Air Quality Assessment

1071 Southampton Road East, Heathrow

April 2026

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1. Introduction

Background

1.1 Phlorum Limited was commissioned by Avison Young on behalf of Tritax London Logistics GP Limited, to undertake an Air Quality Assessment (AQA) to support a planning application for a proposed industrial warehouse development at Heathrow, located within the London Borough of Hillingdon's (LBH) authority boundary. The National Grid Reference for the centre of the site is 506902, 174401. A site location plan has been included in Figure 1.

1.2 It is understood that the scheme includes an industrial warehouse development comprising a single level flexible warehouse with mezzanine level offices.

1.3 Land use in the vicinity of the site comprises predominantly industrial uses, with Heathrow airport located approximately 600m north of the site at its closest point.

1.4 The main pollution sources in the vicinity of the site are vehicles travelling on the local road network, primarily on the Southern Perimeter Road which bounds the site to the south.

1.5 The site lies within the Hillingdon Air Quality Management Area (AQMA), which was declared in 2003 due to exceedances of the UK Air Quality Standard (AQS) for annual mean concentrations of nitrogen dioxide (NO_2).

Scope of Assessment

1.6 This report assesses both the proposed development's sensitivity to, and impact on, local air quality, considering both the operational and construction phases, and recommends mitigation where necessary. An Air Quality Neutral Assessment has also been undertaken, in line with relevant London policy.

2. Policy Context

The UK Air Quality Strategy

2.1 The UK Air Quality Strategy (UKAQS)[1] sets out Air Quality Standard (AQS) concentrations for a number of key pollutants that are to be achieved at sensitive receptor locations across the UK by corresponding Air Quality Objective (AQO) dates. The sensitive locations at which the standards and objectives apply are those where the population are reasonably expected to be exposed to said pollutants over the particular averaging period.

2.2 For those objectives to which an annual mean standard applies, the most common sensitive receptor locations used to compare concentrations against the standards are areas of residential housing. It is reasonable to expect that people living in their homes could be exposed to pollutants over such a period of time.

2.3 Schools and children's playgrounds are also often used as sensitive locations for comparison with annual mean objectives due to the increased sensitivity of young people to the effects of pollution (regardless of whether or not their exposure to the pollution could be over an annual period). For shorter averaging periods of between 15 minutes, 1 hour or 1 day, the sensitive receptor location can be anywhere where the public could be exposed to the pollutant over these shorter periods of time. A summary of the standards and objectives relevant to this assessment is included in Table 2.1, below.

Table 2.1 UK Air Quality Standards and Objectives

Pollutant	Averaging Period	Air Quality Standard (µg.m^{-3})	Air Quality Objective
Nitrogen dioxide (NO_2)	1 hour	200	200 µg.m^{-3} not to be exceeded more than 18 times a year
	Annual	40	40 µg.m^{-3}
Particulate Matter (PM_{10})	24-hour	50	50 µg.m^{-3} not to be exceeded more than 35 times a year
	Annual	40	40 µg.m^{-3}
Particulate Matter ($PM_{2.5}$)	Annual	20	20 µg.m^{-3}
	Annual	10*	10 µg.m^{-3} not to be exceeded as an annual mean in 2030

Note: (*) denotes an interim target, outlined in Defra's Environmental Improvement Plan 2025[2] .

1 Air Quality Strategy for England, Scotland, Wales and Northern Ireland (Volumes 1 and 2) July 2007.
2 Department for Environment, Food & Rural Affairs. (2025). *Environmental Improvement Plan 2025.*

2.4 The objectives adopted in the UK are based on the Air Quality (England) Regulations 2000, as amended in 2002[3] and 2010[4], for the purpose of Local Air Quality Management. These Air Quality Regulations have been adopted into UK law from the limit values required by European Union Daughter Directives on air quality.

2.5 The UK AQS for $PM_{2.5}$ was amended from 25 $\mu g.m^{-3}$ to 20 $\mu g.m^{-3}$, as part of the Environment (Miscellaneous Amendments) (EU Exit) Regulations 2020[5].

2.6 In 2025, Defra published the updated *Environmental Improvement Plan 2025*[6], which outlines a target of 10 $\mu g.m^{-3}$ for annual mean $PM_{2.5}$ concentrations to be achieved by December 2030.

2.7 Obligations under the Environment Act 1995 require local authorities to declare an AQMA at sensitive receptor locations where an objective concentration has been predicted to be exceeded. In setting an AQMA, the local authority must then formulate an Air Quality Action Plan (AQAP) to seek to reduce pollution concentrations to values below the objective levels.

2.8 LBH have drafted a new AQAP[7] which is currently under consultation and is expected to be adopted in the near future. As part of the draft AQAP, LBH aims to achieve World Health Organisation (WHO) Air Quality Guideline Values (2021)[8] by 2030; the WHO targets are for annual mean concentrations to be equal to or less than 10 $\mu g.m^{-3}$ for NO_2, 15 $\mu g.m^{-3}$ for PM_{10} and 5 $\mu g.m^{-3}$ for $PM_{2.5}$.

London Local Air Quality Management

2.9 The *London Local Air Quality Management* (LLAQM) framework is the statutory process used by London authorities to review and improve air quality within their administrative boundaries. This framework was designed to specifically meet London's needs.

2.10 The LLAQM framework provides London-specific policy and technical guidance (LLAQM.PG(19)[9] and LLAQM.TG(19)[10]) for the London Boroughs. Although both are largely based on the national Department for Environment, Food and Rural Affairs (Defra) *Local Air Quality Management Technical Guidance (LAQM(TG22))*[11], they incorporate London-specific elements of the national LAQM system.

3 Department for Environment, Food & Rural Affairs. (2002). *The Air Quality (England) (Amendment) Regulations 2002 - Statutory Instrument 2002 No.3043*.
4 Department for Environment, Food & Rural Affairs. (2010). *The Air Quality (England) (Amendment) Regulations 2010 - Statutory Instrument 2010 No.1001*.
5 The Environment (Miscellaneous Amendments) (EU Exit) Regulations 2020.
6 Department for Environment, Food & Rural Affairs. (2025). *Environmental Improvement Plan 2025.*
7 London Borough of Hillingdon. (2025). London Borough of Hillingdon *Air Quality Action Plan 2025-2030.*
8 World Health Organisation. (2021). *WHO global air quality guidelines.*
9 Local Air Quality Management. (2019). *London Local Air Quality Management: Policy Guidance 2019*.
10 Local Air Quality Management. (2019). *London Local Air Quality Management: Technical Guidance 2019*.
11 Department for Environment, Food and Rural Affairs. (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).*

2.11 The Greater London Authority (GLA) has designated twelve Air Quality Focus Areas (AQFA) in Hillingdon. An AQFA is a location that has been identified by the GLA as having both high levels of NO_2 and significant human exposure. The site is located within the Heathrow Area AQFA.

London Ultra Low Emission Zone

2.12 In addition to the existing London Low Emission Zone (LEZ)[12], the central London Ultra-Low Emission Zone (ULEZ)[13] was introduced on 8th April 2019, which replaced previous interim policy interventions to tackle air pollution, such as the London Emissions Surcharge (T-charge).

2.13 The application site is located within the existing London LEZ. In August 2023, the ULEZ was widened to extend across the entirety of each LEZ London borough, and therefore, the application site is also located within the expanded ULEZ.

National Planning Policy Framework

2.14 The National Planning Policy Framework (NPPF)[14] sets out the Government's planning policy for England. At its heart is an intention to promote more sustainable development. A core principle in the NPPF that relates to air quality effects from development is that planning should "contribute to conserve and enhance the natural and local environment" as demonstrated at paragraph 187:

"Planning policies and decisions should contribute to and enhance the natural and local environment by: [...]

> *e) preventing new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability [...]".*

2.15 With regard to assessing cumulative effects the NPPF states the following at paragraph 198:

"Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. [...]"

2.16 With regard to compliance with relevant limit values and national objectives for air pollutants, along with assessing cumulative effects, the NPPF states the following at paragraph 199:

12 Transport for London (2023). *Low Emission Zone*. Available from: https://tfl.gov.uk/modes/driving/low-emission-zone
13 Transport for London (2023). *Ultra Low Emission Zone*. Available from: https://tfl.gov.uk/modes/driving/ultra-low-emission-zone
14 Ministry of Housing, Communities & Local Government. (2025). *National Planning Policy Framework.*

"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."

2.17 With regard to promoting sustainable transport, paragraph 110 states:

"The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making".

2.18 The NPPF offers a broad framework but does not afford a detailed methodology for assessments. Specific guidance for air quality continues to be provided by organisations such as the Defra, Environmental Protection UK (EPUK) and the Institute of Air Quality Management (IAQM).

National Planning Practice Guidance

2.19 Reference ID 32 (Air Quality) of the National Planning Practice Guidance (PPG)[15] provides guiding principles on how planning can take account of the impact of new development on air quality. The PPG summarises the importance of air quality in planning and the key legislation relating to it.

2.20 As well as describing the importance of international, national and local policies (detailed elsewhere in this report), it summarises the key sources of air quality information. It also explains when air quality is likely to be relevant to a planning decision, stating:

"Considerations that may be relevant to determining a planning application include whether the development would:

- *Lead to changes (including any potential reductions) in vehicle-related emissions in the immediate vicinity of the proposed development or further*

15 Planning Practice Guidance (PPG) 32. (2019). *Air Quality*.

afield. This could be through the provision of electric vehicle charging infrastructure; altering the level of traffic congestion; significantly changing traffic volumes, vehicle speeds or both; or significantly altering the traffic composition on local roads. Other matters to consider include whether the proposal involves the development of a bus station, coach or lorry park; could add to turnover in a large car park; or involve construction sites that would generate large Heavy Goods Vehicle flows over a period of a year or more;

- *Introduce new point sources of air pollution. This could include furnaces which require prior notification to local authorities; biomass boilers or biomass-fuelled Combined Heat and Power plant; centralised boilers or plant burning other fuels within or close to an air quality management area or introduce relevant combustion within a Smoke Control Area; or extraction systems (including chimneys) which require approval or permits under pollution control legislation;*
- *Expose people to harmful concentrations of air pollutants, including dust. This could be by building new homes, schools, workplaces or other development in places with poor air quality;*
- *Give rise to potentially unacceptable impacts (such as dust) during construction for nearby sensitive locations;*
- *Have a potential adverse effect on biodiversity, especially where it would affect sites designated for their biodiversity value."*

2.21 Details are also provided of what should be included within an air quality assessment. Key considerations include:

- Baseline local air quality;
- Whether the proposed development could significantly affect local air quality during its construction/operation; and
- Whether the development is likely to expose more people to poor air quality.

2.22 Examples of potential air quality mitigation measures are also provided in the PPG.

London Specific Planning Policy

2.23 The Mayor's Air Quality Strategy to tackle air quality across London as a whole was published in 2010. This was replaced by the Mayor's Environment Strategy in 2018[16], and is supported by the *London Plan*[17], which was published in 2021.

2.24 Policy SI1 '*Improving air quality*', of the London Plan, states that:

16 Greater London Authority. (2018). *London Environment Strategy.*
17 Greater London Authority. (2021). *The London Plan*.

"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:

a) lead to further deterioration of existing poor air quality

b) 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

c) 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 should demonstrate that design measures have been used to minimise exposure. […]

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."

London Low Emissions Zone for Non-Road Mobile Machinery

2.25 London has introduced the Central Activity Zone (CAZ) for Non-Road Mobile Machinery (NRMM) to reduce emissions from construction site machinery in key areas of London; namely areas that contain seats of national governance, as well as nationally significant cultural and business locations. In addition to this, Opportunity Areas (OAs) were designated as geographic areas that have the potential for future infrastructural and residential development.

2.26 The NRMM CAZ was introduced as current estimates of emissions from NRMM used on construction sites were shown to be responsible for 7% of NO_X emissions, 14% of $PM_{2.5}$ emissions and 8% of PM_{10} emissions across the capital as detailed in a parliamentary environmental bill[18].

2.27 The site is located within the NRMM CAZ and within the designated Heathrow Area OA. At the time of construction in 2027, the site will be bound by the Greater London Authority emission requirements[19], which state:

- NRMM for all machines, other than generators, will be required to meet Emission Stage IV as a minimum; and
- All constant-speed engines, such as those typically found in generators, will be required to be at Emissions Stage V.

Local Planning Policy

2.28 The Hillingdon Local Plan comprises two parts, the *Local Plan: Part 1- Strategic Policies*[20], which outlines the council's strategic objectives and core policies for the borough and Part 2, which comprises two separate documents, *Development Management Policies*[21] and *Site Allocations and Designations*[22]. The *Local Plan Part 1*[20] contain policies and objectives of direct relevance to air quality including:

Policy EM8: Land, Water, Air and Noise

"[…] Air Quality

All development should not cause deterioration in the local air quality levels and should ensure the protection of both existing and new sensitive receptors.

18 Environmental Bill. (2020). Available at: https://publications.parliament.uk/pa/cm5801/cmpublic/Environment/memo/EB20.htm [Accessed: February 2026]
19 Greater London Authority. (2024). *Non-Road Mobile Machinery Practical Guide V.6*.
20 London Borough of Hillingdon. (2012). *Local Plan: Part 1 Strategic Policies.*
21 London Borough of Hillingdon. (2020). *Local Plan Part 2 Development Management Policies.*
22 London Borough of Hillingdon. (2020). *Local Plan Part 2 Site Allocations and Designations.*

All major development within the Air Quality Management Area (AQMA) should demonstrate air quality neutrality (no worsening of impacts) where appropriate; actively contribute to the promotion of sustainable transport measures such as vehicle charging points and the increased provision for vehicles with cleaner transport fuels; deliver increased planting through soft landscaping and living walls and roofs; and provide a management plan for ensuring air quality impacts can be kept to a minimum.

The Council seeks to reduce the levels of pollutants referred to in the Government's National Air Quality Strategy and will have regard to the Mayor's Air Quality Strategy. London Boroughs should also take account of the findings of the Air Quality Review and Assessments and Actions plans, in particular where Air Quality Management Areas have been designated.

The Council has a network of Air Quality Monitoring stations but recognises that this can be widened to improve understanding of air quality impacts. The Council may therefore require new major development in an AQMA to fund additional air quality monitoring stations to assist in managing air quality improvements.[…]"

Policy E3: Strategy for Heathrow Airport Opportunity Area

"The Council will prepare a Local Development Document (LDD) for the Heathrow area to achieve the future growth set out in Table 5.3, in consultation with the GLA and London Borough of Hounslow. This LDD will help manage development and protect land within the Heathrow Airport boundaries for airport-related activities. It will seek to ensure that local people benefit from sustainable economic growth located both within the Airport boundaries and in the Perimeter areas. The LDD will also set requirements for climate change mitigation and adaptation through a low carbon emission strategy and measures to improve local air quality."

2.29 Policies of direct relevance to air quality within the *Local Plan Part Two*[21] include the following:

Policy DMEI 14: Air Quality

"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:

i) be at least "air quality neutral";

ii) include sufficient mitigation to ensure there is no unacceptable risk from air pollution to sensitive receptors, both existing and new; and

iii) actively contribute towards the improvement of air quality, specially within the Air Quality Management Area."

Policy DMT 1: Managing Transport Impacts

"A) Development proposals will be required to meet the transport needs of the development and address its transport impacts in a sustainable manner. In order for developments to be acceptable they are required to: […]

v) have no significant adverse transport or associated air quality and noise impacts on the local and wider environment, particularly on the strategic road network.[…]"

3. Assessment Methodology

Guidance

3.1 Defra's *Local Air Quality Management Technical Guidance* (LAQM(TG22))[11] and London's *Local Air Quality Management Technical Guidance* (LLAQM.TG(19))[10] were followed in carrying out the assessment.

3.2 The latest Environmental Protection UK (EPUK) & Institute of Air Quality Management (IAQM) guidance on *Planning for Air Quality*[23] was also referred to throughout the assessment.

3.3 Guidance published by the IAQM on the *Assessment of Dust from Demolition and Construction*[24] was also used to assess the risk of dust emissions during the construction phase of the proposed development. The Greater London Authority's (GLA) *Supplementary Planning Guidance*[25] on the control of dust from construction has also been referred to, which is considered best practice guidance for the UK. It details a number of mitigation measures that should be adopted to minimise adverse impacts from emissions of dust and fine particles.

3.4 The GLA's latest *Air Quality Neutral Guidance* (2023)[26] has been followed when undertaking the air quality neutral assessment for the proposed development.

Construction Phase

3.5 The construction phase of the proposed development will involve a number of activities that could potentially produce polluting emissions to air. Predominantly, these will be emissions of dust.

3.6 The IAQM's guidance[24] to assess the impacts of construction dust emissions on human and ecological receptors has been followed in carrying out the construction dust risk assessment.

3.7 The guidance suggests that where a receptor is located within 250m (50m for statutory ecological receptors) of a site boundary and/or 50m of a route used by construction vehicles, up to 250m from the site entrance, a dust assessment should be undertaken. Figure 2 shows the area located within 250m of the site boundary that that could be sensitive to dust emissions.

3.8 High sensitivity receptors are considered particularly sensitive when located within 20m of a works area.

23 Environmental Protection UK & Institute of Air Quality Management. (2017). *Land-Use Planning & Development Control: Planning for Air Quality*.
24 Institute of Air Quality Management. (2024). *Guidance on the Assessment of Dust from Demolition and Construction*.
25 Greater London Authority. (2014). *The Control of Dust and Emissions During Construction and Demolition*.
26 Greater London Authority. (2023). *Air Quality Neutral Guidance*.

3.9 The Multi Agency Geographic Information for the Countryside (MAGIC) website[27], which incorporates Natural England's interactive maps, has been reviewed to identify whether any statutory ecological sensitive receptors are situated within 50m of the site boundary or within 50m of any routes used by construction vehicles on the public highway, up to 250m from the site entrance.

Construction Significance

3.10 The IAQM guidance[24] suggests that *Demolition*, *Earthworks*, *Construction* and *Trackout* should all be assessed individually to determine the overall significance of the construction phase.

3.11 In the IAQM dust guidance, the first step in assessing the risk of impacts is to define the potential dust emission magnitude. This can be considered *Negligible*, *Small*, *Medium,* or *Large* for each of the construction stages. Whilst the IAQM provides examples of criteria that may be used to assess these magnitudes, the vast number of potential variables means that every site is different and therefore professional judgement must be applied by what the IAQM refer to as a "technically competent assessor". The construction phase assessment therefore relies on the experience of the appraiser.

3.12 As such, attempts to define precisely what constitutes a *Negligible*, *Small*, *Medium* or *Large* dust emission magnitude should be treated with caution. Factors such as the scale of the work, both in terms of size and duration, the construction materials and the plant to be used must be considered.

3.13 The second step is to define the sensitivity of the area around the construction site. As stated in the IAQM guidance:

"the sensitivity of the area takes into account a number of factors:

- *the specific sensitivities of receptors in the area;*
- *the proximity and number of those receptors;*
- *in the case of PM_{10}, the local background concentrations; and*
- *site-specific factors, such as whether there are natural shelters, such as trees, to reduce the risk of wind-blown dust."*

3.14 Based on these factors, the area is categorised as being of *Low*, *Medium*, or *High* sensitivity.

27 Natural England and MAGIC Partnership Organisations. (2025). *Multi Agency Geographic Information for the Countryside*.

3.15 When dust emission magnitudes for each stage and the sensitivity of the area have been defined, the risk of dust impacts can be determined. The IAQM provides a risk of impacts matrix for each construction stage. The overall significance for the construction phase can then be judged from the stages assessed. Again, this is subject to professional judgement.

3.16 Combustion exhaust gases from diesel-powered plant and construction vehicles accessing the site will also be released. However, the volumes and periods over which these releases will occur are unlikely to result in long-term impacts on local air quality and therefore this has been scoped out of the assessment.

Operational Phase

Road Transport Sources

3.17 Vehicle emissions will arise from the combustion of fossil fuels in vehicle engines and their subsequent release to atmosphere via tailpipe exhausts. The most significant pollutants released by cars and other vehicles are oxides of nitrogen (NO_2/NO_x) and particulate matter (PM_{10} and $PM_{2.5}$). Releases of carbon monoxide (CO) and some volatile hydrocarbons (e.g. benzene and 1,3-butadiene) are of less significance and are not considered further in this report.

3.18 As it is elevated annual mean concentrations of NO_2 and PM_{10} that have resulted in the declaration of most AQMAs across the UK, these are the pollutants of most concern, and they have therefore been the focus of this air quality assessment. $PM_{2.5}$, which is another fraction of particulate matter, has also been considered.

3.19 The latest EPUK & IAQM planning guidance[23] provides indicative thresholds for changes in traffic flows which would require a detailed, dispersion modelling, air quality assessment to be undertaken. These are a change in 24-hour Annual Average Daily Traffic (AADT) flows exceeding 100 Light-duty Vehicles (LDVs) and/or 25 Heavy-duty Vehicles (HDVs) on roads within, or adjacent to, an AQMA. The application site is located within LBH's borough-wide AQMA.

3.20 Full justification behind the screening of operational air quality related impacts on existing sensitive receptors in the local area has been provided in Section 6 of this report. Section 6 also includes an analysis of the site's suitability for the introduction of new receptors.

Emergency Generator Emissions

3.21 An emergency diesel-powered generator is proposed on site. EPUK & IAQM guidance[23] provides an initial 'high level' screening approach to determine whether combustion plant emissions have the potential to cause significant effects on local air quality, stating the following:

"Typically, any combustion plant where the single or combined NOx emission rate is less than 5 mg/sec is unlikely to give rise to impacts, provided that the emissions are released from a vent or stack in a location and at a height that provides adequate dispersion.

In situations where the emissions are released close to buildings with relevant receptors, or where the dispersion of the plume may be adversely affected by the size and/or height of adjacent buildings (including situations where the stack height is lower than the receptor) then consideration will need to be given to potential impacts at much lower emission rates.

Conversely, where existing nitrogen dioxide concentrations are low, and where the dispersion conditions are favourable, a much higher emission rate may be acceptable".

3.22 Determination of whether emissions from a point source, in this case the emergency generator on site, can be screened out is discussed further in Section 6 of this report.

Site Suitability

3.23 In addition, it is necessary to determine whether the proposed development could introduce new receptors into an area of existing poor air quality. Further analysis of the site's suitability, in air quality terms, for the introduction of new receptors, including proposed office staff on site, has been undertaken and is presented in Section 6 of this report.

3.24 When assessing the suitability of a site in terms of long-term air quality impacts on proposed highly sensitive receptors, including residential dwellings, the annual mean AQS for NO_2 and PM_{10} of 40 µg.m^{-3} is considered the appropriate threshold according to the UK Air Quality Strategy[1].

3.25 However, when assessing the suitability of the site for its proposed industrial and office use, the short-term AQSs for NO_2 and PM_{10} will apply, with reference to Box 1-1 of the LAQM (TG22)[11]. Short-term AQSs generally apply when assessing the potential impact of air quality when in proximity to spaces in which members of the public would not be expected to spend more than a few hours a day, such as a workplace premises.

3.26 For the hourly (short-term) AQS for NO_2 (200 µg.m^{-3} not to be exceeded more than 18 times a year), LAQM (TG22) states that where an annual mean concentration of NO_2 is below 60 µg.m^{-3}, this short-term AQS is unlikely to be exceeded.

3.27 The 24-hour (short-term) AQS for PM_{10} is 50 µg.m^{-3} (not to be exceeded more than 35 times a year). Taking the annual mean PM_{10} concentration, the following equation can be used to derive the number of days that the 24-hour AQS is likely to be exceeded:

$$\text{No. 24 hour exceedances} = -18.5 + 0.00145 \times \text{annual mean}^3 + \left(\frac{206}{\text{annual mean}}\right)$$

3.28 Using this equation, an annual mean concentration of approximately 32 µg.m^{-3} or above would likely result in an exceedance of the short-term AQS for PM_{10}.

3.29 Therefore, annual mean indicative thresholds of 60 µg.m^{-3} for NO_2 and 32 µg.m^{-3} for PM_{10} are considered to be appropriate benchmarks for assessing the suitability of the site for its proposed end use, as annual mean concentrations below these thresholds are an indication that exceedances of the short-term AQSs are unlikely to occur for both pollutants, with reference to LAQM (TG22). As there is currently no short-term AQS for $PM_{2.5}$, the respective annual mean (long-term) standard for this pollutant of concern is referred to within this report. For completeness, the annual mean AQSs for NO_2 and PM_{10} have also been reviewed throughout this air quality assessment.

Air Quality Neutral Assessment

3.30 For some time, the standard approach for air quality assessments was to predict the change in pollution concentrations through the use of a screening or detailed dispersion model and, where the potential for a significant impact was identified, recommend mitigation measures so that the significance of effect can be kept to an acceptable level. However, this type of assessment does little to consider the overall emissions from a development and its contribution to broader background concentrations, which can gradually increase due to incremental changes from successive developments, particularly in a large city such as London.

3.31 As a result of these effects, an Air Quality Neutral (AQN) policy was included in the London Plan[17]. It aims to ensure that developments are air quality neutral or better, particularly in areas where any AQSs are being breached.

3.32 Following multiple updates and changing of methodologies, the GLA's most recently published *Air Quality Neutral Guidance* (2023)[26] has been followed when undertaking the Air Quality Neutral Assessment (AQNA) for the proposed development. The results of the AQNA are presented in Section 7 of this report.

Consultation

3.33 Spelthorne Borough Council's (SBC) Environmental Health Officer (EHO) was contacted to discuss and agree the scope of this Air Quality Assessment.

3.34 The proposed scope included the assessment of both the proposed development's sensitivity to, and impact on, local air quality, considering both the operational and construction phases, recommending mitigation where necessary. An Air Quality Neutral Assessment was also proposed, in line with relevant London policy. Due to a number of factors, disused further within this report, a simple *screening* type air quality assessment was proposed as it was considered sufficient to support the planning application.

3.35 A number of items were discussed within the consultation emails which included:

- The lack of highly sensitive receptors in the immediate vicinity of the application site boundary;

- Operational development traffic flows primarily expecting to route west of the site along the A3133 Airport Way to the M25; and
- Operational development traffic flows not being expected to exceed relevant screening thresholds on the A3044 Stanwell Moor Road or at the Crooked Billet Roundabout which have been subject to poor air quality in recent years.

3.36 A response was received from SBC's EHO on the 18th February 2026 agreeing to the proposed scope of assessment.

4. Baseline Assessment

4.1 This chapter is intended to establish prevailing air quality conditions in the vicinity of the application site, through the compilation and review of appropriately sourced background concentration estimates and local monitoring data.

4.2 Defra provides estimated background annual mean concentrations of the UKAQS pollutants at the UK Air Information Resource (UK-AIR) website[28]. These estimates are produced using detailed modelling tools and are presented as concentrations at central 1km^2 National Grid square locations across the UK. At the time of writing, the most recent background maps were from August 2024, which are based on monitoring data from 2021.

4.3 Being background concentrations, the UK-AIR data are intended to represent a homogenous mixture of all emissions sources within the general area of a particular grid square location. Concentrations of pollutants at various sensitive receptor locations can, therefore, be calculated by modelling the emissions from a nearby pollution source, such as a busy road, and then adding them to the appropriate UK-AIR background datum.

4.4 The London Atmospheric Emissions Inventory (LAEI)[29] provides modelled ground level concentrations of key pollutants at a 20m grid resolution across inner and greater London. LAEI estimates of annual mean NO_2, PM_{10} and $PM_{2.5}$ concentrations are provided for the years 2025 and 2030 at a single 20m grid square within the application site boundary.

4.5 Local air quality monitoring networks are also considered an appropriate source of data for the purposes of establishing baseline air quality. To this end, LBH's automatic and non-automatic local air quality monitoring data were reviewed to establish baseline air quality. At the time of writing, LBH's most recent available *Air Quality Annual Status Report* (ASR)[30] included data for 2023.

4.6 Due to the site's proximity to SBC's authority boundary to the south and the London Borough of Hounslow's (LBoH) authority boundary to the east, automatic and non-automatic pollutant monitoring data from SBC's and the LBoH's latest ASRs[31,32] have also been reviewed for the purposes of establishing baseline air quality. These two ASRs include monitoring data for 2024.

28 Department for Environment, Food and Rural Affairs. (2024). *UK Air Information Resource Website (UK-AIR).*
29 Greater London Authority. (2022). *London Atmospheric Emission Inventory (LAEI) 2025.*
30 London Borough of Hillingdon. (2024). *London Borough of Hillingdon Air Quality Annual Status Report for 2023.*
31 Spelthorne Borough Council. (2025). *2025 Air Quality Annual Status Report (ASR).*
32 London Borough of Hounslow. (2025). *London Borough of Hounslow Air Quality Annual Status Report for 2024.*

4.7 This review of baseline air quality has considered pollutant concentrations relative to current legal standards and objectives, Defra's 2030 10 $\mu g.m^{-3}$ annual mean target[6] for $PM_{2.5}$, and the 2030 WHO annual mean target concentrations[8] established for NO_2, PM_{10} and $PM_{2.5}$ (i.e. 10 $\mu g.m^{-3}$, 15 $\mu g.m^{-3}$ and 5 $\mu g.m^{-3}$, respectively), which are targeted in LBH's AQAP, where appropriate.

UK-AIR Background Pollution

4.8 UK-AIR predicted annual mean background concentrations of NO_2, PM_{10} and $PM_{2.5}$ for 2021 to 2030 are presented in Table 4.1 below. These data were taken from the central grid square location within which the site is located (i.e. National Grid Reference: 506500, 174500).

Table 4.1: Predicted Background Concentrations of Pollutants at the Site

Pollutant	Predicted Background Concentration ($\mu g.m^{-3}$)										Annual Mean Air Quality Standard Concentration ($\mu g.m^{-3}$)
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	
NO_2	23.2	24.6	26.0	26.9	27.8	27.5	27.3	27.1	26.9	26.7	40
PM_{10}	12.9	12.8	12.8	12.7	12.6	12.6	12.5	12.4	12.3	12.3	40
$PM_{2.5}$	8.2	8.1	8.0	7.9	7.8	7.8	7.7	7.6	7.6	7.5	20

4.9 The data in Table 4.1 show that annual mean background concentrations of NO_2, PM_{10} and $PM_{2.5}$ in the vicinity of the application site between 2021 and 2030, are predicted to be well below their respective annual mean AQSs, as well as below the annual mean short-term indicative thresholds of 60 $\mu g.m^{-3}$ for NO_2 and 32 $\mu g.m^{-3}$ for PM_{10}.

4.10 The data show that in 2027, the development's projected opening year, NO_2, PM_{10} and $PM_{2.5}$ concentrations are predicted to be below their respective annual mean AQSs by approximately 32%, 69% and 62%, respectively. As such, annual mean background pollutant concentrations are anticipated to be below their respective annual mean AQSs in the vicinity of the application site.

4.11 Furthermore, in 2030, $PM_{2.5}$ concentrations are predicted to be below Defra's 2030 target[6] of 10 $\mu g.m^{-3}$ by 25%.

4.12 In 2030, concentrations of NO_2 and $PM_{2.5}$ are predicted to be above the WHO 2030 annual mean target concentrations[8] of 10 $\mu g.m^{-3}$ and 5 $\mu g.m^{-3}$, as targeted within LBH's *Air Quality Action Plan*[7], by 16.7 $\mu g.m^{-3}$ and 2.5 $\mu g.m^{-3}$ respectively, with PM_{10} concentrations predicted to be below the 15 $\mu g.m^{-3}$ target concentration by 2.7 $\mu g.m^{-3}$. However, it should be noted that these are future target values.

4.13 Furthermore, concentrations of all three pollutants are predicted to continually decline between 2021 and 2030. These reductions are expected to be principally due to the forecast effect of the roll out of cleaner vehicles, but also due to London, national and international plans to reduce emissions across all sectors.

London Atmospheric Emissions Inventory

4.14 London Atmospheric Emissions Inventory (LAEI)[29] modelled annual mean concentrations of NO_2, PM_{10} and $PM_{2.5}$ for 2025 and 2030 give predicted concentrations at a 20m grid square resolution across Greater London.

4.15 The most recent LAEI modelled pollution concentrations of NO_2, PM_{10} and $PM_{2.5}$ for 2025 and 2030 are presented in Table 4.2, below. These data were taken from a 20m grid square located within the site boundary (i.e. National Grid Reference: 506900, 174400).

Table 4.2: LAEI Concentrations at the Application Site (2025 & 2030)

Grid Square	Pollutant	Modelled Concentration ($\mu g.m^{-3}$)	Averaging Period	Air quality Standard Concentration ($\mu g.m^{-3}$)
506900, 174400 (2025)	NO_2	24.5	Annual Mean	40
	PM_{10}	13.7		
	$PM_{2.5}$	9.2	Annual Mean	20
506900, 174400 (2030)	NO_2	21.4	Annual Mean	40
	PM_{10}	12.9		
	$PM_{2.5}$	8.5	Annual Mean	20

Note: Concentrations are rounded to 1 decimal place.

4.16 The data in Table 4.2 show that modelled annual mean concentrations of NO_2, PM_{10} and $PM_{2.5}$ in 2025 and 2030 are predicted to be well below their respective annual mean AQSs, as well as below the annual mean short-term indicative thresholds for NO_2 and PM_{10}, in the vicinity of the application site.

4.17 In 2025, modelled LAEI concentrations of NO_2, PM_{10} and $PM_{2.5}$ are precited to be below their respective annual mean AQSs by approximately 39%, 66% and 54% respectively. 2030 modelled concentrations are also predicted to be below annual mean AQSs.

4.18 Therefore, this suggests that the annual mean AQSs for NO_2, PM_{10} and $PM_{2.5}$ are unlikely to be exceeded at the application site.

4.19 In 2030, $PM_{2.5}$ concentrations are predicted to be below Defra's 2030 target[6] of 10 $\mu g.m^{-3}$ by 15%.

4.20 The 2030 LAEI modelled concentrations of NO_2 and $PM_{2.5}$ are above their respective 10 $\mu g.m^{-3}$ and 5 $\mu g.m^{-3}$ 2030 WHO annual mean target concentrations[8] by 11.4 $\mu g.m^{-3}$ and 3.5 $\mu g.m^{-3}$; however, concentrations of PM_{10} are below the 15 $\mu g.m^{-3}$ target concentration by 2.1$\mu g.m^{-3}$. Again, it should be noted that these are future targets with concentrations of all three pollutants predicted to decline over time.

Local Sources of Monitoring Data

4.21 Air quality monitoring is considered an appropriate source of data for the purposes of describing baseline air quality. At the time of writing, the most recent ASR[30] released by LBH included local pollutant monitoring data from 2023. Due to the close proximity of the site to the LBH's authority boundary with Spelthorne Borough Council (SBC) and the London Borough of Hounslow (LBoH), local monitoring data from SBC's and LBoH's most recent ASRs[31,32] have also been reviewed below.

4.22 Figure 1 displays the monitoring locations closest to the proposed site.

Automatic Monitoring

NO_2

4.23 Automatic (continuous) monitoring of NO_2 was undertaken at several monitoring locations within 3 km of the site between 2019 and 2024. The most recent available annual mean data from these monitors are included in Table 4.3 below.

Table 4.3: NO_2 Data from Automatic Monitors within 3km of the Site

Monitor	Borough	Type	Distance to Site (km)	Annual Mean NO_2 Concentration ($\mu g.m^{-3}$)					
				2019	2020	2021	2022	2023	2024
BAA_OAKS	SBC	UB	1.0	-	16.8	18.1	20.3	20.0	18.2
T54	LBH	A	1.0	26.0	17.0	19.0	20.0	20.0	-
HS7 (Hatton Cross)	LBoH	UB	2.4	27.3	17.0	18.2	20.0	19.0	20.0
LHR2	LBH	A	2.7	**42.0**	25.0	25.0	30.0	32.0	-
LHRBR	LBH	R	2.8	-	**44.5**	34.0	36.0	36.0	-
SIPS	LBH	UB	2.8	30.0	19.0	19.0	24.0	23.0	-

Note: "UB" = Urban Background, "A" = Airport, "R" = Roadside. **Bold** denotes exceedance of the 40$\mu g.m^{-3}$ annual mean AQS for NO_2.

4.24 The data presented in Table 4.3 show that annual mean concentrations of NO_2 recorded at automatic monitoring stations within 3km of the site have been consistently below the 40 $\mu g.m^{-3}$ AQS between 2021 and 2024, with exceedances recorded at one monitor in 2019 (LHR2) and one monitor in 2020 (LHRBR).

4.25 Annual mean concentrations recorded by all six monitors have been below the annual mean short-term indicative threshold of 60 $\mu g.m^{-3}$ between 2020 and 2024.

4.26 The closest automatic monitoring station to the site, BAA_OAKS, is located in an urban background location at Oaks Road, in a residential area, approximately 1km west of the application site. In 2024, this monitor recorded an annual mean NO_2 concentration of 18.2 $\mu g.m^{-3}$; below the 40 $\mu g.m^{-3}$ annual mean AQS by approximately 55%.

4.27 Monitor LHRBR recorded the most recent exceedance of the annual mean AQS of the monitors located within 3km of the site, recording an annual mean concentration of 44.5 µg.m^{-3} in 2020; approximately 11% above the AQS. LHRBR is located in a roadside location adjacent to the A4 Bath Road approximately 2.8km north of the site. The monitor did not record any exceedances in subsequent years. In 2023, LHRBR recorded an annual mean concentration of 36 µg.m^{-3}; 10% below the AQS, the highest concentration of the monitors located within 3km of the site.

PM_{10}

4.28 Automatic (continuous) monitoring of PM_{10} was also undertaken at monitoring locations within 3 km of the site between 2019 and 2024. The most recent available annual mean data from these monitors are included in Table 4.4 below.

Table 4.4: PM_{10} Data from Automatic Monitors within 3km of the Site

Monitor	Borough	Type	Distance to Site (km)	Annual Mean PM_{10} Concentration (µg.m^{-3})					
				2019	2020	2021	2022	2023	2024
BAA_OAKS	SBC	UB	1.0	-	12.7	12.3	13.2	12.1	11.9
T54	LBH	A	1.0	15.0	13.0	12.0	13.0	12.0	-
HS7 (Hatton Cross)	LBoH	UB	2.4	20.0	18.0	19.0	23.0	20.0	22.0
LHR2	LBH	A	2.7	13.0	11.0	11.0	13.0	13.0	-
LHRBR	LBH	R	2.8	-	14.0	14.0	16.0	14.0	-

Note: "UB" = Urban Background, "A" = Airport, "R" = Roadside.

4.29 The data presented in Table 4.4 show that annual mean concentrations of PM_{10} recorded at automatic monitors within 3km of the site have been consistently below the 40 µg.m^{-3} AQS between 2019 and 2024, as well as below the annual mean short-term indicative threshold of 32 µg.m^{-3}.

4.30 In 2024, monitor BAA-OAKS, the closest monitor to the application site, recorded an annual mean PM_{10} concentration of 11.9 µg.m^{-3}; below the 40 µg.m^{-3} annual mean AQS by approximately 70%.

$PM_{2.5}$

4.31 Automatic (continuous) monitoring of $PM_{2.5}$ was also undertaken at monitoring locations within 3 km of the site between 2019 and 2024. The most recent available annual mean data from these monitors are included in Table 4.5 below.

Table 4.5: $PM_{2.5}$ Data from Automatic Monitors within 3km of the Site

Monitor	Borough	Type	Distance to Site (km)	Annual Mean $PM_{2.5}$ Concentration ($\mu g.m^{-3}$)					
				2019	2020	2021	2022	2023	2024
BAA_OAKS	SBC	UB	1.0	-	7.2	7.5	7.8	7.2	6.9
T54	LBH	A	1.0	10.0	7.0	7.0	8.0	7.0	-
HS7 (Hatton Cross)	LBoH	UB	2.4	0.0	0.0	0.0	0.0	0.0	19.0
LHR2	LBH	A	2.7	9.0	7.0	7.0	8.0	8.0	-
LHRBR	LBH	R	2.8	-	11.0	8.0	9.0	8.0	-

Note: "UB" = Urban Background, "A" = Airport, "R" = Roadside.

4.32 The data presented in Table 4.5 show that annual mean concentrations of $PM_{2.5}$ recorded at automatic monitors within 3km of the site have been consistently below the 20 $\mu g.m^{-3}$ AQS between 2019 and 2024.

4.33 In 2024, monitor BAA-OAKS recorded an annual mean $PM_{2.5}$ concentration of 6.9 $\mu g.m^{-3}$; below the annual mean AQS by approximately 66%.

Non-Automatic Monitoring

4.34 LBH operate a non-automatic NO_2 diffusion tube monitoring network at strategic locations within the authoritative boundary. However, the closest diffusion tube to the site within LBH's monitoring network is located approximately 3km from the site. SBC, the neighbouring district located directly south of LBH, also operate a non-automatic NO_2 diffusion tube monitoring network. These diffusion tubes are located in closer proximity to the site, and therefore concentrations recorded at these tubes are likely to be more representative of concentrations expected at the site. Therefore, NO_2 monitoring data from the closest diffusion tubes to the site, which are all located within SBC's authority boundary, have been presented in Table 4.6 below.

Table 4.6: Monitoring Data from the Closest NO_2 Diffusion Tubes to the Site

Monitor	Type	Borough	Distance from the Site (km)	NO_2 Annual Mean Concentration ($\mu g.m^{-3}$)				
				2020	2021	2022	2023	2024
SP19	R	SBC	0.1	22.6	23.1	24.7	21.8	21.2
SP63	UB	SBC	0.3	24.7	25.5	25.8	26.0	22.8
SP48	K	SBC	0.8	21.3	23.0	24.1	25.3	19.3
SP16,17,18	UB	SBC	1.0	17.4	18.5	20.3	19.7	18.5
SP47	UB	SBC	1.1	16.8	18.5	18.2	15.6	15.5
SP26	UB	SBC	1.2	19.9	21.5	22.3	23.6	19.1
SP64	R	SBC	1.3	23.5	23.2	23.4	19.7	18.6

Monitor	Type	Borough	Distance from the Site (km)	NO_2 Annual Mean Concentration ($\mu g.m^{-3}$)				
				2020	2021	2022	2023	2024
SP62	R	SBC	1.4	18.2	20.0	22.2	20.6	19.5
SP31	R	SBC	1.7	23.0	25.3	24.8	23.6	18.1

Note: "R" = Roadside, "UB" = Urban Background, "K" = Kerbside.

4.35 The data in Table 4.6 show that annual mean concentrations of NO_2 recorded at the closest diffusion tubes to the application site have been consistently below the 40 $\mu g.m^{-3}$ annual mean AQS between 2020 and 2024, as well as below the 60 $\mu g.m^{-3}$ short-term indicative threshold, even at roadside monitoring locations.

4.36 The closest diffusion tubes to the site, SP19, is located in a roadside location adjacent to Long Lane in close proximity to Bedfont Road; approximately 90m south of the site. In 2024, this tube recorded an annual mean NO_2 concentration of 21.2 $\mu g.m^{-3}$; below the annual mean AQS by 47%.

4.37 In 2024, diffusion tube SP63, located in an urban background location approximately 0.3km south-west of the site, recorded the highest annual mean NO_2 concentration of any of the ten closest tubes to the site of 22.8 $\mu g.m^{-3}$; below the annual mean AQS by 43%.

Summary

4.38 UK-AIR predicted background and LAEI modelled pollutant concentrations of NO_2, PM_{10} and $PM_{2.5}$ are predicted to be below relevant annual mean AQS's in the vicinity of the site and are predicted to decline incrementally each year to 2030.

4.39 Compilation and review of the latest local monitoring data shows that NO_2, PM_{10} and $PM_{2.5}$ concentrations recorded at local monitoring locations within the vicinity of the site have been below relevant annual mean AQSs, as well as below relevant annual mean short-term indicative thresholds in recent years, even at monitoring locations located adjacent to A-roads and within AQMAs.

5. Construction Phase Impacts

5.1 The construction phase of the proposed development will involve a number of activities that could produce polluting emissions to air. Predominantly, these will be emissions of dust.

5.2 The estimates for the dust emission magnitude for the demolition, earthworks, construction and trackout phases below are based on the professional experience of Phlorum's consultants, information provided by the client and Google Earth imagery.

Dust Emission Magnitude

Demolition

5.3 The majority of the demolition required on site was completed in May 2025 with only the demolition of the ground floor slab and foundations still required to be completed on site. Therefore, the volume of structures to be demolished on site is expected to be below 12,000m^3, which falls within the IAQM's[24] *Small* dust emission magnitude category for demolition.

5.4 Mobile crushing equipment is expected to be used on site for slab and foundation demolition, but all demolition will be at ground level, falling into the IAQM's *Small* dust emission magnitude category.

5.5 Therefore, with reference to the IAQM guidance, the overall dust emission magnitude for the demolition phase is considered to be *Small*.

Earthworks

5.6 The total site area is approximately 5.51 acres, approximately 22,300m^2, which falls within the IAQM's *Medium* dust emission magnitude category for earthworks.

5.7 No bunds are expected to be formed on site.

5.8 It is currently unknown how many heavy earth moving vehicles will be active on site at any one time. If between 5 and 10 heavy earth-moving vehicles were to operate on site at any one time, this would also fall within the IAQM's *Medium* dust emission magnitude category.

5.9 The potential health effects from the release of contaminated dusts are not considered by this report, and should be dealt with by a separate, specialist assessment, if required.

5.10 Therefore, based on currently available information, the overall dust emission magnitude for the earthworks phase is considered to be *Medium* with reference to the IAQM guidance.

Construction

5.11 During construction, activities that have the potential to cause emissions of dust may include concrete batching, sandblasting and piling. Piling is expected to occur on site. Localised use of cement powder and general handling of construction materials also have the potential to generate dust emissions, as does the effect of wind-blow from stockpiles of friable materials.

5.12 The primary construction materials are still to be determined but are expected to most likely include structural steel framing and pre-cast concrete construction.

5.13 It is estimated that the total volume of the buildings to be constructed on site will exceed 75,000m^3, falling within the IAQM's *Large* dust emission magnitude category.

5.14 Based on currently available information, the overall dust emission magnitude for the construction phase is considered to be *Large* with reference to the IAQM guidance.

Trackout

5.15 Construction traffic, when travelling over soiled road surfaces, has the potential to generate dust emissions and to also add soil to the local road network. During dry weather, soiled roads can lead to dust being emitted due to physical and turbulent effects of vehicles.

5.16 The site is expected to be accessed via Southampton Road East located directly to the north of the development site. Therefore, it is anticipated that no unpaved road surfaces will be utilise during the construction programme, falling within the IAQM's *Small* dust emission magnitude category.

5.17 It is currently unknown how many heavy-duty vehicles will access the site per day. If fewer than 20 heavy-duty vehicles were expected to operate on site at any one time, this would also fall within the IAQM's *Small* dust emission magnitude category.

5.18 Therefore, based on currently available information, the overall dust emission magnitude for the trackout phase is considered to be *Small*, with reference to the IAQM guidance.

Emission Magnitude Summary

5.19 A summary of the dust emission magnitude as a result of the activities of the demolition, earthworks, construction and trackout phases, as specified in the IAQM guidance, and as discussed above, are listed in Table 5.1 below.

Table 5.1: Dust Emission Magnitude for the Construction Activities, Based on the IAQM's Guidance.

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

Sensitivity of the Area

5.20 Having established the dust emission magnitudes for each phase above, the sensitivity of the area must be considered to establish the significance of effects. The effect of dust emissions depends on the sensitivity of each receptor affected.

5.21 High sensitivity human receptors include residential dwellings, schools, and hospitals, but can also include locations such as car showrooms when considering the impacts of dust soiling.

5.22 The impacts of dust emissions from the sources discussed above have the potential to cause an annoyance to human receptors living in the local area. Within distances of 20m of the site boundary there is a high risk of dust impacts, regardless of the prevailing wind direction. Up to 100m from the construction site, there may still be a high risk, particularly if the receptor is downwind of the dust source and conditions are dry.

5.23 With the exponential decline in dust concentrations with distance from dust generating activities, it is considered that for receptors more than 250m from the site boundary, the risk is negligible. Furthermore, the risks at over 100m only have the potential to be significant in certain weather conditions (e.g. downwind of the source during dry periods).

5.24 The approximate number of high sensitivity receptors in the vicinity of the site are detailed in Table 5.2 below.

Table 5.2: Approximate Number of High Sensitivity Receptors Within 250m of the Application Site

Distance to site (m)	Number of *High Sensitivity* Receptors	Receptor Details
<20	2	Car parks
<50	2	Car parks
<100	3-10	Car parks, residential dwelling on Bedford Road
<250	40-50	Car parks, residential dwellings

5.25 Figure 3 shows that the predominant wind direction at the closest relevant meteorological station, Heathrow Airport (2024), is from the south-west, with frequent but lower wind speeds from the north-east. As detailed in Table 5.2, there are two highly sensitive receptors, in terms of nuisance dust soiling effects, located within 20m of the site boundary. Although not located directly down-wind in the prevailing south-westerly wind direction, one of these receptors is a multi-story car park let by commercial uses to provide parking spaces for their employees. The car park is located directly to the east of the site. The car park can reasonably be classed as a highly sensitive receptor with reference to the IAQM guidance due to the frequency and duration that cars may be parked in the car park. As such, the sensitivity of the area to dust soiling impacts can be defined as *Medium* with reference to the IAQM guidance[24].

5.26 As presented in Tables 4.1, 4.2 and 4.4, local monitoring data, UK-AIR predictions and LAEI modelled concentrations indicate that annual mean concentrations of PM_{10} are likely to be below 24 $\mu g.m^{-3}$ within the vicinity of the site. This represents the IAQM's threshold for an area to be considered *Low Sensitivity* for PM_{10} related human health effects[33]. Therefore, the sensitivity of the area to human health impacts is defined as *Low* with reference to the IAQM guidance[24].

5.27 Review of the MAGIC website[27], which incorporates Natural England's interactive maps, has identified that the closest statutory ecological receptors to the application site are the South West London Waterbodies Special Protection Area (SPA) and the Stains Moor Site of Special Scientific Interest (SSSI), both located approximately 1.4km to the south-west of the site boundary at their closest points. Therefore, based on distance from the site, the proposed development can be considered to have a *Negligible* impact on local ecological receptors, with reference to the IAQM guidance[24].

Risk of Impacts

5.28 Having established the potential dust emission magnitudes and sensitivity of the area, the risk of impacts can be determined in accordance with the IAQM guidance. These are summarised in Table 5.3, below.

33 The 24 $\mu g.m^{-3}$ 'threshold' is taken from Table 3 of the IAQM's construction dust guidance. This threshold, along with the number of receptors, their sensitivity, and their distance from source (construction site), helps establish the sensitivity of an area in terms of potential human health impacts from exposure to PM_{10}. According to the guidance, baseline annual mean PM_{10} concentrations below 24 $\mu g.m^{-3}$ indicate that the sensitivity of the area in terms of human health impacts is *Low* in all cases except when there are a large number (>100) of highly sensitive receptors within 20m of the construction site.

Table 5.3: Summary of Impact Risk by Construction Stage Based on the IAQM's Dust Guidance.

Stage	Impact Risk		
	Nuisance Dust	PM_{10} Health Effects	Ecology
Demolition	Low Risk	Negligible Risk	Negligible Risk
Earthworks	Medium Risk	Low Risk	Negligible Risk
Construction	Medium Risk	Low Risk	Negligible Risk
Trackout	Low Risk	Negligible Risk	Negligible Risk

5.29 Overall, the proposed development is considered to be of *Medium Risk* for nuisance dust soiling effects, *Low Risk* for PM_{10} health effects and *Negligible Risk* for impacts on nearby ecological receptors, in the absence of mitigation.

Site Specific Mitigation

5.30 The GLA guidance[25] suggests a number of mitigation measures that should be adopted in order to minimise impacts from dusts and fine particles. Appropriate measures that could be included during construction of the proposed development include:

- ideally cutting, grinding and sawing should not be conducted on-site and pre-fabricated material and modules should be brought in where possible;
- where such work must take place, water suppression should be used to reduce the amount of dust generated;
- skips, chutes and conveyors should be completely covered and, if necessary, enclosed to ensure that dust does not escape;
- no burning of any materials should be permitted on site;
- any excess material should be reused or recycled on-site in accordance with appropriate legislation;
- developers should produce a waste or recycling plan;
- hard surfaces should be used for haul routes where possible;
- haul routes should be swept/washed regularly;
- vehicle wheels should be washed on leaving the site;
- all vehicles carrying dusty materials should be securely covered; and
- delivery areas, stockpiles and particularly dusty items of construction plant should be kept as far away from neighbouring properties as possible.

5.31 In addition, the IAQM lists recommended mitigation measures for *Low*, *Medium* and *High* dust impact risks. The highly recommended mitigation measures for *Medium Risk* sites are included in Appendix A of this report.

5.32 Where dust generation cannot be avoided in areas close to neighbouring properties, additional mitigation measures should be put in place, such as windbreaks, sprinklers, and/or time/weather condition limits on the operation of some items of plant or the carrying out of activities that are likely to generate a particularly significant amount of dust.

Residual Effects

5.33 After the implementation of the mitigation measures listed above and in Appendix A, the significance of each phase of the construction programme will be reduced and the residual significance of impacts from the construction phase is expected to be *Negligible*.

6. Operational Phase

Site Suitability

6.1 The primary source of air pollution in the vicinity of the application site is motor vehicles travelling on the local road network, primarily on the Southern Perimeter Road located directly to the south of the site.

6.2 The proposed building on site is located approximately 15m from the Southern Perimeter Road at its closest point.

6.3 The proposed development comprises the erection of a new industrial warehouse with mezzanine level offices. Therefore, no highly sensitivity receptors are proposed on site and all proposed uses on site can reasonably be considered to be medium sensitivity receptors with reference to the LAQM (TG22) guidance[11] where the short-term AQSs would apply, as detailed in Paragraphs 3.25 to 3.29.

6.4 UK-AIR background pollutant concentrations of NO_2, PM_{10} and $PM_{2.5}$ in the vicinity of the site, as detailed in Table 4.1, are predicted to be below their respective annual mean AQSs, as well as the annual mean short-term indicative thresholds of 60 $\mu g.m^{-3}$ for NO_2 and 32 $\mu g.m^{-3}$ for PM_{10}, now and in future years.

6.5 Modelled LAEI concentrations of NO_2, PM_{10} and $PM_{2.5}$ in the year 2025 are predicted to be well below their respective annual mean AQSs at a 20m grid square within the application site boundary, with concentrations predicted to decline further by 2030.

6.6 Annual mean concentrations of NO_2, PM_{10} and $PM_{2.5}$ at automatic monitoring sites in the vicinity of the site have been below their respective annual mean AQSs, as detailed in Tables 4.3 to 4.5, as well as below the annual mean short-term indicative thresholds in recent years, even at monitoring locations located adjacent to A-roads and within AQMAs.

6.7 Annual mean NO_2 concentrations at the closest diffusion tubes to the site have been below the 40 $\mu g.m^{-3}$ annual mean AQS, and therefore also below the 60 $\mu g.m^{-3}$ short term indicative threshold for NO_2, in recent years and even at tubes located adjacent to A-roads and within AQMAs.

6.8 Therefore, relevant local monitoring data, as well as nationally and locally mapped pollutant concentration data, indicate that NO_2, PM_{10} and $PM_{2.5}$ concentrations in the vicinity of the site have been, and are predicted to be, below their respective annual mean and short term AQS's.

6.9 Taking the above into consideration, the site is considered to be suitable, in air quality terms, for its proposed end use, and no further assessment of site suitability is required.

Impact on Local Air Quality

6.10 The latest EPUK & IAQM planning guidance[23] provides indicative thresholds for changes in traffic flows which would require a detailed, dispersion modelling, air quality assessment to be undertaken to assess a proposed development's impact on local air quality. These are a change in 24-hour Annual Average Daily Traffic (AADT) flows of more than 100 Light-duty Vehicles (LDVs) and/or 25 Heavy-duty Vehicles (HDVs) on roads within, or adjacent to, an AQMA. Changes below these thresholds can be reasonably considered to have an insignificant impact on air quality. The proposed site is located within the Hillingdon AQMA, with Spelthorne Borough Council's AQMA located directly to the south.

6.11 Mott MacDonald, the project's transport consultant, anticipate that the proposed development is likely to generate a total AADT of 122 LDVs and 784 HDVs.

6.12 Information provided by Mott MacDonald indicate that the proposed development is expected to generate an AADT of more than 100 LDVs on one section of road, as follows:

- A small section of Sealand Road, located east of the proposed site, between the Southern Perimeter Road to the south and the roundabout connecting Sealand Road to Southampton Road East to the north.

6.13 Of the total 122 LDVs (AADT), 70 LDVs are then expected to split and travel west of Sealand Road on the Southern Perimeter Road and 52 LDVs are expected to split and travel east on the Southern Perimeter Road. Therefore, the small section of Sealand Road is the only road where LDVs generated by the development are expected to exceed the 100 LDV screening threshold.

6.14 The proposed development is expected to generate AADT flows of more than 25 HDVs on a number of roads in the immediate vicinity of the site, including the following:

- Stanstead Road, directly west of the site boundary;
- Southampton Road East directly north of the site boundary;
- Sealand Road directly east of the site;
- Southampton Road north of the site; and
- Stirling Road west of the site.

6.15 The area surrounding the proposed site is primarily industrial with the closest highly sensitive receptor, with regards to air quality related human health impacts, being a residential dwelling located adjacent to Bedfont Road. This receptor is located approximately 90m south of the proposed site boundary at its closest point and approximately 140m from Stanstead Road, the closest of any of the roads listed above.

6.16 Therefore, any highly sensitive receptors in the vicinity of the site are considered to be sufficiently distanced from the roads listed above, and, therefore the need to undertake a detailed dispersion modelling assessment to assess the proposed development's impact on these existing highly sensitive receptors has reasonably been screened out of this assessment.

6.17 The proposed development is also expected to generate AADT flows of more than 25 HDVs on roads to the west of the site including the following:

- Southern Perimeter Road;
- A3113 Airport Way; and
- The M25 north and south of the Poyle Interchange.

6.18 However, green space primarily surrounds these roads. All highly sensitive receptors in the surrounding area are sufficiently distanced from these roads, with the closest highly sensitive residential receptors located approximately 50m south of the Southern Perimeter Road.

6.19 Furthermore, annual mean NO_2 concentrations recorded by diffusion tubes within Spelthorne Borough Council's authority boundary located near highly sensitive receptors in the vicinity of these roads, including tubes SP19, SP48, SP63 and SP65, have been below the annual mean AQS for NO_2 in recent years, as detailed in Table 4.6. Diffusion tube SP48, displayed in Figure 2, is located approximately 0.8km west of the site in a kerbside location at Riverside Road and approximately 40m from the Southern Perimeter Road. This tube is the closest tube to the highly sensitive receptors located along the Southern Perimeter Road, although the closest sensitive receptor to this tube is located a further 15m south of the Southern Perimeter Road. In 2024, SP48 recorded an annual mean NO_2 concentration of 19.3 $\mu g.m^{-3}$; approximately 52% below the 40 $\mu g.m^{-3}$ AQS.

6.20 As such, it can reasonably be assumed that traffic emissions associated with the operation of the proposed development are unlikely to have a significant air quality impact on these sensitive receptors. Therefore, the need to undertake a detailed dispersion modelling assessment to assess the proposed development's impact on these existing highly sensitive receptors has reasonably been screened out of this assessment.

6.21 The proposed development is expected to generate AADT flows of more than 25 HDVS on the M25 north and south of the Poyle Interchange. No highly sensitive receptors are located in close proximity the M25 north of the Poyle Interchange. The closest existing highly sensitive receptors located adjacent to the M25 south of the Poyle Interchange are four residential dwellings located at Moor Lane approximately 4.3km south-west of the site, and approximately 30m from the M25 at its closest point. The location of these receptors is displayed in Figure 4.

6.22 These receptors are located near the M25 which already hosts AADT flows in excess of 200,000 vehicles with reference to Department for Trasport estimates for 2024[34]. HDV flows are, according to the project transport consultant, expected to increase on this section of the M25 as a result of the proposed development's operation by approximately 197 HDVs (AADT), a 0.1% increase with respect to the flows already travelling on the motorway. Therefore, it is expected that the increase in HDV flows would not cause a significant increase in pollutant concentrations already being produced by traffic travelling on the M25.

6.23 Furthermore, diffusion tube SP49, within Spelthorne Borough Council's local monitoring network, is located adjacent to these sensitive receptors. The ASR classifies SP49 as being located in an urban background location, and therefore the existing residential receptors can also reasonably be classed as being located in an urban background location. Annual mean NO_2 concentrations recorded by tube SP49 have been well below the 40 $\mu g.m^{-3}$ AQS for NO_2 between 2020 and 2024. In 2024, the tube recorded an annual mean NO_2 concentration of 16.9 $\mu g.m^{-3}$; below the annual mean AQS by approximately 58%. Therefore, pollutant concentrations have been well below the annual mean AQS at this diffusion tube in recent years despite being located near the M25. Therefore, any incremental increases in pollutant concentrations expected due to the increase in HDVs on the M25 is not expected to increase local pollutant concentrations at this sensitive receptor above relevant annual mean AQSs.

6.24 Therefore, the need to undertake detailed dispersion modelling of the proposed development's impact, in terms of air quality, on these four residential receptors has reasonably been screened out of this assessment.

6.25 As such, it can reasonably be assumed that traffic emissions associated with the operation of the proposed development would have an insignificant impact on local air quality at local sensitive receptor locations.

Emergency Generator

6.26 As highlighted in Paragraphs 3.21 and 3.22, although there is screening guidance relating to generator emissions, the professional judgment of the technical assessor is critical when determining whether a generator can reasonably be screened out without the need for further assessment.

6.27 The emergency diesel generator will have a power output of circa. 818 kW.

6.28 The generator is only expected to be operational as an emergency power source and therefore, is only expected to be operational for a limited number hours a year.

6.29 The closest highly sensitive receptor to the proposed generator is a residential receptor located approximately 110m south-east of the generator, adjacent to Bedfont Road, and therefore sufficiently distanced from the generator.

34 Department for Transport. (2024). *Manual Count Points. Site Number: 47876* https://roadtraffic.dft.gov.uk/manualcountpoints/60082 [Accessed March 2026].

6.30 The closest sensitive receptor is also located upwind of the generator and therefore, not in the prevailing south-westerly wind direction.

6.31 Based on the above, it is considered reasonable to screen out the need to assess point source emissions from the proposed generator. Understanding that the generator would likely only operate for short periods each year, its overall contribution to local pollution levels would likely be negligible. Additionally, and perhaps most importantly, all highly sensitive receptors are well distanced from the generator. As such, point source emissions from the generator are not considered further in this assessment.

7. Air Quality Neutral Assessment

7.1 An Air Quality Neutral Assessment (AQNA) compares a proposed development's expected emissions from both traffic generation and buildings emissions with benchmarked emissions for particular land use classes derived from latest *Air Quality Neutral (AQN) Guidance*[26].

7.2 The development is located in Outer London and is expected to comprise a Gross Internal Area (GIA) of 9,810 m^2 of industrial use and 970 m^2 of office use for which Transport Emission Benchmarks (TEBs) and Building Emission Benchmarks (BEBs) are available.

Transport Emissions

7.3 With reference to the Air Quality Neutral Guidance[26], and taking into consideration the proposed uses on site, a Transport Emissions Benchmark (TEB) of 175,565 trips per annum (or 481 trips per day) has been calculated for the proposed development.

7.4 Following the Air Quality Neutral guidance, the proposed development's trip rate has been calculated based on car and light-duty vehicle trips expected to be generated during the operation of the proposed development. Other vehicle trips such as servicing vehicles, taxis and heavy vehicle movements have been excluded from this calculation following the Air Quality Neutral Guidance (See Page 14, Section 4.1.4 of the guidance).

7.5 Information from the project's transport consultant, Mott MacDonald, indicates that the proposed development, in its operation, would generate a total of 44,530 light-duty vehicle trips per annum (or 122 light-duty vehicle trips per day).

7.6 As the proposed development's calculated trip rate is below the TEB by approximately 131,035 trips per annum (or 359 trips per day), the proposed development is expected to achieve air quality neutrality with respect to transport emissions.

Building Emissions

7.7 It is currently understood that the proposed development's main energy strategy will be all-electric, utilising Air Source Heat Pumps and Photovoltaic (PV) panels.

7.8 Therefore, the scheme is not anticipated to produce any direct operational emissions of NO_x or particulate matter, and the proposed development is expected to achieve air quality neutrality with respect to building emissions.

7.9 With regards to the emergency generator proposed on site, the Air Quality Neutral Guidance[26] states the following:

"Backup plants installed for emergency and life safety power supply, such as diesel generators, may be excluded from the calculation of predicted building emissions. Normally, it is expected that the use of these generators for anything other than an emergency and operational testing (less than 50 hours per year) would be prevented by planning conditions."

7.10 Therefore, the need to consider emissions from the emergency generator as part of the air quality neutral assessment has reasonably been screened out.

8. Discussion

Construction Phase Impacts

8.1 The construction phase of the proposed development could potentially give rise to emissions which could cause dust soiling effects on adjacent uses. Following IAQM guidance[24], the construction phase of the proposed development can be considered to be of *Medium Risk* for nuisance dust soiling effects*, Low Risk for* PM_{10} health effects and *Negligible Risk* for impacts on nearby ecological receptors, in the absence of mitigation.

8.2 Following the implementation of the mitigation measures provided in Appendix A and listed in Section 5.30, emissions from the construction programme will be reduced and the residual significance of impacts is expected to be *Negligible*, thus complying with the requirements of the NPPF[14].

Operational Phase Impacts

8.3 The need for a detailed pollutant dispersion modelling assessment of the proposed development's sensitivity to local air quality has been screened out. This was primarily due to the proposed development's industrial and office end use, with the users of the site reasonably being considered to be medium sensitivity receptors, in terms of air quality related human health impacts, as well as background and local monitoring pollutant concentrations being below relevant AQSs, as well as relevant short-term indicative thresholds, in the vicinity of the application site. Therefore, the site is considered to be suitable for its proposed end use, and no further assessment of site suitability is considered necessary.

8.4 Although the proposed development is expected to generate traffic flows exceeding the EPUK & IAQM thresholds on a number of roads in the vicinity of the proposed site, the need to undertake detailed dispersion modelling to assess the impact of traffic generated by the proposed development on existing sensitive receptor locations in the vicinity of the site has reasonably been screened out.

8.5 This was primarily due to existing highly sensitive receptors being sufficiently distanced from those roads which are expected to see an increase in development flows above the relevant screening thresholds, as well as pollutant monitoring data from relevant local monitoring sites in close proximity to these existing receptors being below relevant AQSs in recent years.

8.6 The need to undertake a detailed pollutant dispersion modelling assessment of emissions produced by the emergency generator on site has also been screened out. This was primarily due to the generator only being expected to be operational for a limited number of hours per year and all highly sensitive receptors being well distanced from the generator.

8.7 Taking the above into consideration, it can be reasonably assumed that the operation of the proposed development would not have a significant impact on local air quality.

Air Quality Neutral Assessment

8.8 An air quality neutral assessment has been undertaken following guidance from the Greater London Authority. The development's proposed LDV trip generation rate (AADT) is expected to be below the calculated transport emissions benchmark.

8.9 The development's proposed main energy strategy is expected to rely on electrical sources only, with no heating or power generation from on-site combustion sources expected.

8.10 Therefore, the proposed development is expected to achieve air quality neutrality with respect to both transport and building emissions.

9. Conclusions

9.1 Phlorum Limited was commissioned by Avison Young on behalf of Tritax London logistics GP Limited to undertake an Air Quality Assessment to support a planning application for a proposed industrial warehouse development at Heathrow.

9.2 It is understood that the scheme includes an industrial warehouse development comprising a single level flexible warehouse, with mezzanine level offices.

9.3 UK-Air Information Resource background concentrations, London Atmospheric Emissions Inventory modelled pollution concentrations and local air quality monitoring data from the wider area suggest that pollution concentrations within the vicinity of the application site are likely to be below relevant UK Air Quality Strategy standard concentrations.

9.4 The construction phase of the proposed development could give rise to emissions which could cause dust soiling effects on adjacent uses. However, by adopting appropriate mitigation measures to reduce emissions and their potential impact, there should be no significant residual effects.

9.5 The operation of the proposed development is not expected to introduce new receptors into an area of poor air quality, nor is it anticipated to significantly impact local air quality. Additionally, the development is expected to achieve Air Quality Neutrality, in line with London Plan policy.

9.6 Therefore, the proposed development is expected to comply with all current relevant local, regional and national air quality policy, and as such, air quality should not pose any significant obstacles to the planning process.

Figures and Appendices

Figure 1: Site Location Plan

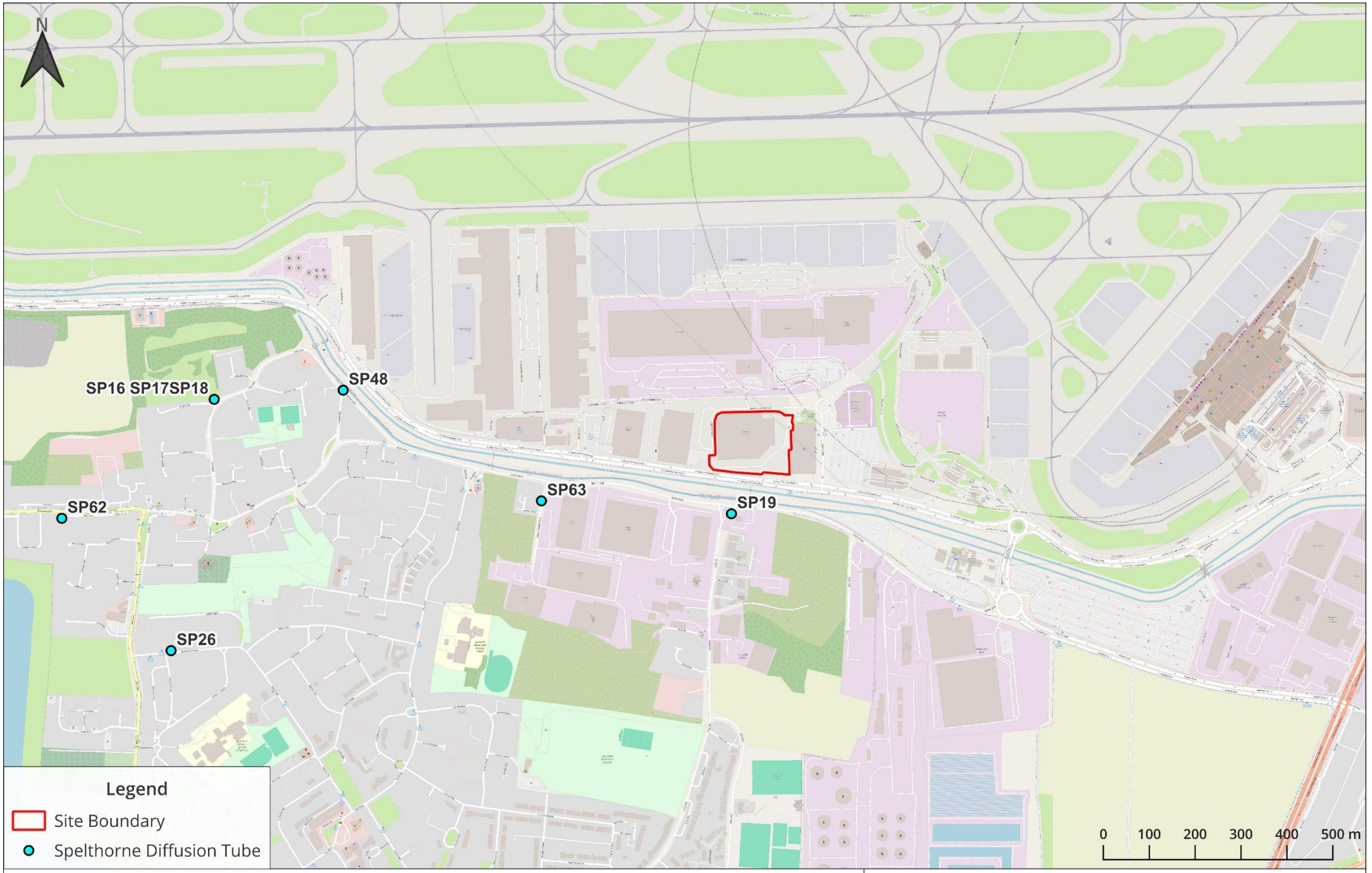

Figure 1: Site Location Plan

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Author: I. Tear
Date: 02/02/2026
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Figure 2: Construction Phase Buffers

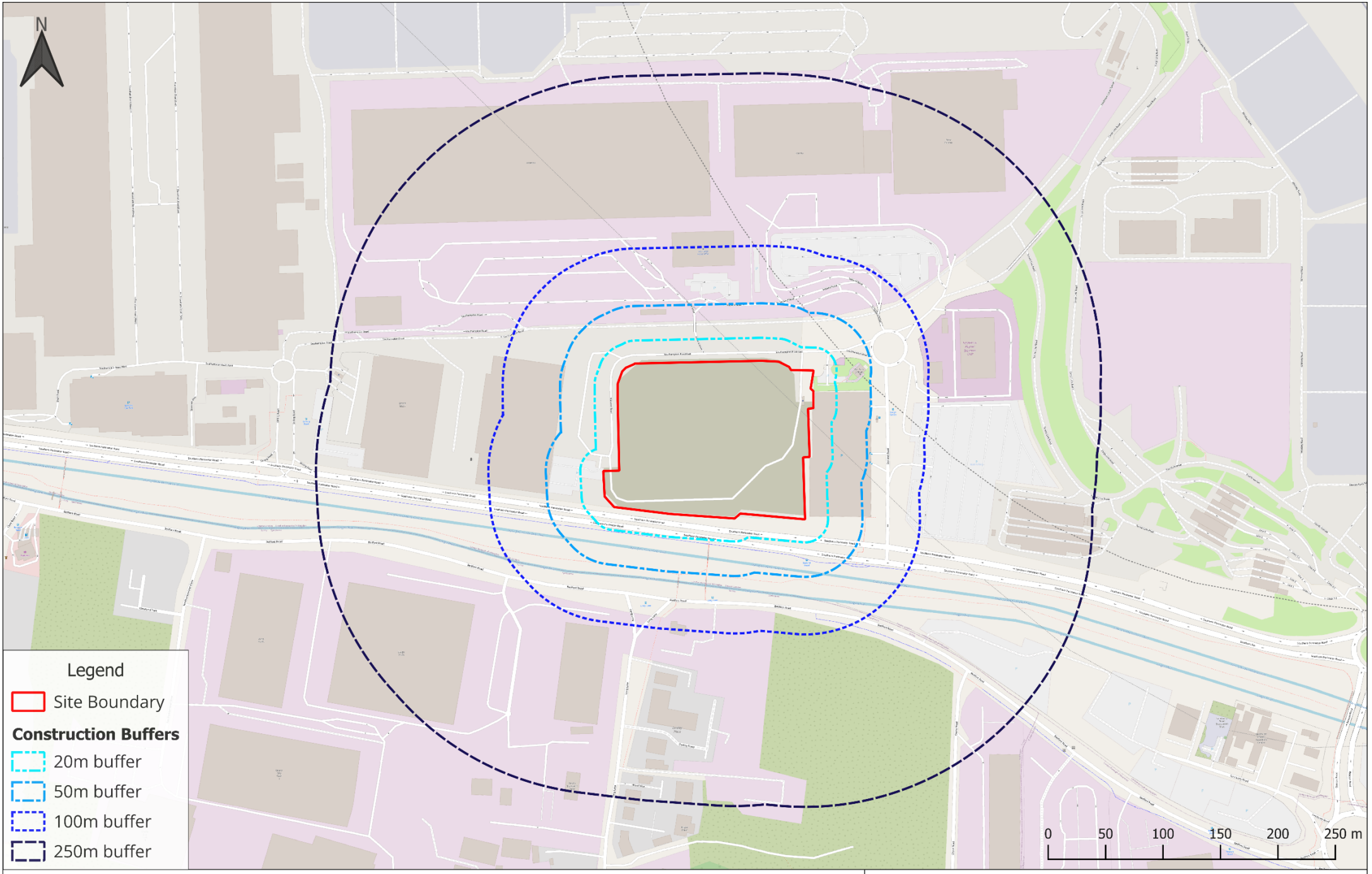

Figure 2: Construction Phase Buffers

Job No: 14353
Author: I. Tear
Date: 19/03/2026
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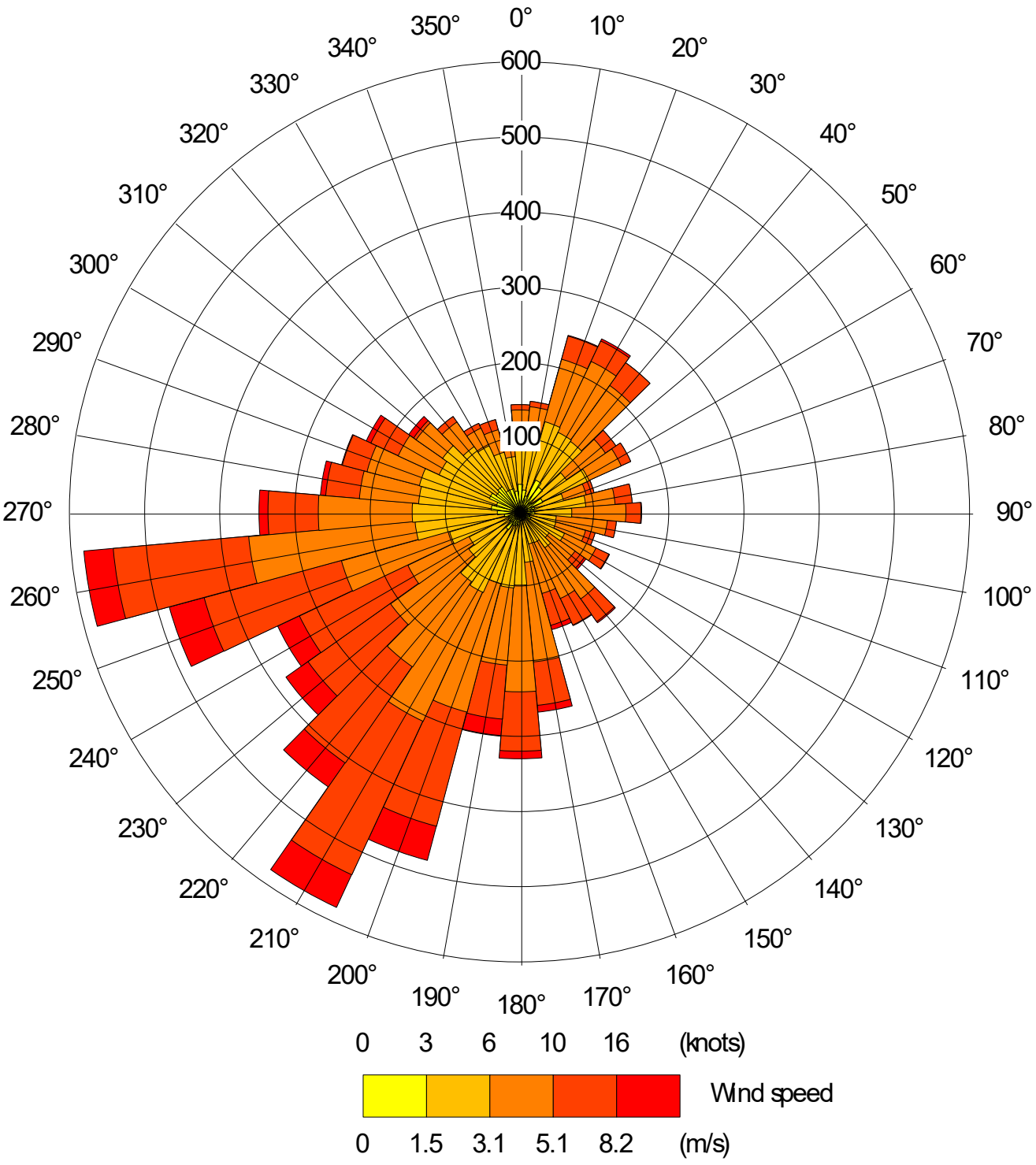
Figure 3: Wind Rose for Heathrow (2024)


0°
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270°
280°
290°
300°
310°
320°
330°
340°
350°
600
500
400
300
200
100
0 3 6 10 16 (knots)
Wind speed
0 1.5 3.1 5.1 8.2 (m/s)

Figure 4: Existing Highly Sensitive Receptor adjacent to the M25

Figure 4: Existing Sensitive Receptor

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Appendix A: IAQM Highly Recommended Mitigation Measures for *Medium Risk* sites, in Terms of Dust Impacts

Appendix A: IAQM Highly Recommended Mitigation Measures for Medium Risk Sites, in terms of Dust Impacts

Please refer to the IAQM's *Guidance on the Assessment of Dust from Demolition and Construction (2024)*[24] and *Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites (2018)*[35] for further, "desirable", mitigation measures.

Communications

- Develop and implement a stakeholder communications plan that includes community engagement before work commences on site.
- Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environment manager/engineer or the site manager.
- Display the head or regional office contact information.
- Develop and implement a Dust Management Plan (DMP), which may include measures to control other emissions, approved by the Local Authority. The level of detail will depend on the risk, and should include as a minimum the highly recommended measures in this Appendix. The DMP may include monitoring of dust deposition, dust flux, real-time PM_{10} continuous monitoring and/or visual inspections.

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 exception 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

- Carry out regular site inspections to monitor compliance with the Dust Management Plan, record inspection results, and make an inspection log available to the local authority when asked.
- Increase the frequency of 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.
- Agree dust deposition, dust flux, or real-time PM_{10} continuous monitoring locations with the Local Authority. Where possible commence baseline monitoring at least three months before work commences on site or, if it is a large site, before work on a phase commences. Further guidance is provided by the IAQM on monitoring during demolition, earthworks and construction[24].

Preparing and Maintaining the Site

- Plan site layout so that machinery and dust causing activities are located away from receptors, as far as 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

35 Institute of Air Quality Management. (2018). *Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites*.

and the site is active for an extensive period.

- Avoid site runoff of water or mud.
- Keep site fencing, barriers and scaffolding clean using wet methods.
- Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on site cover as described below.
- Cover, seed or fence stockpiles to prevent wind whipping.

Operating Vehicle/Machinery and Sustainable Travel

- Ensure all on-road vehicles comply with the requirements of the London Low Emission Zone and the London Non-Road Mobile Machinery (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.

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 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

- Ensure effective water suppression is used during demolition operations. Hand held 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

- 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.

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.
- Avoid dry sweeping of large areas.
- Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.
- Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as

soon as reasonably practicable.

- Record all inspections of haul routes and any subsequent action in a site log book.
- Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned.
- Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior leaving the site where reasonably practicable).
- 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.

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