clerkenwell 3 - Laystall Road south	Roadside	531160,182039	LBC	1.0	-	-	-	-	31.20

Site ID	Site Name	Type	X, Y	LA	Distance to Site (km)	Annual mean NO_2 concentrations (µg/m^3)				
						2019	2020*	2021*	2022	2023
CAM288	Somers Town 3 - Chenies Place West	Roadside	529750,183288	LBC	1.0	-	-	-	20.91	21.51
CAM318	Holborn 9 - Theobalds Road	Roadside	530845,181904	LBC	1.0	-	-	-	-	**40.27**
CAM205	Torrington-Tavistock/Midland-Judd 27 - Endsleigh Street	Roadside	529753,182452	LBC	1.0	**44.64**	33.24	-	-	-
CAM321	Clerkenwell 2 - Clerkenwell Road at junction with Back Hill	Roadside	531223,182034	LBC	1.0	-	-	-	-	34.86

Where a concentration is shown in **bold** the air quality standard (40µg/m^3) is exceeded.

Data for the LBC and LBI was obtained from the Air Quality Annual Status Report 2024 and 2023 respectively.

*2020 and 2021 monitoring data is not considered to be representative of normal conditions nor when making comparisons of long-term trends due to national lockdown restrictions attributed to the outbreak of the COVID-19 pandemic

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