

Air Quality Assessment

Mondial House, Mondial Way, Harlington, Hayes, UB3 5AR
RG Airspace Ltd

August 2026

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Introduction

This report assesses the potential impact on local air quality of a Proposed Development at Mondial House, Mondial Way, Harlington, Hayes, UB3 5AR. The Site falls within the administrative jurisdiction of the London Borough of Hillingdon (LBH). The Site location is presented in Figure 1.

The Proposed Development comprises a two storey airspace extension to provide 28 apart-let units (C1 use class), associated ancillary facilities, cycle parking and refuse.

The proposed third and fourth floor layouts are presented in Figure 2 and Figure 3, respectively.

The site falls within the LBH Air Quality Management Area (AQMA), which is a borough-wide designation due to measured and modelled exceedances of the annual mean Air Quality Objective for nitrogen dioxide (NO₂).

An assessment has been undertaken to determine the potential impact on local air quality during both the construction and operational phases of the development, with recommendations made for mitigation where appropriate.

FIGURE 1: SITE LOCATION

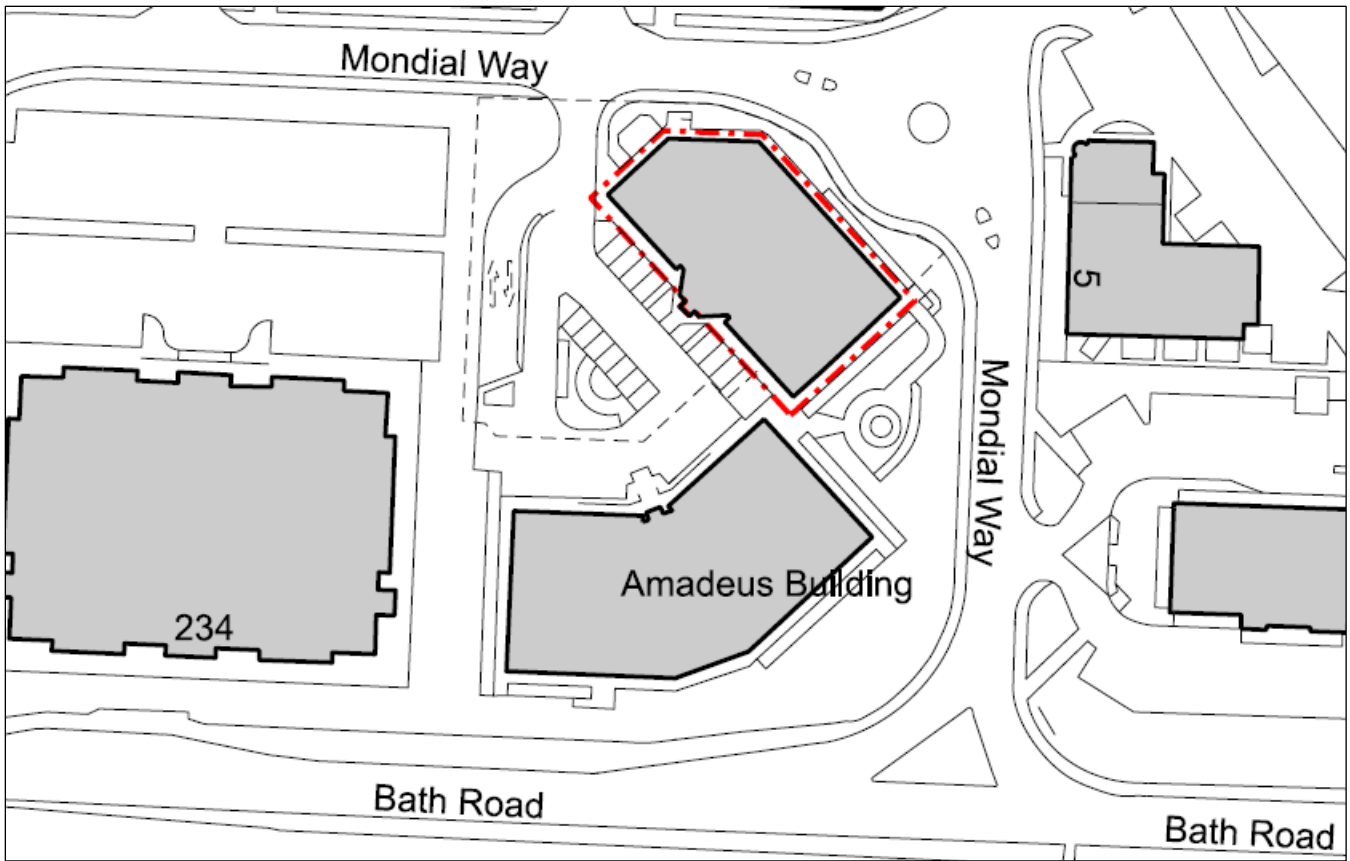


FIGURE 2: PROPOSED THIRD-FLOOR LAYOUT

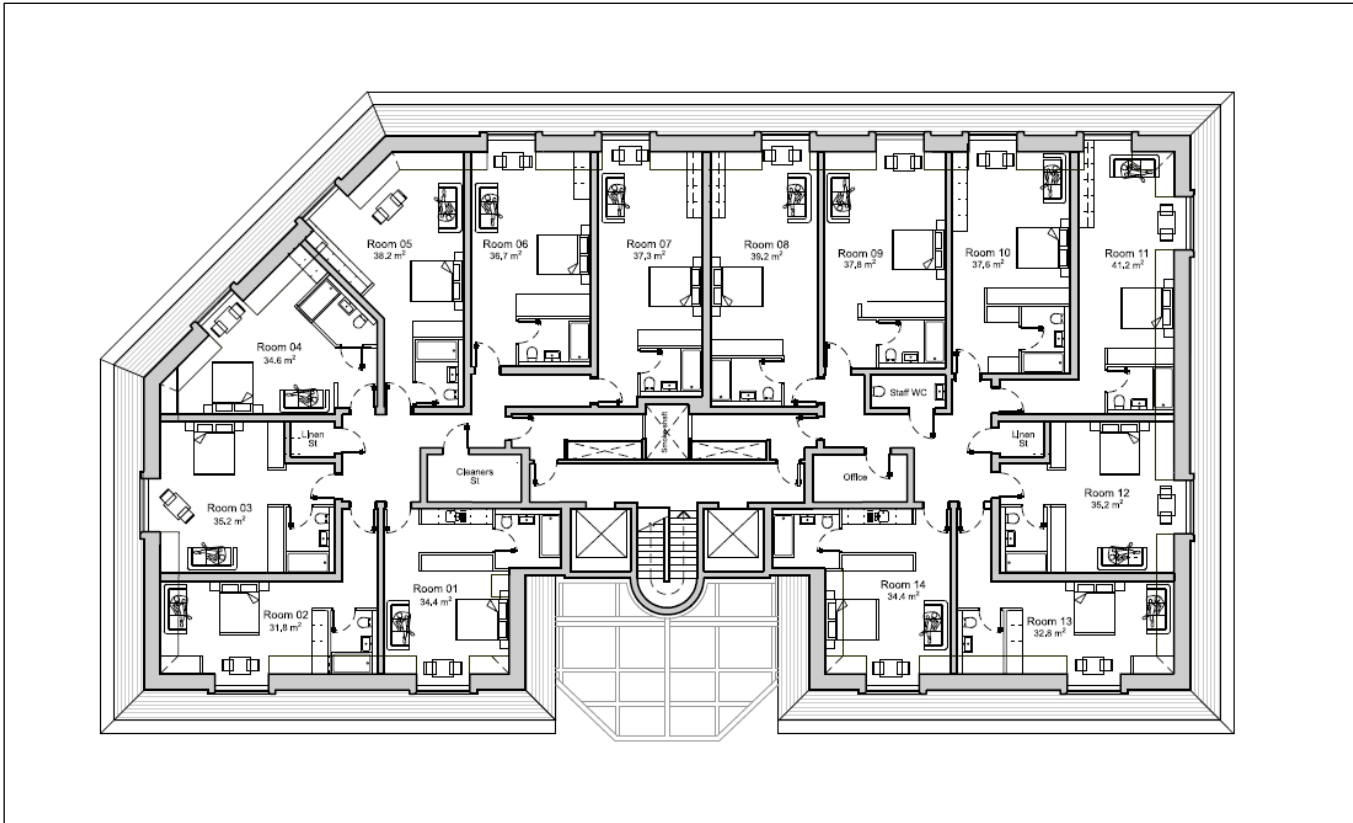
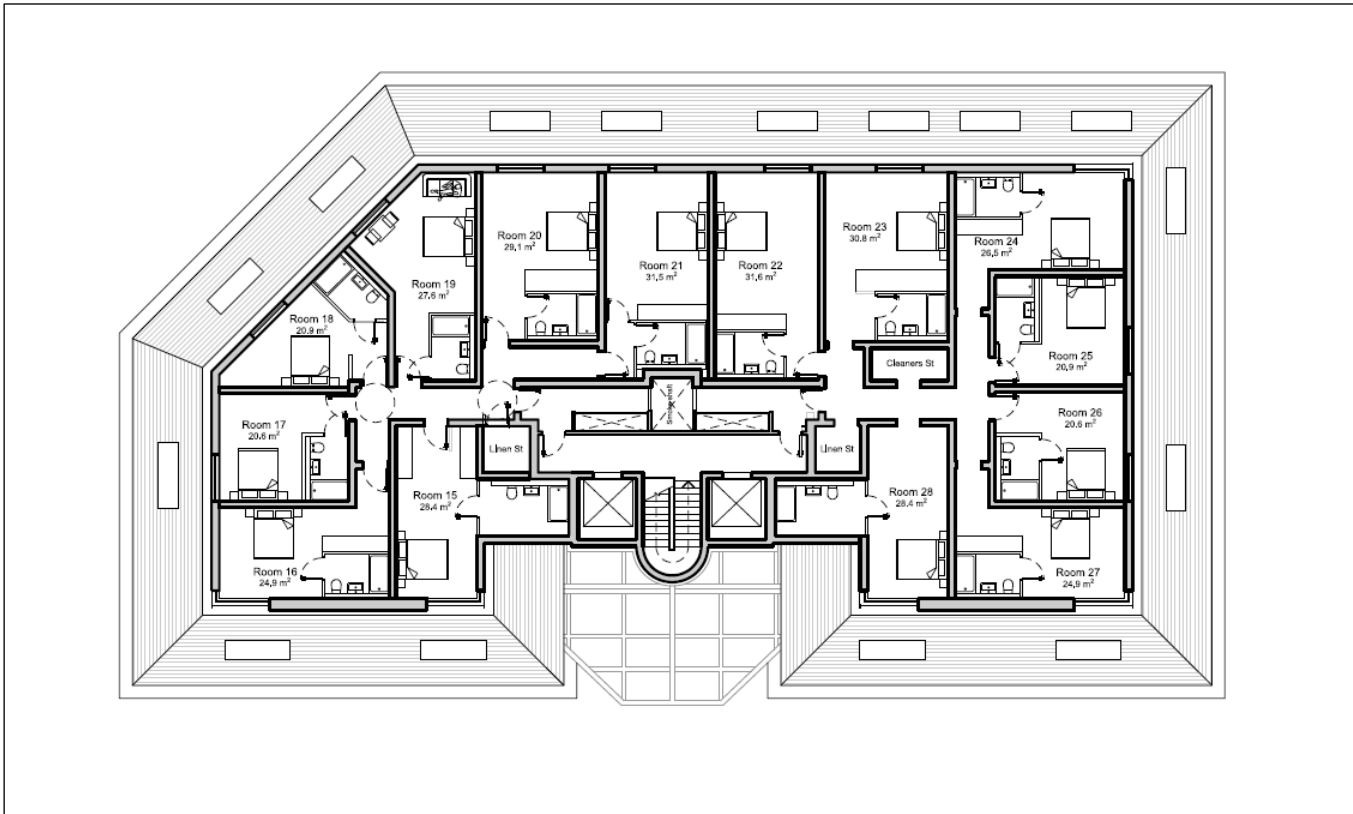


FIGURE 3: PROPOSED FOURTH-FLOOR LAYOUT



Policy Context

National Legislation

The National Planning Policy Framework

The National Planning Policy Framework (NPPF)¹ serves as the key planning document in England, providing guidance for local authorities and developers on how to achieve sustainable development. With regard to air quality, it provides a clear, rules-based approach to protecting public health and the environment. The following policies are relevant to the assessment:

P3: Living conditions and pollution

1. *Development proposals should be appropriate for their location, taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, whether these effects are on or off-site; and whether this is as a result of the development itself or the product of pre-existing conditions in its vicinity. In assessing the potential effects of pollution, consideration should be given to the potential sensitivity of the site, and its intended occupiers and users, as well as that of the environment and population in the surrounding area (including where certain groups could be particularly vulnerable to its effects, such as children and older people).*
2. *Within this context development proposals should:*
 - a. *Provide healthy living conditions for occupiers and users in terms of adequate access to light and avoiding exposure to levels of air, noise, artificial light or other sources of pollution which could have an unacceptable adverse effect on health and the quality of life. Where necessary suitable mitigation measures should be incorporated to secure acceptable living conditions;*
 - b. *Not give rise to, or contribute to, an unacceptable level of access to daylight and sunlight for neighbouring residents and occupiers, or unacceptable levels of air, noise, artificial light, water, soil or other forms of pollution on or beyond the site. Adverse impacts of this nature should be avoided where possible, or else mitigated to an acceptable degree. Where possible, opportunities should be taken to reduce pollution affecting the wider area (such as through traffic and travel management or improved external lighting);*
 - c. *Sustain and contribute to compliance with relevant limit values or national objectives and targets for air pollutants including PM_{2.5}. Development proposals should take account of Air Quality Management Areas and be consistent with the objectives of relevant Air Quality Action Plans, Clean Air Plans and Local Air Quality Strategies;*
3. *In applying this policy, it should be assumed, unless there is clear evidence to the contrary, that separate regulatory regimes for the control of pollution will operate effectively, as set out in policy DM7. This means that it will be appropriate to take into account emissions limits set through those other regimes.*

P4: Impact of Development on existing activities

1. *Existing businesses, community facilities, public services and defence and security activities should not have unreasonable restrictions placed on their current or permitted operation as a result of development being approved after they were established. This means that*

development proposals should be capable of being integrated effectively with existing business, community and public service activities and infrastructure in their vicinity (including, but not limited to, uses such as pubs, music venues, places of worship, sports clubs, blue light services, defence, electricity network infrastructure and industrial and waste sites).

2. *Where the operation of an existing activity could have a significant adverse effect on a proposed new development in its vicinity, development proposals should:*
 - a. *Identify the nature of the potential impacts, informed where necessary by early discussions between the applicant (i.e. the 'agent of change') and those existing uses which could be affected by the proposal to inform the scope for mitigation; and*
 - b. *Be able to demonstrate that suitable mitigation can be provided before first occupation of the development, if it is to be acceptable. Planning conditions or obligations should be used to secure agreed mitigation measures.*
3. *This policy applies to new development involving changes of use of land and property, as well as to new construction, and includes situations where new development may interfere with the operation of electronic communications networks. Both lawful current and permitted levels of operation of existing activities should be taken into account when applying this policy.*

N6: Areas of particular importance for biodiversity and geodiversity

To support the conservation of important habitats, species and sites of geodiversity value, development proposals affecting:

- a. *A site of international importance, which for the purpose of this policy is a habitats site, should be refused unless:*
 - i. *An appropriate assessment has concluded that the proposal will not adversely affect the integrity of the site (either individually or in combination with other developments), or the proposal can satisfy the derogation tests; and/or*
 - ii. *The impact of development on the relevant protected features of the protected site is being addressed through an Environmental Delivery Plan which has been made and the developer has committed to paying the nature restoration levy.*
- b. *A site of national importance, which for the purpose of this policy is one designated as a Site of Special Scientific Interest, should only be supported if:*
 - i. *There would be no adverse effect (either individually or in combination with other developments) on the site's features of special scientific interest; or*
 - ii. *The benefits of the development in the location proposed clearly outweigh both the likely impact on the features of special scientific interest, and any broader impact on the national network of Sites of Special Scientific Interest; or*
 - iii. *The impact of development on the relevant protected feature of the protected site is being addressed through an Environmental Delivery Plan which has been made and the developer has committed to paying the nature restoration levy.*

¹ Ministry of Housing, Communities and Local Government, National Planning Policy Framework, 17 August 2026

- c. A site of local importance, which for the purpose of this policy is one designated as a Local Nature Reserve or identified as a local wildlife site, local geological site or equivalent in the development plan, should only be supported if:
- i. There would not be a significant adverse effect on the integrity of the site; or
 - ii. The benefits of development in the location proposed clearly outweigh the likely impact on the features which make the site valuable for nature conservation.
 - iii. Irrespective of a site's status in nature conservation terms, development proposals which would entail the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists.

This policy applies to development on land inside or outside a designated area, if it would have an impact on the identified biodiversity or geodiversity value of the area concerned.

National Air Quality Standard and Objectives

The assessment of potential air quality impacts associated with the Proposed Development has been evaluated with respect to the current Air Quality Standards and Objectives for the protection of human health, as set out in the Air Quality Regulations 2010² and The Environment (Miscellaneous Amendments) (EU Exit) Regulations 2020³.

In the context of the Proposed Development, the key pollutants of concern are nitrogen dioxide (NO₂) and particulate matter (PM₁₀ and PM_{2.5}), which, in the LBH, are primarily associated with road traffic emissions and construction works.

The Government’s Environmental Improvement Plan 2023⁴ set out long-term PM_{2.5} targets, including an Annual Mean Concentration Target (AMCT) of 10 µg/m³ and a Population Exposure Reduction Target (PERT) of 35% compared with 2018, to be achieved by the end of 2040. These targets were adopted into law via the Environmental Targets (Fine Particulate Matter) (England) Regulations 2023⁵.

The 2025 EIP⁶, published in December 2025, introduced a non-statutory interim compliance date for the PM_{2.5} targets of 31 December 2030.

The Air Quality Standards and Objectives for NO₂, PM₁₀ and PM_{2.5} that are applicable in England, are presented in Table 1.

TABLE 1: NATIONAL AIR QUALITY STANDARDS AND OBJECTIVES

Pollutant	Averaging Period	Standard /Objective	Date to be achieved and maintained thereafter
NO ₂	1-hour	200 µg/m ³ , not to be exceeded more than 18 times per calendar year (a)	31 December 2005
	Annual	40 µg/m ³	
PM ₁₀	24-hour	50 µg/m ³ , not to be exceeded more than 35 times per calendar year (b)	31 December 2004
	Annual	40 µg/m ³	
PM _{2.5}	Annual	20 µg/m ³	2020
	Annual	10 µg/m ³ (target)	31 December 2040

Local Air Quality Management

The framework for Local Air Quality Management (LAQM) in the UK was introduced by the Environment Act 1995⁷. Local Authorities are required to regularly review and assess air quality to establish whether there are any locations where pollutant concentrations exceed the relevant air quality objectives or EU limit values. Where an exceedance is identified, the local authority is obliged to declare an Air Quality Management Area (AQMA) and prepare an Action Plan setting out measures to improve air quality and achieve compliance with the objective(s). The LAQM delivery framework for local authorities in England is set out in Defra’s 2023 Air Quality Strategy⁸.

Under the London Local Air Quality Management (LLAQM) framework, all boroughs are required to regularly review and assess local air quality and submit an Annual Status Report (ASR) to the Department for Environment Food and Rural Affairs (Defra) and the Greater London Authority (GLA).

Regional Policy

The London Plan 2021

The London Plan 2021⁹ is the statutory spatial development strategy for Greater London, prepared by the Mayor of London and adopted in March 2021. It sets out an integrated economic, environmental, transport, and social framework for development over the period to 2041, and forms part of the development plan for every London borough. All borough Local Plans must be in general conformity with it, and it is a material consideration in the determination of planning applications across Greater London.

Policy SI1 ‘Improving Air Quality’ sets out the Greater London Authority’s (GLA) commitment to improving air quality and public health and states:

² The Air Quality Standards Regulations 2010, Statutory Instrument 2010 No. 1001
³ The Environment (Miscellaneous Amendments) (EU Exit) Regulations 2020, The Environment (Miscellaneous Amendments) (EU Exit) Regulations 2020, SI 2020/1313
⁴ Department for Environment, Food & Rural Affairs (2023). *Environmental Improvement Plan 2023*. London: DEFRA.
⁵ The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023, SI 2023/96 (UK)

⁶ Environmental Improvement Plan 2025, Defra, December 2025
⁷ Part IV of the Environment Act 1995
⁸ Air Quality Strategy Framework for local authority delivery, Defra, April 2023
⁹ Greater London Authority (2021) *The London Plan: The Spatial Development Strategy for Greater London*

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:

- i. lead to further deterioration of existing poor air quality.
- ii. 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.
- iii. 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:

- a) Development proposals must be at least Air Quality Neutral.
- b) 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.
- c) 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.
- d) 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, which do not demonstrate that design measures have been used to minimise exposure should be refused.

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

- a) How proposals have considered ways to maximise benefits to local air quality, and
- b) 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.

The Air Quality Neutral London Plan Guidance (LPG)¹⁰ sets out the maximum permissible (benchmarked) emissions of NO₂ and particulate matter from a proposed development, based on its size and use-class. All new developments are required to meet or improve upon these Air Quality Neutral (AQN) benchmarks to minimise impacts on local air quality. Two sets of benchmarks are provided:

- Building Emissions Benchmark (BEB) – emissions associated with supplying heat and energy to the development; and
- Transport Emissions Benchmark (TEB) – emissions from private vehicles travelling to and from the development.

In accordance with the Guidance, the following development types are assumed to meet the benchmarks and are Air Quality Neutral:

- Developments that meet the London Plan definition of 'car-free'; and
- Developments with a 100% electric energy strategy.

Minor developments are considered Air Quality Neutral for transport-related emissions if the proposed parking provision does not exceed the maximum permissible level, as set out in Policy T6 of the London Plan.

London Environment Strategy 2018

The London Environment Strategy (LES)¹¹ was published by the Mayor of London in May 2018. It consolidates a range of previously separate environmental strategies into a single overarching document, covering air quality, green infrastructure, climate change mitigation and energy, climate change adaptation, waste, and noise. The Strategy is a material consideration in planning decisions and provides the policy context within which the London Plan's environmental policies sit.

The strategy aims to significantly reduce NO₂ and particulate (PM₁₀, PM_{2.5} and black carbon) concentrations through a number of key objectives and policies:

Objective 4.1 support and empower London and its communities, particularly the most disadvantaged and those in priority locations, to reduce their exposure to poor air quality.

- Policy 4.1.1 Make sure that London and its communities, particularly the most disadvantaged and those in priority locations, are empowered to reduce their exposure to poor air quality.
- Policy 4.1.2 Improve the understanding of air quality health impacts to better target policies and action.

Objective 4.2 achieve legal compliance with UK and EU limits as soon as possible, including by mobilising action from London boroughs, government and other partners.

- Policy 4.2.1 Reduce emissions from London's road transport network by phasing out fossil fuelled vehicles, prioritising action on diesel, and enabling Londoners to switch to more sustainable forms of transport.
- Policy 4.2.2 Reduce emissions from non-road transport sources, including by phasing out fossil fuels.
- Policy 4.2.3 Reduce emissions from non-transport sources, including by phasing out fossil fuels.
- Policy 4.2.4 The Mayor will work with the government, the London boroughs and other partners to accelerate the achievement of legal limits in Greater London and improve air quality.
- Policy 4.2.5 The Mayor will work with other cities (here and internationally), global city and industry networks to share best practice, lead action and support evidence-based steps to improve air quality.

¹⁰ Greater London Authority (2023), Air Quality Neutral London Plan Guidance, February 2023

¹¹ Greater London Authority (2018) London Environment Strategy.

Objective 4.3 establish and achieve new, tighter air quality targets for a cleaner London by transitioning to a zero emission London by 2050, meeting World Health Organization health-based guidelines for air quality.

- Policy 4.3.1 The Mayor will establish new targets for PM2.5 and other pollutants where needed. The Mayor will seek to meet these targets as soon as possible, working with government and other partners.
- Policy 4.3.2 The Mayor will encourage the take up of ultra-low and zero emission technologies to make sure London's entire transport system is zero emission by 2050 to further reduce levels of pollution and achieve WHO air quality guidelines.
- Policy 4.3.3 Phase out the use of fossil fuels to heat, cool and maintain London's buildings, homes and urban spaces, and reduce the impact of building emissions on air quality.
- Policy 4.3.4 Work to reduce exposure to indoor air pollutants in the home, schools, workplace and other enclosed spaces.

Greater London Authority Air Quality Focus Areas

Air Quality Focus Areas (AQFA) have been identified by the Greater London Authority (GLA) where there is high human exposure in locations where the annual mean air quality objective for NO₂ is exceeded. The purpose of the Focus Areas is to allow local authorities to target actions to improve air quality where it is most needed and to inform the planning process with regard to the air quality impact of new developments.

The Proposed Development is located within the Heathrow AQFA.

Local Policy

London Borough of Hillingdon Air Quality Action Plan

LBH carries out frequent review and assessments of air quality within the area and produces Annual Status Reports (ASRs) in accordance with the requirements of Defra.

Historically, routine monitoring of NO₂ concentrations within the Borough identified many areas where the air quality objectives were exceeded. Consequently, in 2003 the Council declared an AQMA and produced an AQAP outlining their commitment to improving local air quality.

The current Hillingdon Air Quality Action Plan¹² outlines the Council's commitment to improving air quality in the Borough. Borough-wide actions include:

- Leading by example by reducing emissions from the Council's vehicle fleet and buildings.
- Reducing public exposure and improving air quality around schools.
- Implementation of improvement strategies in the AQ Focus Areas.
- Ensuring the integration of the 'Healthy Streets' approach in relevant council work programmes.
- Ensuring the planning system supports the achievement of air quality improvements in relation to new developments.
- Raising awareness via targeted campaigns.

In April 2025 LBH published a draft new Action Plan¹³, which is currently under consultation. The core aims of the plan are stated as follows:

- 1) To reduce pollutant emissions within our Borough to the maximum possible extent, with all emissions being mitigated.
- 2) To reduce pollution concentrations, striving to achieve the World Health Organization (WHO) guidelines in the shortest time possible.
- 3) Remove inequalities in exposure to poor air quality and protect the vulnerable.
- 4) Continue to use the planning system to ensure:
 - new development does not contribute additional air pollution; and
 - new development in our Focus Areas contribute improvements in air quality.
- 5) Raise awareness on the health impacts and preventive measures to be taken to safeguard health.
- 6) Influence change and lead by example.

Progress against the Action Plan is evaluated by the ongoing monitoring programme and reported annually within the Council's ASR.

Hillingdon Local Plan

The Hillingdon Local Plan: Part 2¹⁴ sets out strategic objectives and policies for development in the Borough. Policy DMEI 14 relates specifically to air quality and states that:

A. Development proposals should demonstrate appropriate reductions in emissions to sustain compliance with and contribute towards meeting EU limit values and national air quality objectives for pollutants.

B. Development proposals should, as a minimum:

- be at least "air quality neutral".
- include sufficient mitigation to ensure there is no unacceptable risk from air pollution to sensitive receptors, both existing and new; and
- actively contribute towards the continued improvement of air quality, especially within the Air Quality Management Area.

¹² London Borough of Hillingdon (2019), Air Quality Action Plan 2019–2024. Adopted 2019

¹³ London Borough of Hillingdon (2025) Draft Air Quality Action Plan 2025–2030, Published for consultation April 2025

¹⁴ London Borough of Hillingdon (2020), Hillingdon Local Plan Part 2: Development Management Policies. Adopted 16 January 2020

World Health Organization (WHO) Air Quality Guidelines

The WHO's 2021 Air Quality Guidelines¹⁵ (AQG) provide evidence-based thresholds for key air pollutants to protect human health. The guidelines are considerably more stringent than the current UK statutory air quality standards and objectives. The guideline values for NO₂, PM₁₀ and PM_{2.5} are set out in Table 2. Interim targets are also included to support gradual progress, acknowledging that the Air Quality Guidelines are currently significantly exceeded in many parts of the world.

The AQGs are not legally binding, however LBH have set a target for compliance with the long-term AQGs for NO₂ and PM_{2.5} in the shortest possible time.

TABLE 2: WHO 2021 AIR QUALITY GUIDELINES

Pollutant	Averaging Period	Interim Target (µg/m³)				AQG Level (µg/m³)
		1	2	3	4	
NO ₂	24-hour (a)	120	50	-	-	25
	Annual	40	30	20	-	10
PM ₁₀	24-hour (a)	150	100	75	50	45
	Annual	70	50	30	20	15
PM _{2.5}	24-hour (a)	75	50	37.5	25	15
	Annual	35	25	15	10	5
(a) 99 th percentile (3-4 exceedances per year)						

¹⁵ World Health Organization (2021), WHO global air quality guidelines: particulate matter (PM_{2.5} and PM₁₀), ozone, nitrogen dioxide, sulfur dioxide and carbon monoxide.

Methodology

Construction Dust

All construction sites have the potential to generate dust during the construction phase which may adversely affect nearby sensitive human and ecological receptors.

The potential impact on local air quality during the construction of the Proposed Development has been assessed in accordance with the Greater London Authority's (GLA's) Control of Dust and Emissions During Construction and Demolition Supplementary Planning Guidance¹⁶ which recommends the use of the latest version of the Institute of Air Quality Management (IAQM) Construction Dust Guidance¹⁷.

Screening criteria are provided such that a detailed risk assessment is required where there are sensitive human health receptors within 250 m of the Site boundary or within 50 m of roads used by construction traffic (up to 250 m from the Site entrance). For ecological receptors, the screening distances are 50 m from the Site boundary and within 50 m of roads used by construction traffic (up to 250 m from the Site entrance).

The risk of dust impacts is based on the following:

- The sensitivity of the area to health impacts (dependent on the proximity and sensitivity of the nearest receptors, however the risk is higher in locations with existing elevated particulate concentrations);
- The sensitivity of the area to dust impacts (dependent on the proximity and sensitivity of the nearest receptors); and
- The magnitude of the dust emission during demolition, earthworks, construction and from trackout (re-suspended dusty material that has been transported onto the local roads by construction traffic, based on the scale and nature of the proposed works).

These factors are combined to evaluate the potential risk (high, medium or low) and determine the level of mitigation that is required to ensure that any effects are minimised. The identified best practice mitigation measures should be incorporated into an Air Quality and Dust Management Plan (AQDMP) or Construction Environmental Management Plan (CEMP) for the Proposed Development.

It should be noted that the assessment of dust risk is also based on professional judgement taking into account factors such as the prevailing wind direction, the proposed construction phasing, the likely duration of dust raising activities and local topography (including potential barriers to the dispersion of dust such as tall vegetation or buildings).

Full details of the IAQM construction dust methodology are provided in Appendix A.

Construction Traffic

Detailed information relating to construction traffic associated with the Proposed Development is not currently available; however, the proposed works comprise a two-storey extension to an existing building, and the construction phase trip generation is expected to be minimal. The temporary impact of vehicular emissions of NO₂, PM₁₀ and PM_{2.5} from construction traffic is therefore expected to be negligible.

¹⁶ GLA (2014) The Control of Dust and Emissions During Construction and Demolition: Supplementary Planning Guidance

¹⁷ IAQM (2024), Guidance on the assessment of dust from demolition and construction, Version 2.2

Non-Road Mobile Machinery

All NRMM must meet the emissions standards specified in Table 3.

An inventory of NRMM should be maintained on Site and on the NRMM Register¹⁸. Provided these standards are adhered to, NRMM emissions during the construction phase will not significantly affect local air quality.

TABLE 3: NRMM MINIMUM EMISSIONS STANDARDS

NRMM	Emission Standard
Engines with a power rating between 37 kW and 560 kW	Stage IV of the 97/68/EC Directive
Machines with constant speed engines e.g., generators	Stage V of the 97/68/EC Directive
Variable speed engines below 56 kW	Stage V of the 97/68/EC Directive

Operational Traffic

The Proposed Development meets the London Plan definition of ‘car-free’. Operational trips will be limited to delivery and servicing only, of which a maximum of eight trips per week are anticipated.

Whilst it is acknowledged that LBH do not accept the use of screening criteria within AQFAs, the average change in flow is approximately 1 movement per day and on this basis the operational traffic emissions will have a negligible impact on local air quality.

Building Emissions

The proposed energy strategy is 100% electric (air source heat pumps). There will be no combustion emissions associated with the Proposed Development and therefore no impact on local air quality.

Air Quality Neutral

An Air Quality Neutral assessment has been undertaken for the transport and building-related emissions, in accordance with the London Plan Guidance¹⁰.

On-Site Exposure

Future users of the Proposed Development have the potential to be affected by emissions from traffic on the local road network as well as dust, odour and other emissions associated with the surrounding land-uses.

The land-uses surrounding the Site have been reviewed to identify significant sources of odour or fugitive dust that have the potential to affect amenity at the Proposed Development. No significant sources have been identified. The Proposed Development is, however, approximately 250 m from Heathrow Airport, which, along with road traffic, is a significant source of airborne pollution.

A review of local air quality monitoring data, Defra mapped concentrations and LAEI projections has been undertaken to assess exposure and determine whether on-Site mitigation is required to minimise exposure to poor air quality.

¹⁸ <https://www.london.gov.uk/what-we-do/environment/pollution-and-air-quality/non-road-mobile-machinery-register/login/register>

The London Councils Air Quality Planning Guidance¹⁹ provides criteria for determining the significance of exposure to air pollution and level of mitigation required. The Air Pollution Exposure Criteria (APEC) are presented in Table 4. The applicable ranges assume a downward trend in pollutant concentrations has been established, which is anticipated due to the ongoing transition to a low emission vehicle fleet.

TABLE 4: AIR POLLUTION EXPOSURE CRITERIA

Category	Applicable Range NO ₂	Applicable Range PM ₁₀	Recommendation
APEC - A	Annual Mean: > 5% below national objective	Annual Mean: > 5% below national objective 24 hr Mean: > 1-day less than national objective	No air quality grounds for refusal; however, mitigation of any emissions should be considered
APEC - B	Annual Mean: Between 5% below or above national objective	Annual Mean: Between 5% above or below national objective 24 hr Mean: Between 1-day above or below national objective.	May not be sufficient air quality grounds for refusal, however appropriate mitigation must be considered e.g., Maximise distance from pollutant source, proven ventilation systems, parking considerations, winter gardens, internal layout considered, and internal pollutant emissions minimised.
APEC - C	Annual Mean: > 5% above national objective	Annual Mean: > 5% above national objective 24 hr Mean: > 1-day more than national objective.	Refusal on air quality grounds should be anticipated, unless the Local Authority has a specific policy enabling such land use and ensure best endeavours to reduce exposure are incorporated. Worker exposure in commercial/industrial land uses should be considered further. Mitigation measures must be presented with air quality assessment, detailing anticipated outcomes of mitigation measures

¹⁹ London Councils Air Quality and Planning Guidance, January 2007

Baseline Air Quality

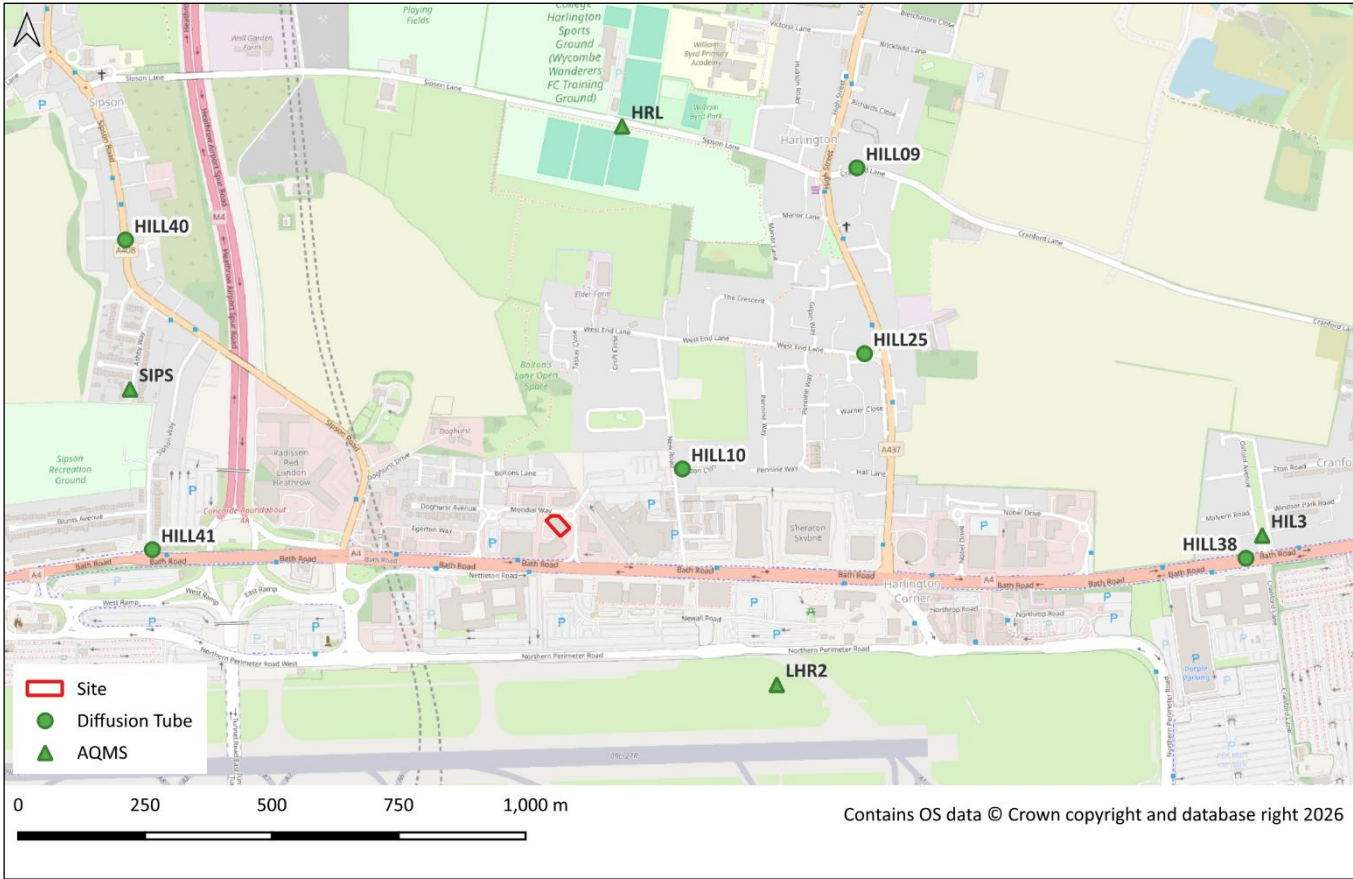
Local Air Quality Monitoring Data

Ambient air quality is measured in London using a combination of automatic air quality monitoring stations (AQMS) and passive NO₂ diffusion tubes. Details of the monitoring sites that are considered relevant to the assessment are provided in Table 5. The monitoring locations are shown in Figure 4.

TABLE 5: AIR QUALITY MONITORING SITES

ID	Site / Location	Type	Easting	Northing	Pollutants Measured
AQMS					
LHR2	London Heathrow	Airport	508600	176700	NO ₂ , PM ₁₀ , PM _{2.5}
HIL3	Hillingdon 3 – Oxford Avenue	Roadside	509557	176994	NO ₂ , PM ₁₀
HRL	London Harlington	Roadside	508295	177800	NO ₂ , PM ₁₀ , PM _{2.5}
SIPS	Hillingdon Sipson	Urban Background	507325	177282	NO ₂
Diffusion Tube					
HILL09	25 Cranford Lane Harlington (lamp post on the left after car park)	Roadside	509798	178654	NO ₂
HILL10	Brendan Close Harlington (1st lamp post on the left)	Roadside	508758	177718	NO ₂
HILL25	10 West End Lane, Harlington Lamp Post (2)	Background	508773	177352	NO ₂
HILL38	Blue street light near speed camera markings to west of Oxford Ave, Near AQMS. UB3 5HU	Roadside	509525	176949	NO ₂
HILL40	On zone sign at corner of Sipson Close/Sipson Rd. UB7 0JX.	Roadside	507316	177576	NO ₂
HILL41	On the north side of the A4 near the houses by the junction with Sipson Way	Roadside	507369	176966	NO ₂

FIGURE 4: MONITORING LOCATIONS



Nitrogen Dioxide

Concentrations of NO₂ measured between 2020 and 2025 are presented in Table 6. The data have been obtained from LBH Annual Air Quality Status Reports (ASRs) and Air Quality England²⁰. No exceedances of the air quality standard of 40 µg/m³ have been measured in the area over the six-year period, however the concentrations are well above the WHO AQG and LBH target of 10 µg/m³.

In general, annual mean concentrations increased between 2020 and 2023 as traffic levels recovered following the Covid-19 pandemic and subsequently declined from 2023 to 2024 likely due to the expansion of the ULEZ. The 2025 automatic monitoring data show an increase from 2024 levels at some locations and a decline at others.

Two exceedances of the short-term (1-hour mean) air quality standard of 200 µg/m³ were measured at HIL3 in 2023, well below the 18 exceedances allowable within the objective. At all other monitoring sites there were no recorded exceedances over the six-year period. Diffusion tubes cannot measure short-term concentrations, however a study undertaken on behalf of Defra²¹ indicated that where annual mean concentrations are below 60 µg/m³, an exceedance of the short-term objective is unlikely to occur. Based on the data, the risk of an exceedance of the short-term objective in the area is considered to be negligible.

²⁰ <https://www.airqualityengland.co.uk/>

²¹ D Laxen and B Marner (2003), Analysis of the relationship between 1-hour and annual mean nitrogen dioxide at UK roadside and kerbside monitoring sites, July 2003

TABLE 6: NO₂ MONITORING DATA

ID	2020	2021	2022	2023	2024	2025
Annual Mean (µg/m³)						
LHR2	25	25	30	32	29	29
HIL3	22	25	29	28	27 (a)	24
HRL	20	20	24	22	19	22
SIPS	19	19	24	23	22	26
HILL09	23.8	24.5	28.8	26.7	23.5	-
HILL10	25.2	26.4	28.3	31.5	26.0	-
HILL25	28.3	28.5	32.8	30.2	25.7	-
HILL38	33.0	28.9	35.6	34.4	29.1	-
HILL40	23.6	23.4	26.6	27.8	24.1 (a)	-
HILL41	31.8	32.9	40.1	38.6	23.0	-
Number of 1-Hour Means > 200 µg/m³						
LHR2	0	0	0	0	0	0
HIL3	0	0	0	2	0	0
HRL	0	0	0	0	0	0
SIPS	0	0	0	0	0	0
(a) Data capture < 90%						

Particulate Matter

A summary of annual mean particulate concentrations measured automatically between 2020 and 2025 is presented in Table 7.

The annual mean PM₁₀ and PM_{2.5} concentrations are well below the air quality standards but significantly exceed the WHO AQGs. The LHR2 and HRL data indicate compliance with the EIP/ GLA target for PM_{2.5} of 10 µg/m³.

There is significant inter-annual variability in the measured concentrations and no evidence of a significant decline in concentrations over the six-year period. Compliance with the short-term PM₁₀ objective, which allows 35 exceedances of the limit value of 50 µg/m³ per year, has, however, been consistently achieved at both the background and roadside locations.

²² <http://laqm.defra.gov.uk/review-and-assessment/tools/background-maps.html>

TABLE 7: PM₁₀ AND PM_{2.5} MONITORING DATA

ID	2020	2021	2022	2023	2024	2025
PM ₁₀ Annual Mean (µg/m³)						
LHR2	11	11	13	13	11	16
HIL3	23	20	22	26	18	21
HRL	14	13	13	12	11	14
PM ₁₀ Number of 24-Hour Means > 50 µg/m³						
LHR2	0	0	2	1	0	2
HIL3	0	0	1	4	0	1
HRL	1	0	2	0	3	3
PM _{2.5} Annual Mean (µg/m³)						
LHR2	7	7	8	8	7	9
HRL	8	8	8	7	7	9
(a) Data capture < 90%						

Mapped Background Concentrations

Annual mean pollutant concentrations have been obtained from the Defra UK Background Air Pollution maps²². These 1km grid resolution maps are derived from a complex modelling exercise that takes into account emissions inventories and measurements of ambient air pollution from both automated and non-automated sites. The latest background maps were issued in November 2024 and are based on 2021 monitoring data, with projections for future years.

The mapped 2024 (assessment baseline) and 2029 (expected opening year) background NO₂, PM₁₀ and PM_{2.5} concentrations at the Site are presented in Table 8. The mapped 2029 background concentrations at the Site are well within the current air quality standards but exceed the WHO 2021 AQGs for NO₂ and PM_{2.5}. The data illustrate the anticipated improvement in background air quality over the 5-year period.

TABLE 8: MAPPED AND MEASURED ANNUAL MEAN BACKGROUND CONCENTRATIONS

Pollutant	2024 Mapped (a)	2029 Mapped (a)	AQ Standard/ Objective	WHO 2021 AQG
NO ₂	29.1	28.3	40	10
PM ₁₀	13.2	12.9	40	15
PM _{2.5}	7.9	7.7	20 / 10	5

London Atmospheric Emissions Inventory

Modelled NO₂, PM₁₀ and PM_{2.5} concentrations across Greater London are available from the 2022 LAEI²³. The concentrations have been predicted at a resolution of 20 m using data from Transport for London strategic transport models and emission inventories.

The 2022 mapped concentrations are presented in Appendix B. A summary of the maximum concentrations within the Site boundary are presented in Table 9. The data indicate that existing concentrations at the Site are well within the current long-term air quality standards and objectives but exceed the WHO 2021 AQGs for NO₂ and PM_{2.5}.

²³ <https://data.london.gov.uk/dataset/london-atmospheric-emissions-inventory-laei-2022-2lg5g/>

TABLE 9: LAEI MAXIMUM MAPPED ANNUAL MEAN CONCENTRATIONS AT THE SITE (µG/M³)

Pollutant	2022 LAEI Mapped	AQ Standard/ Objective	WHO 2021 AQG
NO ₂	25 – 30	40	10
PM ₁₀	10 – 15	40	15
PM _{2.5}	7.5 – 10	20 / 10	5

Construction Dust Risk Assessment

Screening

The area around the Site that has the potential to be affected by dust generated during on-Site works (demolition, earthworks and construction) or by the re-suspension of material tracked out of the Site onto the local road network (trackout) is shown in Figure 5 and Figure 6, respectively. The affected area includes residential properties, commercial/industrial premises and airport parking; a detailed assessment is therefore required to inform the construction phase mitigation strategy for the Proposed Development.

There are no dust sensitive habitat sites within 50 m of the Site or roads used by construction traffic (up to 250 m from the Site), therefore ecological effects have been scoped out of the assessment.

FIGURE 5: SCREENING DISTANCES FOR EFFECTS FROM DEMOLITION, EARTHWORKS AND CONSTRUCTION

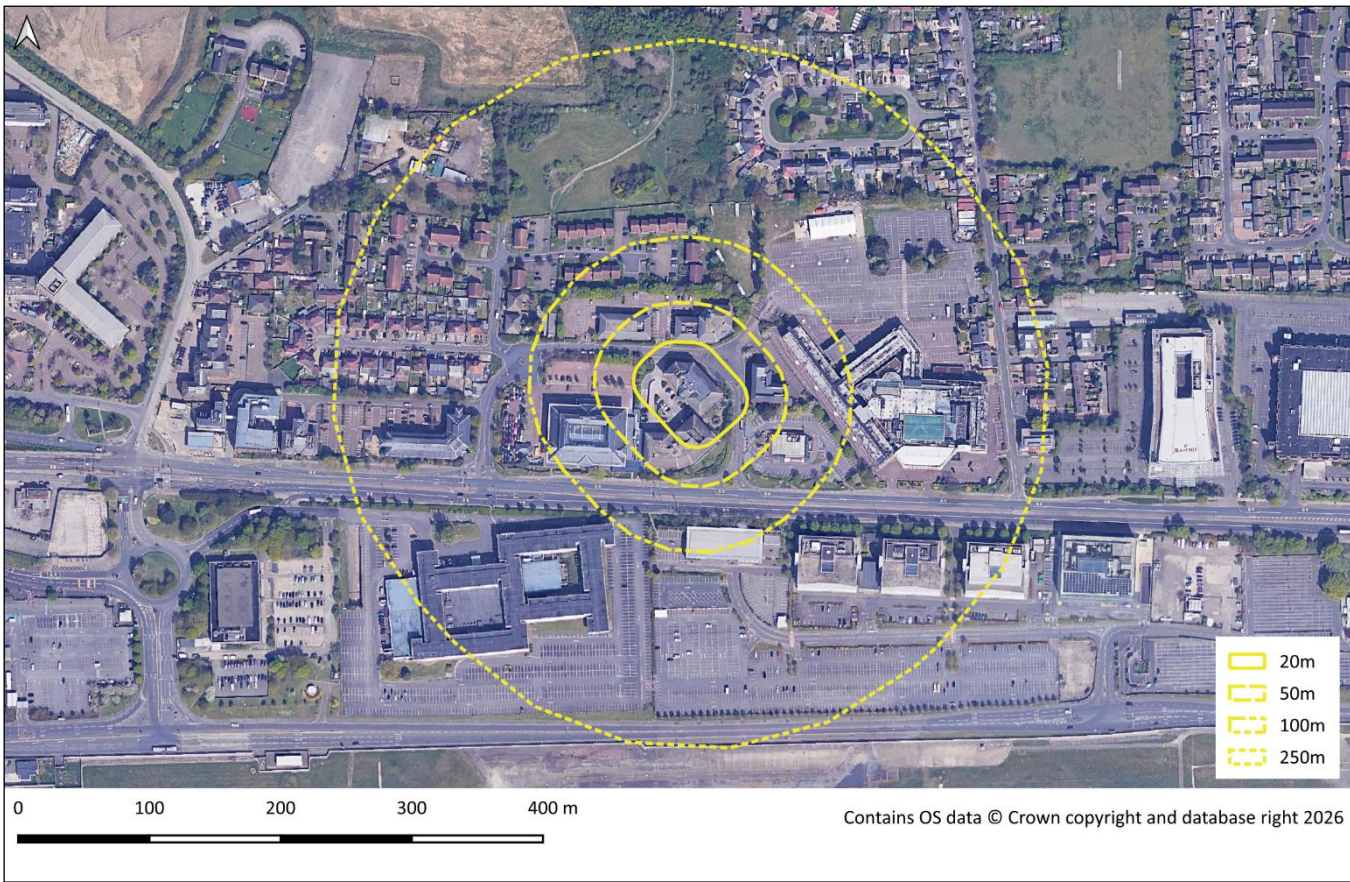
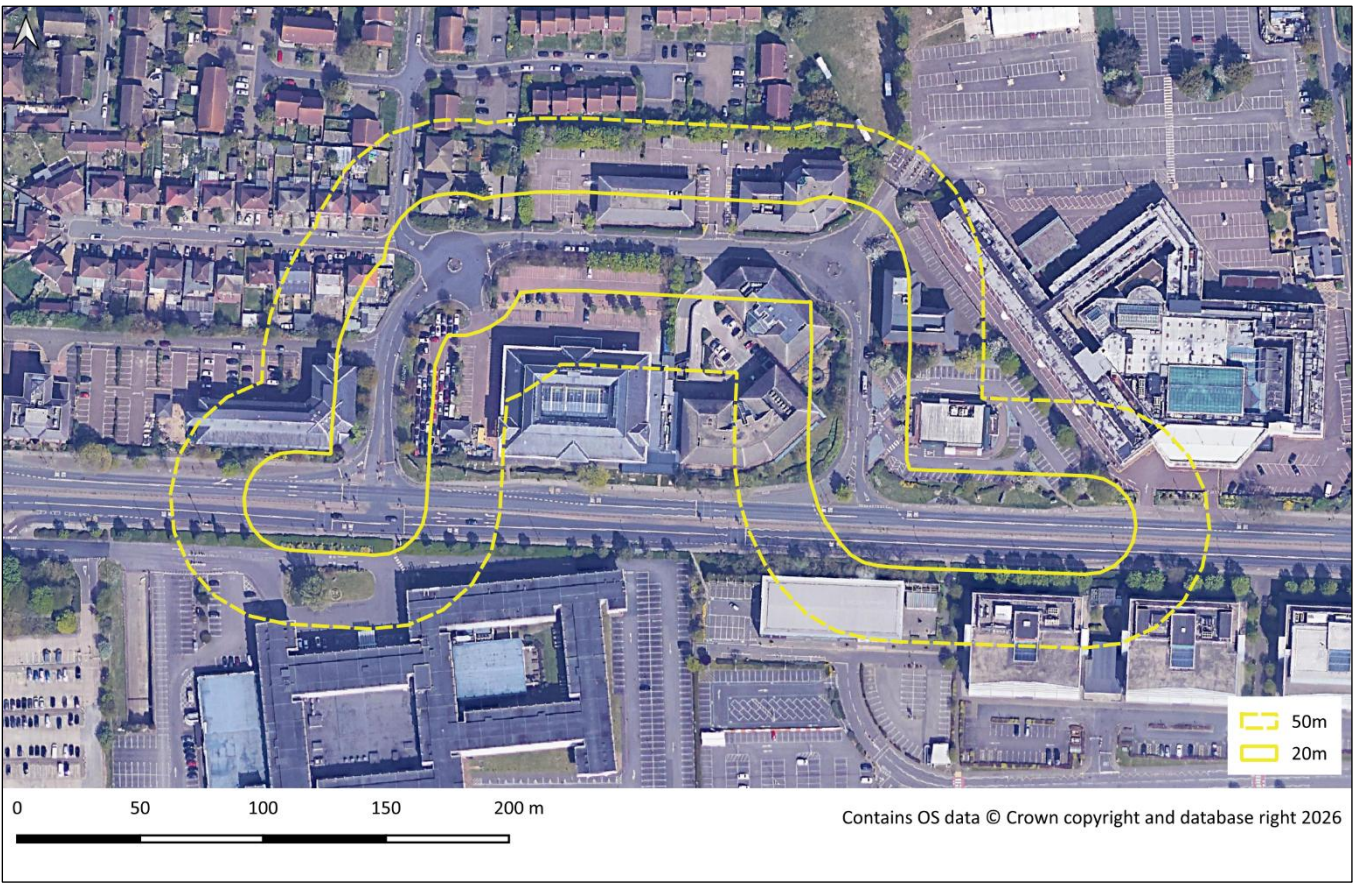


FIGURE 6: SCREENING DISTANCES FOR EFFECTS FROM TRACKOUT



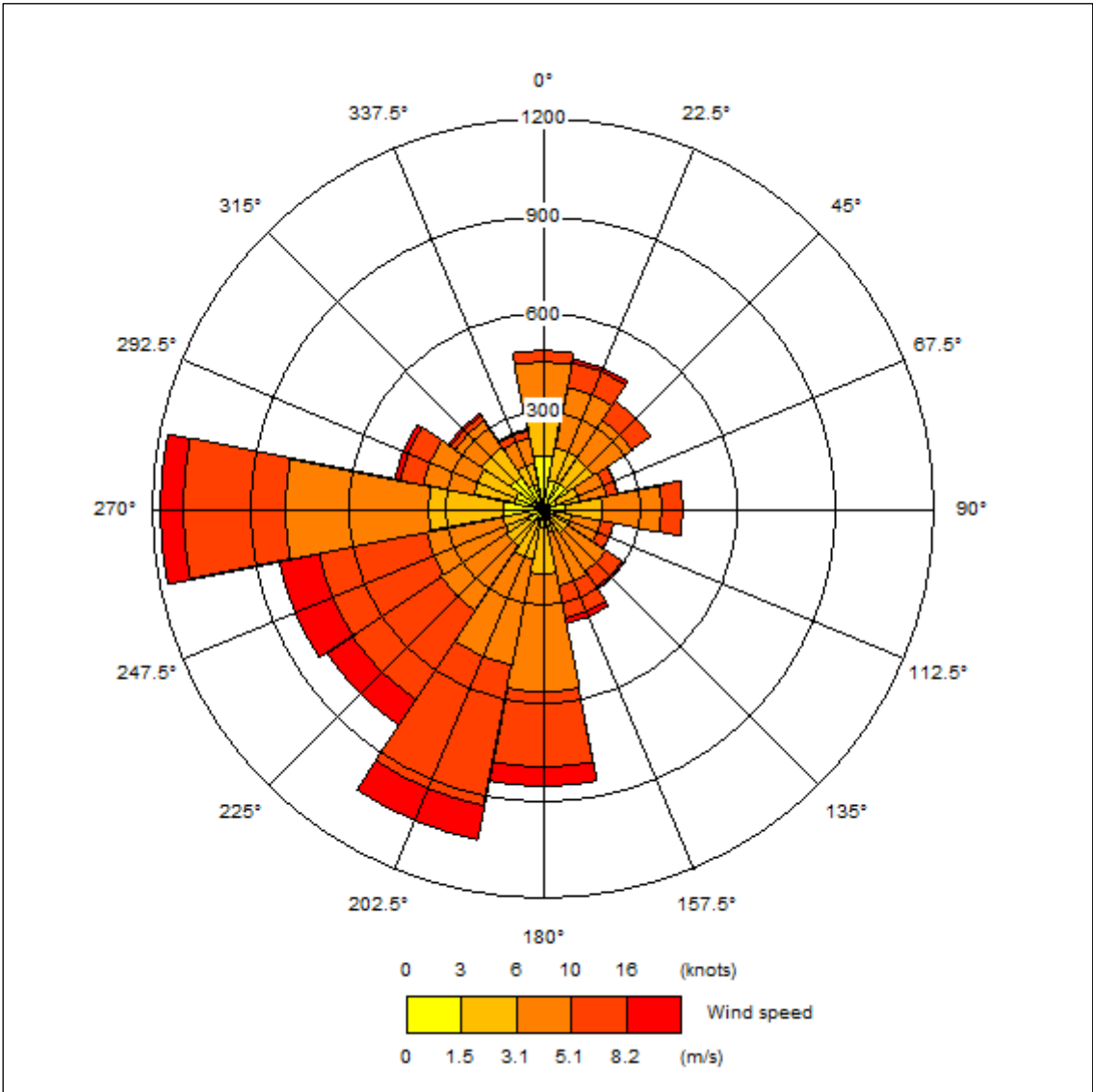
Meteorology and Dispersion Characteristics

The dispersion and deposition of dust particles is governed by a range of meteorological and environmental factors. Wind speed and direction influence both the transport of dust from source and the receptors that are likely to be affected. Local topography and the presence of intervening features, such as buildings or vegetation, may intercept dust particles before they reach sensitive receptors, reducing the potential for off-Site impacts. Rainfall also acts as a natural suppressant, limiting the suspension and transport of dust.

A wind rose for Heathrow Airport (2024) is presented in Figure 7, which shows that the prevailing wind is from the west and southwest. Receptors to the east and northeast of the Site are, therefore, most likely to experience dust impacts during the construction phase.

There are no large structures or vegetation that are likely to significantly attenuate dust effects at the nearest sensitive receptors to the Site.

FIGURE 7: WIND ROSE FOR LONDON HEATHROW AIRPORT (2024)



Sensitivity of the Area to Dust Impacts

Dust Soiling

A summary of the sensitivity of the area to dust soiling effects, based on the proximity of the most sensitive receptors to the Site and roads used by construction traffic is presented in Table 10.

The overall sensitivity of the area to dust soiling effects from on-Site activities (demolition, earthworks and construction) and trackout is assessed as ‘medium’.

TABLE 10: SENSITIVITY OF THE AREA TO DUST SOILING EFFECTS ON PEOPLE AND PROPERTY

Receptor	Receptor Sensitivity	Distance	Number of Receptors	Area Sensitivity
Demolition, Earthworks and Construction				
Residential Properties	High	<50 m	0	Medium
		<100 m	1 – 10	
		<250 m	10 – 100	
Airport Car Parking	High	<50 m	0	
		<100 m	10 – 100	
		<250 m	>100	
Commercial/ Light Industrial	Medium	< 20 m	>1	
Trackout				
Residential Properties	High	<20 m	1 – 10	Medium
		<50 m	10 – 100	
Commercial/ Light Industrial	Medium	<20 m	>1	

Human Health Impacts

A summary of the sensitivity of the area to health effects is presented in Table 11. The sensitivity depends not only on the proximity of the most sensitive receptors, but also on existing PM₁₀ concentrations and the potential for additional dust generated during the construction phase to result in an exceedance of the short or long-term air quality objectives.

Based on the local monitoring data and LAEI mapped concentrations, annual mean PM₁₀ concentrations within 250 m of the Site are expected to be below 24 µg/m³, the lowest threshold within the guidance for assessing potential impacts on human health.

The sensitivity of the area to dust-related health effects is assessed as 'low'.

TABLE 11: SENSITIVITY OF THE AREA TO HUMAN HEALTH IMPACTS

Receptor	Receptor Sensitivity	Distance	Number of Receptors	Area Sensitivity
Demolition, Earthworks and Construction				
Residential Properties	High	<50 m	0	Low
		<100 m	1 – 10	
		<250 m	10 – 100	
Airport Car Parking	High	<50 m	0	
		<100 m	10 – 100	
		<250 m	>100	
Commercial/ Light Industrial	Medium	< 20 m	>1	
Trackout				
Residential Properties	High	<20 m	1 – 10	Low
		<50 m	10 – 100	
Commercial/ Light Industrial	Medium	<20 m	>1	

Dust Emission Magnitude

The magnitude of the likely dust emission from demolition, earthworks, construction and trackout is presented in Table 12.

TABLE 12: EVALUATION OF DUST EMISSION MAGNITUDE

Source	Proposed Development	Dust Emission Magnitude
Demolition	- Demolition of the roof structure of the existing building will be required. - Maximum demolition height > 12 m. - Materials have the potential to generate dust. - Crushing and screening will not be undertaken; all material will be removed from the Site.	Medium
Earthworks	The Proposed Development is an upward extension to an existing building. No earthworks will be undertaken.	n/a
Construction	- Build volume < 12,000 m³. - Materials will include brick/block and concrete. - Concrete batching will not be undertaken on Site.	Medium
Trackout	- Maximum of 5 – 10 HDV trips on any one day during the peak construction phase. - Road-going vehicles will not travel over unpaved ground.	Small

Dust Risk Prior to Mitigation

A summary of the potential risk of dust impacts is presented in Table 13.

TABLE 13: RISK OF DUST IMPACTS PRIOR TO MITIGATION

	Demolition	Earthworks	Construction	Trackout
Dust Soiling	Medium	n/a	Medium	Low
Human Health	Low	n/a	Low	Negligible

Exposure Assessment

The Proposed Development is a commercial aparthotel scheme and will not introduce long-term residential exposure. Exposure has therefore been considered with respect to the short-term air quality standards for NO₂ and PM₁₀.

The NO₂ monitoring data presented in Table 6 show that even adjacent to the A4, which is one of the most heavily trafficked roads in the area, annual mean NO₂ concentrations are less than 50% of the 60 µg/m³ threshold for a potential exceedance of the short-term objective. The Site is 50 m north of the A4, where pollutant concentrations are considerably lower (see LAEI maps in Appendix B). The risk of non-compliance at the Proposed Development is therefore considered to be negligible.

The highest PM₁₀ concentrations in the area are measured at HIL3, which is approximately 20 m from the A4 and downwind of Heathrow Airport. Since 2020, a maximum of 4 exceedances of the 24-hour mean standard of 50 µg/m³ have been measured per year, well below the 35 allowable within the objective. The risk of non-compliance with the short-term PM₁₀ objective at the Proposed Development is therefore also considered to be negligible.

Future baseline concentrations are expected to be lower than current levels due to the continued uptake of electric and hybrid vehicles. On this basis, the Proposed Development falls within exposure category **APEC-A** and will not introduce new exposure to poor air quality.

Air Quality Neutral Assessment

Transport Emissions

The Proposed Development meets the London Plan definition of 'car-free' and is therefore Air Quality Neutral with respect to transport-related emissions.

Building Emissions

The energy strategy is 100% electric; therefore, the Proposed Development is Air Quality Neutral with respect to building-related emissions.

Mitigation

Construction Phase

In accordance with the IAQM guidance¹⁶ an Air Quality and Dust Management Plan (AQDMP) should be developed and approved prior to the commencement of works on-Site.

Based on the assessed risk of dust impacts (see Table 13), the AQDMP should include the 'Highly recommended' and 'Desirable' best practice mitigation measures outlined in Appendix C, in addition to procedures for construction phase monitoring and complaints management.

Following the successful implementation of the recommended measures, the significance of the off-Site construction phase impacts is anticipated to be negligible.

Operational Phase

The Proposed Development is car-free with a 100% electric energy strategy. Minimal delivery and servicing trips will be generated (8 per week), therefore operational impacts on air quality will be negligible.

The review of local air quality monitoring data for the area indicates compliance with the short-term air quality standards and objectives for NO₂ and PM₁₀ at the Site. The impact of traffic-related emissions declines rapidly with height, therefore pollutant concentrations at the aparthotel windows, which will be at third and fourth floor level, are expected to be considerably lower than at ground-floor level. On-site mitigation is therefore not required.

Summary and Conclusions

An assessment has been undertaken to assess the potential impacts on local air quality associated with the construction and operation of the Proposed Development.

Releases of dust and PM₁₀ are likely to occur during Site activities. However, through good site management and the implementation of best practice dust control, the impacts will be effectively mitigated. The resultant effects are expected to be negligible.

Based on the scale of the proposed works, the construction phase trip generation is expected to fall well below the IAQM/EPUK Planning Guidance screening thresholds. The impact of the construction traffic emissions on local air quality is therefore anticipated to be negligible.

The Proposed Development will be 'car-free' and minimal delivery and servicing trips will be generated (8 per week). The operational traffic emissions are therefore also expected to have a negligible impact on local air quality. The Proposed Development is assessed as Air Quality Neutral with respect to transport-related emissions.

The energy strategy for the Proposed Development is 100% electric and therefore there will be no combustion emissions associated with the Site and no impact on local air quality. The Proposed Development is therefore Air Quality Neutral with respect to building-related emissions.

The Proposed Development is an aparthotel scheme and therefore will not introduce long-term residential exposure at the Site. A review of local air quality monitoring data and Defra/ LAEI mapped concentrations indicates that existing NO₂ and PM₁₀ concentrations in the area are well within the current short-term air quality standards and objectives. The development therefore falls within exposure category APEC-A and will not introduce new exposure to poor air quality.

Based on the results of the assessment and with the implementation of the recommended construction phase mitigation measures, it is considered that air quality would not pose a constraint to the redevelopment of the Site as proposed.

Appendix A – Construction Dust Risk Assessment Methodology

Factors defining the sensitivity of a receptor to dust impacts are presented in Table A1.

TABLE A1: RECEPTOR SENSITIVITY

Receptor Sensitivity	Human Health	Dust Soiling	Ecological (f)
High	- Locations where members of the public are exposed over a time period relevant to the air quality objective for PM₁₀ (in the case of the 24-hour objectives, a relevant location would be one where individuals may be exposed for eight hours or more in a day) (a). - Indicative examples include residential properties. Hospitals, schools and residential care homes should also be considered as having equal sensitivity to residential areas for the purposes of this assessment.	- users can reasonably expect (d) enjoyment of a high level of amenity; or - the appearance, aesthetics or value of their property would be diminished by soiling; and - the people or property would reasonably be expected (d) to be present continuously, or at least regularly for extended periods, as part of the normal pattern of use of the land. - Indicative examples include dwellings, museums and other culturally important collections, medium- and long-term car parks and car showrooms.	- locations with an international or national designation and the designated features may be affected by dust soiling; or - locations where there is a community of a particularly dust sensitive species such as vascular species included in the Red Data List For Great Britain (g). - Indicative examples include a Special Area of Conservation (SAC) designated for acid heathlands or a local site designated for lichens adjacent to the demolition of a large site containing concrete (alkali) buildings.
Medium	- locations where the people exposed are workers (b), and exposure is over a time period relevant to the air quality objective for PM₁₀ (in the case of the 24-hour objectives, a relevant location would be one where individuals may be exposed for eight hours or more in a day). - Indicative examples include office and shop workers, but will generally not include workers occupationally exposed to PM₁₀, as protection is covered by Health and Safety at Work legislation.	- users would expect (d) to enjoy a reasonable level of amenity, but would not reasonably expect (d) to enjoy the same level of amenity as in their home; or - the appearance, aesthetics or value of their property could be diminished by soiling; or - the people or property wouldn't reasonably be expected (d) to be present here continuously or regularly for extended periods as part of the normal pattern of use of the land. - Indicative examples include parks and places of work.	- Locations where there is a particularly important plant species, where its dust sensitivity is uncertain or unknown; or - Locations with a national designation where the features may be affected by dust deposition. - Indicative example is a Site of Special Scientific Interest (SSSI) with dust sensitive features.
Low	- locations where human exposure is transient (c). - Indicative examples include public footpaths, playing fields, parks and shopping streets.	- The enjoyment of amenity would not reasonably be expected (d); or - Property would not reasonably be expected (d) to be diminished in	- Locations with a local designation where the features may be affected by dust deposition. - Indicative example is a local Nature Reserve with dust sensitive features.

		- appearance, aesthetics or value by soiling; or - there is transient exposure, where the people or property would reasonably be expected (d) to be present only for limited periods of time as part of the normal pattern of use of the land. - Indicative examples include playing fields, farmland (unless commercially-sensitive horticultural), footpaths, short term car parks and roads.	
(a) This follows Defra guidance, as set out in LAQM.TG22. (b) Notwithstanding the fact that the air quality objectives and limit values do not apply to people in the workplace, such people can be affected to exposure of PM₁₀. However, they are considered to be less sensitive than the general public as a whole because those most sensitive to the effects of air pollution, such as young children are not normally workers. For this reason, workers have been included in the medium sensitivity category. (c) There are no standards that apply to short-term exposure, e.g. one or two hours, but there is still a risk of health impacts, albeit less certain. (d) People's expectations will vary depending on the existing dust deposition in the area. (e) Car parks can have a range of sensitivities depending on the duration and frequency that people would be expected to park their cars there, and the level of amenity they could reasonably expect whilst doing so. Car parks associated with workplace or residential parking might have a high level of sensitivity compared to car parks used less frequently and for shorter durations, such as those associated with shopping. Cases should be examined on their own merits. (f) A Habitat Regulation Assessment of the site may be required as part of the planning process, if the site lies close to an internationally designated site i.e. Special Conservation Areas (SACs), Special Protection Areas (SPAs) designated under the Habitats Directive (92/43/EEC) and RAMSAR sites. (g) Cheffings C. M. & Farrell L. (Editors) (2005), The Vascular Plant. Red Data List for Great Britain, Joint Nature Conservation Committee.			

The sensitivity of the area, as a whole, is dependent on the number of receptors within each sensitivity class and their distance from the source. Human health impacts are also dependent on the existing PM₁₀ concentrations in the area.

Table A2 and Table A3 summarise the criteria for determining the overall sensitivity of the area to dust soiling and health impacts, respectively. The sensitivity of the area to ecological impacts is presented in Table A4.

TABLE A2: SENSITIVITY OF THE AREA TO DUST SOILING EFFECTS ON PEOPLE AND PROPERTY

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 A3: SENSITIVITY OF THE AREA TO HEALTH IMPACTS FROM DUST

Receptor Sensitivity	Annual Mean PM ₁₀ Concentration (µg/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
	<24	>10	Low	Low	Low	Low
		1-10	Low	Low	Low	Low
Low	-	≥1	Low	Low	Low	Low

TABLE A4: SENSITIVITY OF THE AREA TO ECOLOGICAL IMPACTS FROM DUST

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

The magnitude of the dust impacts for demolition, earthworks, construction and trackout is classified as 'Small', 'Medium' or 'Large' depending on the scale of the proposed works as detailed in Table A5.

TABLE A5: DUST EMISSION MAGNITUDE

Source	Large	Medium	Small
Demolition	- Total building volume >75,000 m³ - Potentially dusty material (e.g., concrete) - On-Site crushing and screening	- Total building volume 12,000 - 75,000 m³ - Potentially dusty material - Demolition activities 6 - 12m above ground level.	- Total building volume <12,000 m³ - Construction material with low potential for dust release (e.g., metal cladding or timber)

	Demolition activities >12 m above ground level.		- Demolition activities <6 m above ground level - Demolition during wetter months
Earthworks	- Total site area >110,000 m² - Potentially dusty soil type (e.g., clay) >10 heavy earth moving vehicles active at any one time. - Formation of bunds >6m in height	- Total site area 18,000 - 110,000 m² - Moderately dusty soil type (e.g., silt) 5-10 heavy earth moving vehicles active at any one time. - Formation of bunds 3 - 6m in height	- Total site area <18,000 m² - Soil type with large grain size (e.g., sand) <5 heavy earth moving vehicles active at any one time. - Formation of bunds <3m in height
Construction	- Total building volume >75,000 m³ - On site concrete batching - Sandblasting	- Total building volume 12,000 - 75,000 m³ - Potentially dusty construction material (e.g., concrete) - On site concrete batching	- Total building volume <12,000 m³ - Material with low potential for dust release (e.g., metal cladding or timber)
Trackout	>50 HDV movements in any one day (a) - Potentially dusty surface material (e.g., high clay content) - Unpaved road length >100 m	20 - 50 HDV movements in any one day (a) - Moderately dusty surface material (e.g., silt) - Unpaved road length 50 - 100 m	<20 HDV movements in any one day (a) - Surface material with low potential for dust release - Unpaved road length <50 m

(a) HDV movements refer to outward trips (leaving the site) by vehicles of over 3.5 tonnes.

For each dust emission source, the worst-case area sensitivity is used in combination with the dust emission magnitude to determine the risk of dust impacts prior to mitigation as illustrated in Tables A6 and A7.

TABLE A6: RISK OF DUST IMPACTS FROM DEMOLITION

Area Sensitivity	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Medium Risk
Medium	High Risk	Medium Risk	Low Risk
Low	Medium Risk	Low Risk	Negligible Risk

TABLE A7: RISK OF DUST IMPACTS FROM EARTHWORKS AND CONSTRUCTION

Area Sensitivity	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible Risk

Appendix B – LAEI 2022 Mapped Concentrations

FIGURE B1: 2022 ANNUAL MEAN NO₂ CONCENTRATIONS

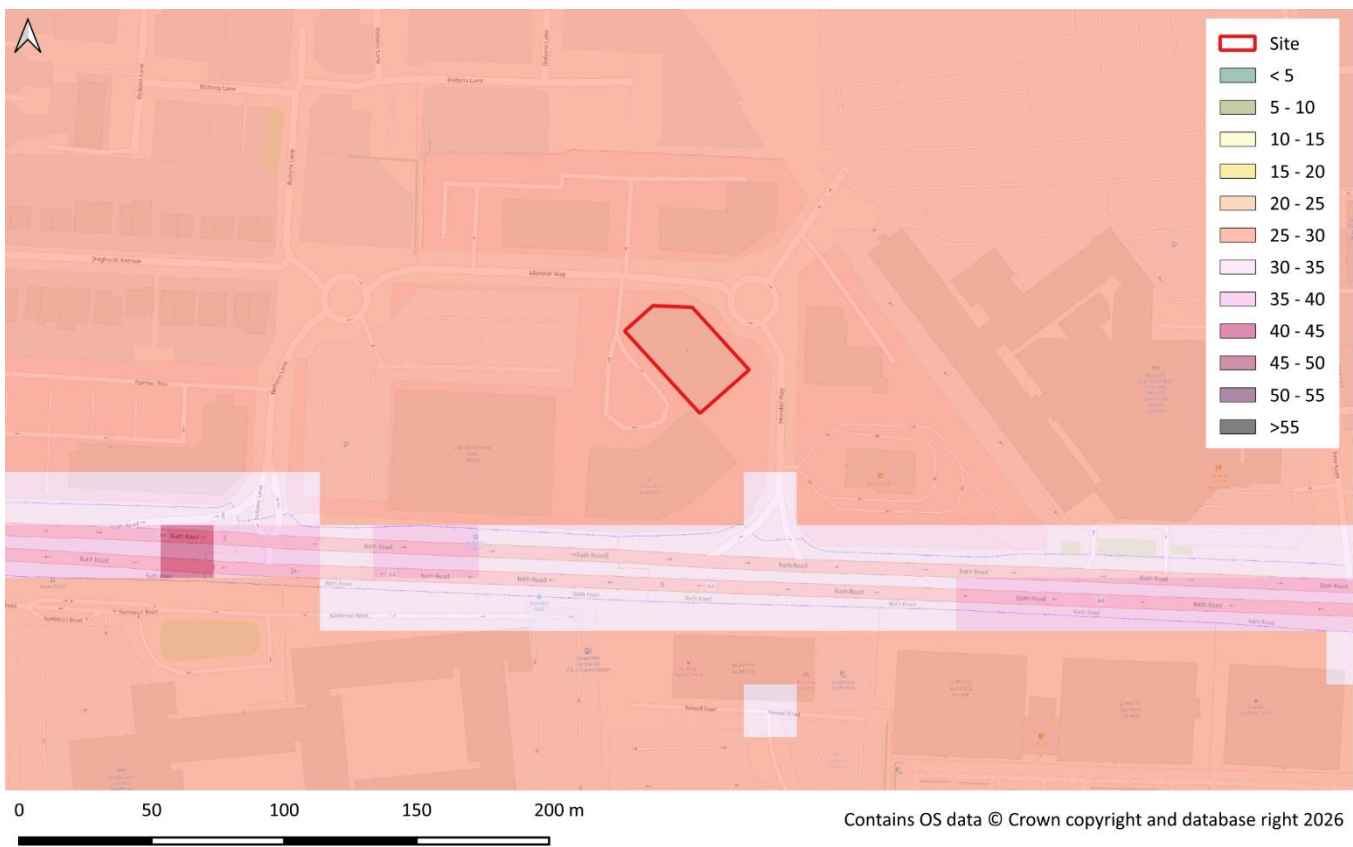


FIGURE B2: 2022 ANNUAL MEAN PM₁₀ CONCENTRATIONS

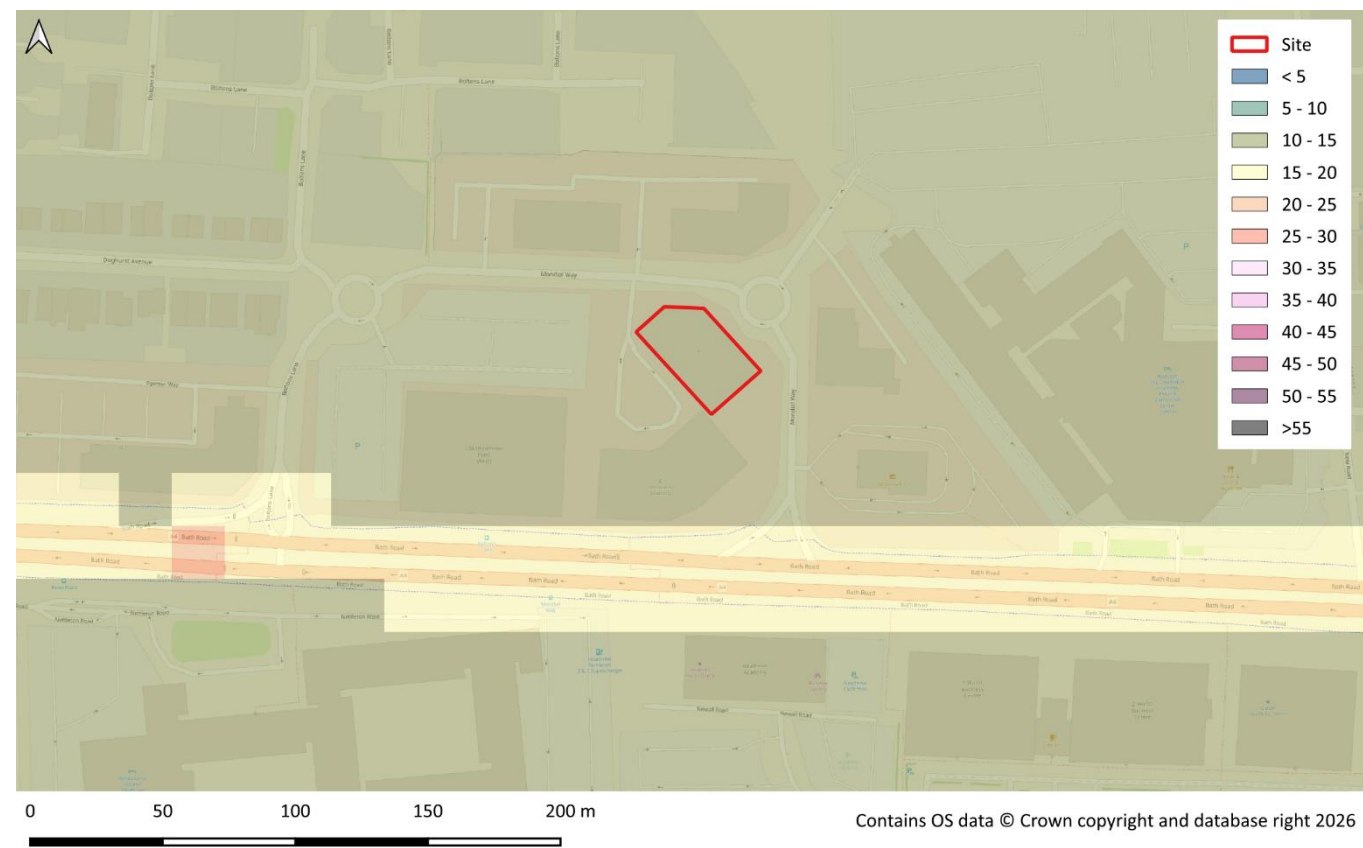
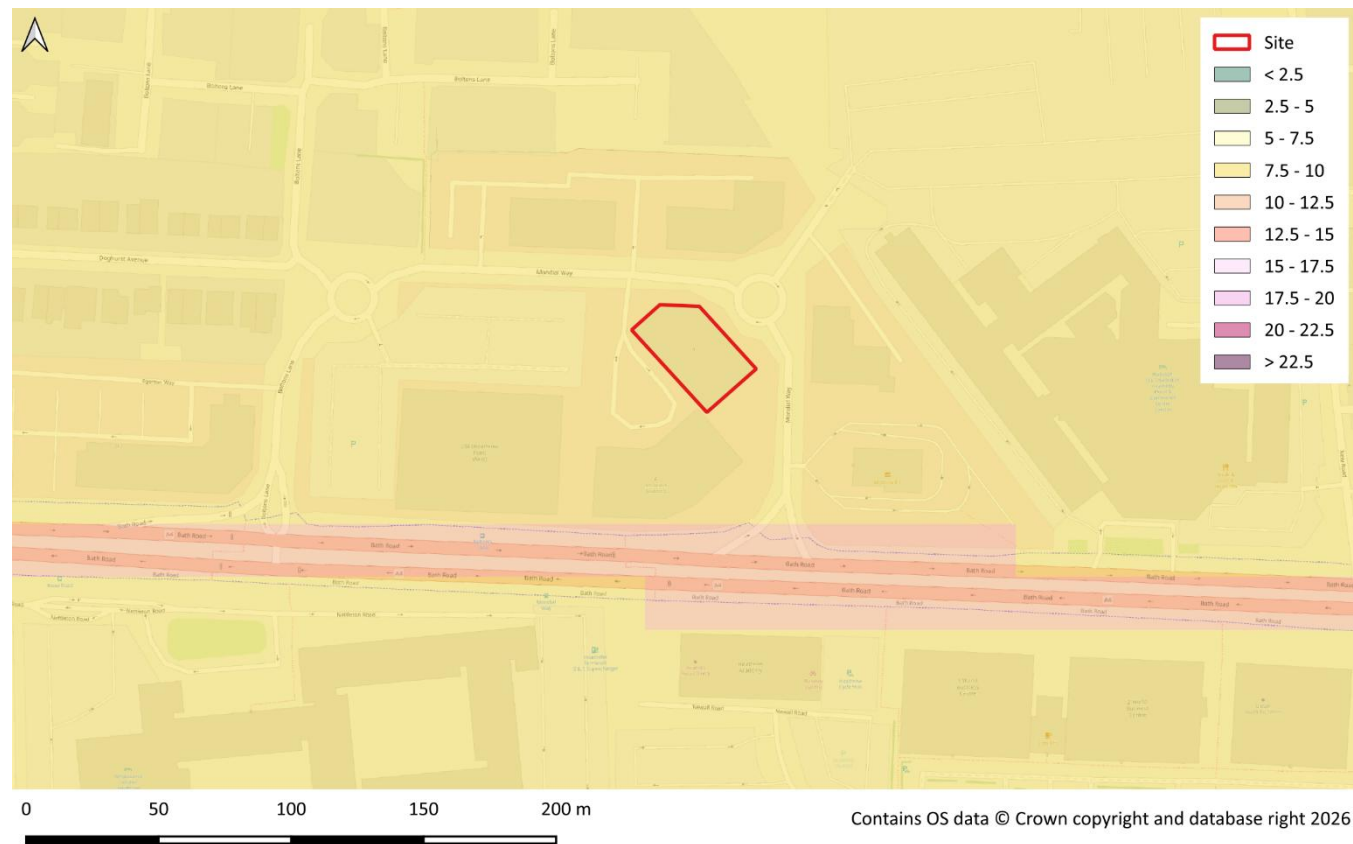


FIGURE B3: 2022 ANNUAL MEAN PM_{2.5} CONCENTRATIONS



Appendix C - Construction Phase Mitigation Measures

TABLE C1: MITIGATION MEASURES TO BE INCORPORATED INTO THE DUST MANAGEMENT PLAN FOR THE PROPOSED DEVELOPMENT

Measure	Highly Recommended	Desirable
Communication		
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. This may be the environment manager/engineer or the site manager.	✓	
Display the head or regional office contact information.	✓	
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 the local authority when asked.	✓	
Record any exceptional incidents that cause dust and/or air emissions, either on- or off-site, and the action taken to resolve the situation in the log book.	✓	
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 the local authority when asked. This should include regular dust soiling checks of surfaces such as street furniture, cars and window sills within 100 m of site boundary, with cleaning to be provided if necessary.		✓
Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to the local authority when asked.	✓	
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.	✓	
Deploy two real-time PM ₁₀ continuous monitors on site. Monitoring locations to be agreed with the local authority. Where possible commence baseline monitoring at least three months before work commences on site or, if it a large site, before work on a phase commences.	✓	
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 the 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.	✓	
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 NRMM standards, where applicable.	✓	
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.	✓	
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 suppression/ mitigation, using non-potable water where possible and appropriate.	✓	
Use enclosed chutes and 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 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).		✓
Ensure effective water suppression is used during demolition operations. Handheld sprays are more effective than hoses attached to equipment as the water can be directed to where it is needed. In addition, high volume water suppression systems, manually controlled, can produce fine water droplets that effectively bring the dust particles to the ground.	✓	
Avoid explosive blasting, using appropriate manual or mechanical alternatives.	✓	
Bag and remove any biological debris or damp down such material before demolition.	✓	
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.		✓
Trackout		
Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use. Jet washers should not be used to flush such dirt into road gullies. No development dirt shall be evident on the highway at the end of any working day.		✓
Avoid dry sweeping of large areas.		✓
Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.		✓
Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).		✓



Building a brighter, more sustainable environment.



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