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NTA Planning LPP



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Glossary

Acronym	Definition
APEC	Air Pollution Exposure Criteria
AQAP	Air Quality Action Plan
AQA	Air Quality Assessment
AQMA	Air Quality Management Area
AQO	Air Quality Objectives
AQS	Air Quality Strategy
ASR	Annual Status Report
AURN	Automatic Urban and Rural Network
Defra	Department for Environment, Food and Rural Affairs
DMP	Dust Management Plan
EPUK	Environmental Protection UK
EU	European Union
IAQM	Institute of Air Quality Management
LAQM	Local Air Quality Management
LNR	Local Nature Reserve
LAEI	London Atmospheric Emissions Inventory
LBH	London Borough of Haringey
NAQS	National Air Quality Strategy
NTA	NTA Planning LPP
NO	Nitric oxide
NO ₂	Nitrogen dioxide
NO _x	Oxides of nitrogen
NRMM	Non-road Mobile Machinery
PM	Particulate Matter
Ramsar Sites	Designated Wetland
SAC	Special Areas of Conservation
SPA	Special Protection Areas
SPG	Supplementary Planning Guidance
SSSI	Sites of Special Scientific Interest
WHO	World Health Organisation



1 Introduction

NTA Planning LPP (NTA) are seeking planning permission for a proposed mixed-use development at Braemar Avenue Baptist Chapel, Braemar Avenue, London N22 7BY. Hereafter called the proposed development; it consists of demolishing the tin tabernacle building which sits to the back of the church to provide a basement plus 4 storey building with community use at basement level and 15 residential units above.

Aeolus Air Quality Consulting (AAQC) have been instructed by NT+A to produce an air quality assessment to support the planning application. The planning application will be determined by the London Borough of Haringey (LBH).

The potential air quality impacts arising as a result of the proposed development have been assessed using the latest planning guidance from Environmental Protection UK (EPUK) with the Institute of Air Quality Management (IAQM)¹ and the Department for Environment, Food and Rural Affairs (Defra)².

1.1 Objectives

This report provides an assessment on the following key issues associated with the construction and operational phases of the proposed development:

- Nuisance, loss of amenity and health impacts associated with the construction phase of the proposed development on sensitive receptors;
- Characterising the baseline conditions at the site using monitored pollutant data from LBH and Defra resources;
- Assessing the suitability of the proposed development for the addition of new sensitive receptors;
- Determining whether the proposed development is 'air quality neutral'; and
- Making recommendations for mitigation measures if required.

1.2 Proposed Development Location

The proposed development is located within the jurisdiction of LBH, in an area dominated by residential use. The proposed development lies within the borough wide Air Quality Management Area (AQMA), declared by LBH on 01/07/2001 for exceedance of both the:

- NO₂ annual mean objective; and
- PM₁₀ 24-hour mean objective.

¹ IAQM (2017): 'Land Use Planning and Development Control: Planning for Air Quality v1.2'.

² Defra (2016): 'Local Air Quality Management – Technical Guidance (TG16)'.



The nearest nationally designated ecological site is Hampstead Heath Woods Site of Special Scientific Interest (SSSI), located approximately 4.4km southwest of the proposed development site. The proposed development location and the AQMA are illustrated in Figure 1.1.



Figure 1.1: Proposed development site location



2 Pollutants and Legislation

All legislation, policy, statutory and non-statutory guidelines applicable to the proposed development can be found in Appendix A. This section outlines the relevant pollutants, their Air Quality Objectives (AQO) and where they are applicable.

2.1 Key Pollutants

The key pollutant associated with the construction phase of the project will be 'disamenity' or 'nuisance' dust. Nitrogen dioxide (NO₂) and particulate matter (PM_{2.5} and PM₁₀) may also be associated with emissions from non-road mobile machinery (NRMM) and construction related traffic.

The key pollutants associated with the operational phase of the proposed development will be road traffic emissions including NO₂, PM₁₀ and PM_{2.5}. Further details of the key pollutants are presented below.

2.1.1 Nitrogen Dioxide

NO₂ and nitric oxide (NO) are collectively referred to as oxides of nitrogen (NO_x). During fuel combustion, atmospheric nitrogen combines with oxygen to form NO, which is not considered harmful. Through a chemical reaction with ozone (O₃), NO further combines with oxygen to create NO₂.

Short-term exposure to concentrations of NO₂ can cause inflammation of the airways and increase susceptibility to respiratory infections and to allergens. NO₂ can exacerbate the symptoms of those already suffering from lung or heart conditions.

2.1.2 Particulate Matter

Particulate matter (PM) is everything in the air that is not a gas and therefore consists of a huge variety of chemical compounds and materials, some of which can be toxic. Due to the small size of many of the particles that form PM some of these toxins may enter the bloodstream and be transported around the body, lodging in the heart, brain and other organs. Therefore, exposure to PM can result in serious impacts to health, especially in vulnerable groups of people such as the young, elderly, and those with respiratory problems.

Particulates are classified according to size: particles are less than 10 micrometres in diameter (PM₁₀) and less than 2.5 micrometres in diameter (PM_{2.5}).

2.1.3 Disamenity Dust

'Dust' is generally regarded as particulate matter up to 75µm in diameter and in an environmental context can be considered in two size categories: coarser dust (particles greater than 10µm) and fine particulate matter (PM₁₀ and PM_{2.5}) as described above.

Coarser dust (particles greater than 10µm) is generally regarded as 'disamenity dust' and can be associated with annoyance, although there are no official standards for dust



annoyance³. Disamenity dust is more readily described than defined as it relates to the visual impact of short-lived dust clouds and the long-term soiling of surfaces.

Although it is a widespread environmental phenomenon, dust is also generated through many anthropogenic activities including materials handling, construction, demolition, and vehicle use. Dust is generally produced by mechanical action on materials and is carried by moving air when there is sufficient energy in the airstream. More energy is required for dust to become airborne than for it to remain suspended.

2.2 Relevant Air Quality Objectives

The AQO listed in Table 2.1 are only applicable at locations where a member of the public could be reasonably expected to spend the relevant averaging period. Further examples of this are presented in Table 2.2.

Table 2.1: Relevant AQO

Pollutant	Averaging Period	AQO ($\mu\text{g}/\text{m}^3$)	Exceedance Allowance	Percentile Equivalent
Nitrogen Dioxide (NO_2)	Annual	40	-	-
	1-hour	200	18 per annum	99.79 th
Particulate Matter (as PM_{10})	Annual	40	-	-
	24-hour	50	35 per annum	90.41 st
Particulate Matter (as $\text{PM}_{2.5}$) ^(a)	Annual	25	-	-

Notes: ^(a) This is a target value set for a 15% reduction in concentrations at urban background aimed to achieve between 2010 and 2020.

Source: Department for Environment Food and Rural Affairs (2016): 'Local Air Quality Management Technical Guidance' (TG.16).

Table 2.2: Examples of where AQO should apply

Averaging period	AQO should apply at	AQO should not apply at
Annual	All locations where members of the public might be regularly exposed. Building façades of residential properties, schools, hospitals, care homes etc.	Building façades of offices or other places of work where members of the public do not have regular access. Hotels, unless people live there as their permanent residence. Gardens of residential properties. Kerbside sites (as opposed to locations at the building façade), or any other location where

³ Note that the expression 'nuisance dust' refers here to 'generally visible particulate matter' rather than specifically and in a legal sense to statutory nuisance, as defined in Section 79 of the Environmental Protection Act 1990.



Averaging period	AQO should apply at	AQO should not apply at
		public exposure is expected to be short-term.
24 Hour	All locations where the annual mean objective would apply, together with hotels and gardens of residential properties ^(a) .	Kerbside sites (as opposed to locations at the building façade), or any other location where public exposure is expected to be short-term.
1 Hour	All locations where the annual mean and 24 and 8-hour mean objectives apply. Kerbside sites (for example, pavements of busy shopping streets). Those parts of car parks, bus stations and railway stations etc. which are not fully enclosed, where members of the public might reasonably be expected to spend one hour or more. Any outdoor locations where members of the public might reasonably have expected to spend one hour or longer.	Kerbside sites where the public would not be expected to have regular access.

Notes: ^(a) "Such locations should represent parts of the garden where relevant public exposure to pollutants is likely, for example where there is seating or play areas. It is unlikely that relevant public exposure to pollutants would occur at the extremities of the garden boundary, or in front gardens, although local judgement should always be applied ^(a) This is a target value set for a 15% reduction in concentrations at urban background aimed to achieve between 2010 and 2020.

Source: Department for Environment Food and Rural Affairs (2016): 'Local Air Quality Management Technical Guidance' (TG.16).



3 Methodology

This section sets out the approach taken to assess the potential impacts on air quality during the construction and operational phases of the proposed development.

3.1 Scope of the Assessment

The assessment is based on the scope of work presented in Table 3.1.

Table 3.1: Scope of Work

Scope	Consideration
Spatial	The assessment considers the impact of NO ₂ , PM ₁₀ and PM _{2.5} emissions from local sources upon the proposed development site.
Temporal	The construction phase impacts resulting from the proposed development have been considered for the earliest possible construction year (2023). The operational phase impacts resulting from the proposed development have been considered for the earliest possible year of occupation (2024).

3.2 Construction Phase

The proposed development has the potential to generate dust during the construction phase of the project. Although there are no standards (such as AQO) for dust disamenity or annoyance, various 'customs and practice' criteria have become established.

For the purposes of this assessment, IAQM's 2016 Construction Dust Risk guidance⁴ has been used to carry out a construction dust risk assessment. The IAQM guidance provides a methodology (Appendix C) to evaluate potential risk of dust generation for a development and the level of mitigation required. The impact of the development is described using one of the following three categories: 'Low Risk', 'Medium Risk' and 'High Risk'. Based on the risk level, appropriate mitigation measures can be considered to minimise any risk of dust impacts from the construction phase.

3.3 Operational Phase

3.3.1 Road Source Emissions

The IAQM and EPUK planning guidance which informs this assessment contains indicative criteria on when to proceed to a detailed assessment. The criteria relating to changes in traffic flow are as follows:

A change of HDV flows of:

- More than 25 annual average daily traffic (AADT) flows within, or adjacent to, an AQMA;

⁴ Institute of Air Quality Management (2016): 'Guidance on the Assessment of Dust from Demolition and Construction'



- More than 100 AADT elsewhere.

A change of LDV flows of:

- More than 100 AADT within or adjacent to an AQMA;
- More than 500 AADT elsewhere.

The proposed scheme is located within an AQMA; therefore, the more stringent criteria apply.

The scheme transport consultant, TTP Consulting, has confirmed that the AADT will not trigger the flows which require a further assessment.

3.3.2 Point Source Emissions

The energy consultant, Energy Lab, have confirmed the proposed development is all electric, with no gas fired plant being installed. An assessment of point source emissions can therefore be scoped out.

3.3.3 Air Quality Neutral Assessment

Policy within the London Plan requires developments to be 'air quality neutral', the aim of which is to bring forward developments that are air quality neutral or better and that do not degrade air quality in areas where air quality objectives are not currently being achieved.

Public engagement on the emerging draft air quality neutral guidance⁵ was carried out for three months and two weeks, ending on 27/02/2022. The final version is expected to be published and adopted later this year.

This assessment has been prepared with reference to the draft air quality neutral guidance.

⁵ https://www.london.gov.uk/sites/default/files/air_quality_neutral_lpg_-_consultation_draft_0.pdf



4 Baseline Conditions

The following section sets out the baseline conditions in relation to air quality at the proposed development site. For the purpose of this assessment, data has been obtained from the LBH⁶ Annual Status Report (ASR) for 2020 and Defra air quality resource website⁷.

4.1 LBH Automatic Monitoring

In 2020, LBH undertook automatic monitoring at two locations within the borough.

As illustrated in Figure 4.1, neither of the automatic monitoring sites are located close to the proposed development site. Monitored concentrations recorded at these sites are not considered representative of those at the proposed development site and have not been considered further.

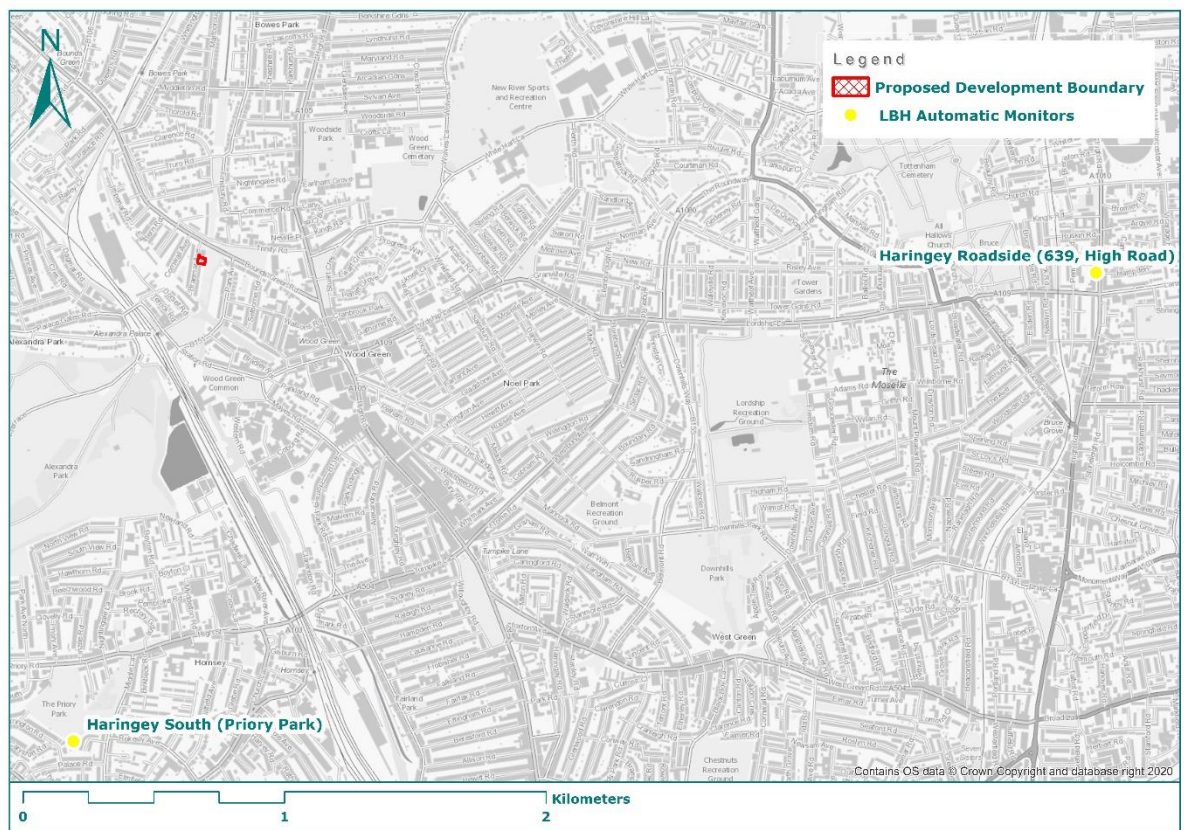


Figure 4.1: LBH Automatic Monitor Locations

⁶ London Borough of Haringey (2021). 'Air Quality Annual Status Report for 2020'.

⁷ Department for Environmental Food and Rural Affairs. Accessible at: <https://uk-air.defra.gov.uk/data/lagm-background-maps?year=2018>



4.2 LBH Diffusion Tube Monitoring

LBH undertook diffusion tube monitoring at 18 sites across the borough in 2020. As illustrated in Figure 4.2, two of these sites are located within 1km of the proposed development. Table 4.1 presents the monitored NO₂ annual mean concentrations recorded at these sites for the latest three-year period available.

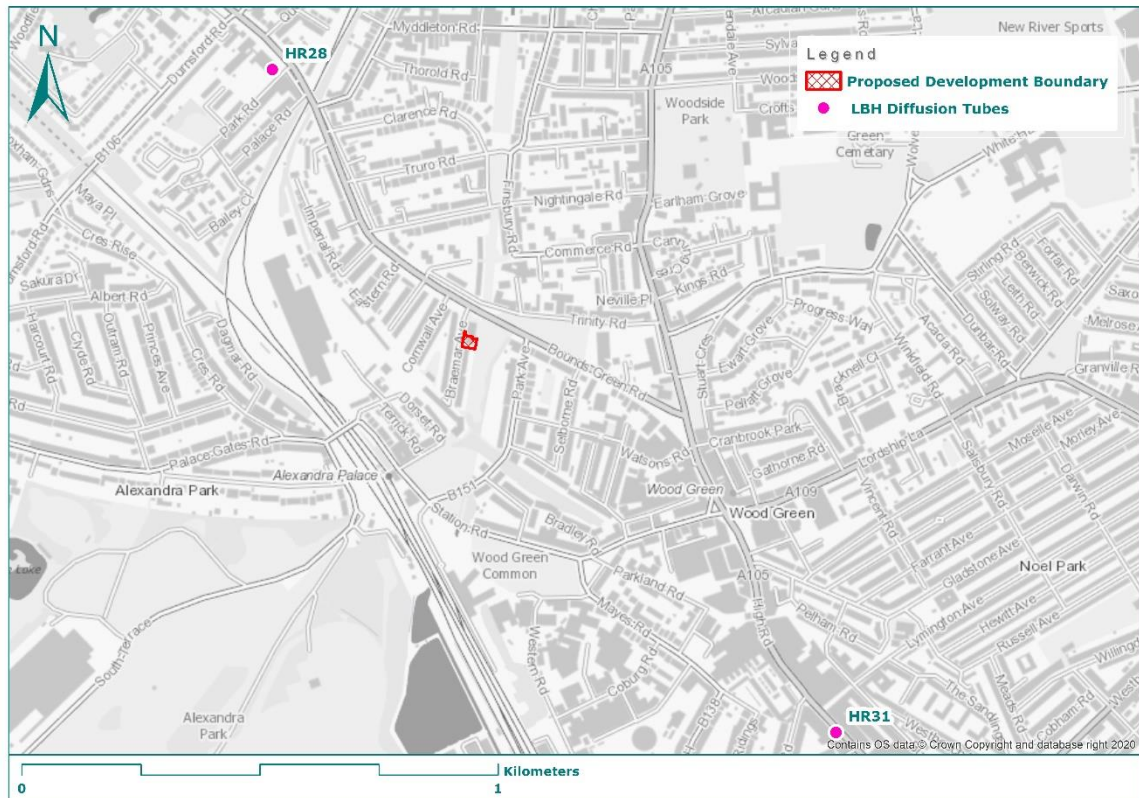


Figure 4.2: LBH Diffusion Tube Locations

Table 4.1: LBH Diffusion Tube NO₂ Annual Mean Concentrations

Site ID	Site Type	Annual mean NO ₂ Concentration (µg/m ³)		
		2018	2019	2020
HR28	Roadside	-	31	29
HR31	Roadside	<u>65</u>	<u>68</u>	<u>72</u>

Notes: Exceedance of the NO₂ annual mean AQO of 40µg/m³ are shown in **bold**.
NO₂ annual means in excess of 60µg/m³, indicating a potential exceedance of the NO₂ hourly mean AQO are shown in **bold** and underlined.
Means were “annualised” in accordance with LLAQM Technical Guidance, when valid data capture is less than 75%.

4.3 Defra Modelled Background Pollution Concentrations

Defra provides background pollution concentration estimates to assist local authorities in undertaking their ‘Review and Assessment’ work. This data is available to download from the Defra air quality resource website for NO_x, NO₂, PM₁₀ and PM_{2.5} for every 1km



X 1km grid square for all local authorities. The current dataset is based on 2018 background data and future year projections are available for 2018 to 2030. The background dataset provides breakdown of pollution concentrations by different sources (both road and non-road sources).

Table 4.2 presents the predicted background concentrations for the latest year of available monitoring data (2020) from LBH and the earliest anticipated year of occupation (2024) for the proposed development.

Table 4.2: Defra Projected Background Concentrations at the proposed development

Year	Annual mean Concentration ($\mu\text{g}/\text{m}^3$)		
	NO ₂	PM ₁₀	PM _{2.5}
2020	21.8	17.2	11.5
2024	19.1	16.4	10.9

Note: Data presented within the table are derived from the following ordinance survey grid square: 530500, 190500.

4.4 Defra UK-AIR

The UK-AIR GIS tool⁸ has been developed to allow users to analyse modelled air pollution data from Defra and the Devolved Administration's annual assessment of compliance with EU air quality directives. The tool allows users to look at the roadside annual mean NO₂ concentrations at selected major roads.

Figure 4.3 below shows the roadside annual mean NO₂ concentrations along the A109 Bounds Green Road in 2021: forecast by Defra to be between 20 and 30 $\mu\text{g}/\text{m}^3$.

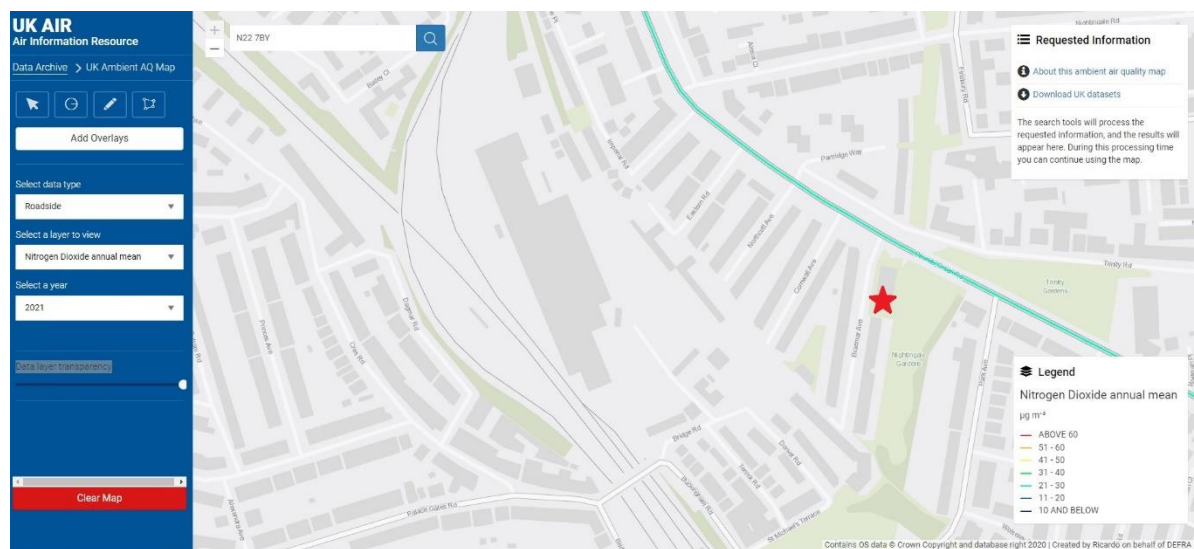


Figure 4.3: Roadside Annual Mean NO₂ Concentration (2021)

4.5 Baseline Summary

⁸ Department for Environmental Food and Rural Affairs. Accessible at: <https://uk-air.defra.gov.uk/data/gis-mapping/>



As illustrated in Figure 4.2, there are two diffusion tubes within 1km of the proposed development site.

Diffusion tube HR31 is less than 0.5m from the kerbside of A105 High Road. Diffusion tube HR28 is 2m from the kerbside of A109 Bounds Green Road.

The proposed development site is over 50m from the kerbside of A109 Bounds Green Road. The proposed development site is likely to experience annual NO₂ concentrations closer to those provided in Table 4.2, taken from the Defra background maps.

In the absence of representative monitoring data, the Defra background concentrations have been used to inform ambient NO₂, PM₁₀ and PM_{2.5} concentrations across the proposed development site.



5 Potential Impacts

5.1 Construction Phase

The earliest construction year could be 2023, subject to planning. The impacts from demolition, earthworks, construction and trackout have been considered. To assess the worst-case scenario, it has been assumed that all activities will be carried out for the duration of the construction period. Figure 5.1 shows the construction dust risk assessment buffers based on the recommended distances by IAQM.

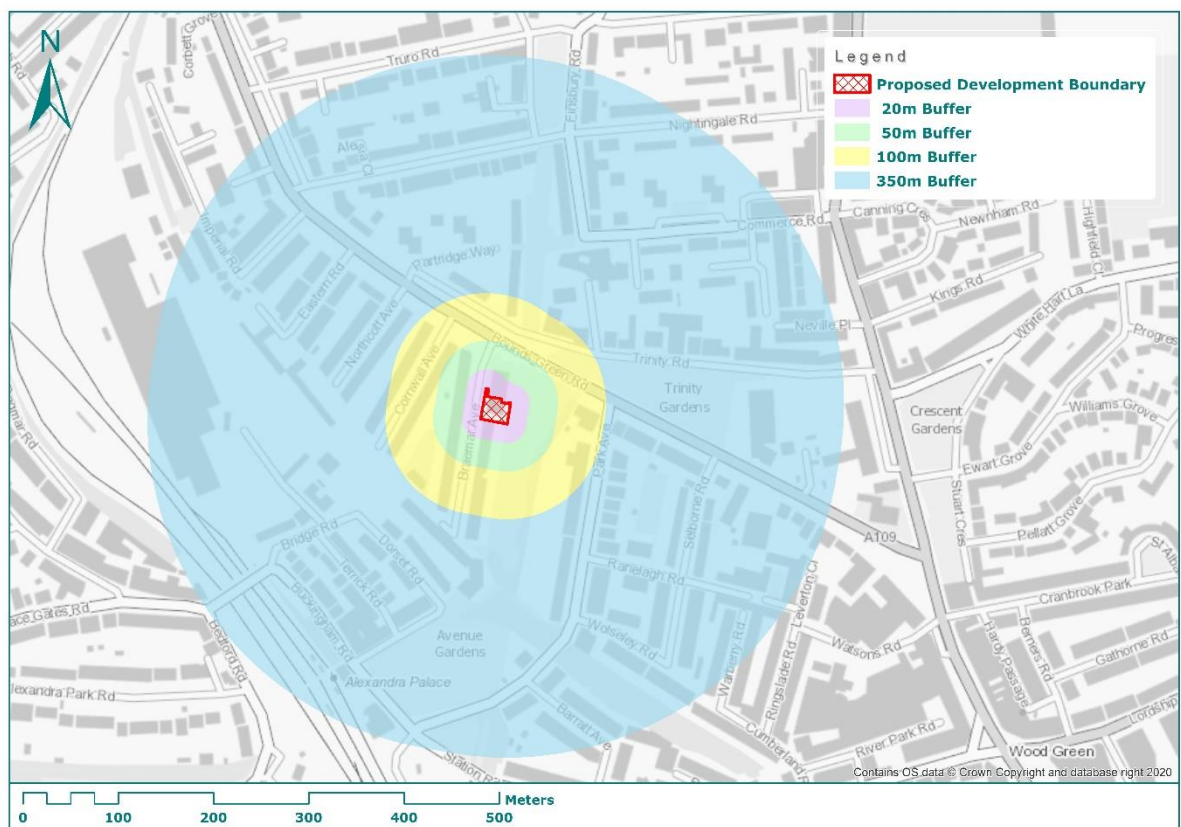


Figure 5.1: Construction Dust Risk Assessment Buffers

Magnitude and sensitivity descriptors that have been applied to assess the overall impact of the construction phase are presented in Appendix C.

The dust emission magnitude for demolition is expected to be 'Small', with the building volume to be demolished anticipated to be below 20,000m³.

The dust emission magnitude for earthworks is expected to be 'Small', with the total earthworks area measuring below 2,500m².

The dust emission magnitude for construction is expected to be 'Small', with the total building volume below 25,000m³.

It is anticipated that the outward daily peak HGV movements will be less than 10 HDV movements in a day, so the dust emission magnitude for trackout has been assigned as 'Small'.



There are no ecological receptors within 50m of the site, therefore the risk of construction dust impacts upon ecological receptors is not considered further.

Table 5.1: Dust Emission Magnitude

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

Table 5.2 presents the sensitivity of the surrounding area to effects caused by construction activities and is based on the criteria presented in Appendix C.

Table 5.2: Sensitivity of Study Area

Potential Impact	Sensitivity of the surrounding area			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	Medium	Medium	Medium	High
Human Health	Low	Low	Low	Low

The overall risk of dust soiling and human health impacts to high sensitivity receptors are presented in Table 5.3. The risk is based on the criteria presented in Appendix C.

Table 5.3: Summary of the Risk of Construction Dust Impacts

Sensitivity of Area	Risk			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	Low Risk	Low Risk	Low Risk	Low Risk
Human Health	Negligible	Negligible	Negligible	Negligible

Based upon the above, the largest risk associated with dust soiling is classified as 'Low'. With respect to human health impacts, the risk is no greater than 'Negligible'.

Mitigation measures appropriate for the proposed development have been presented in Appendix D.

Following the implementation of these mitigation measures, the impacts from the construction phase of the proposed development on dust soiling and human health are considered not to be significant.

5.2 Operational Phase

5.2.1 Suitability for Residential and Community Use



As the proposed development is partially residential in nature, all long and short term AQO are applicable.

In the absence of representative monitoring data, the Defra background concentrations have been used to inform ambient NO₂, PM₁₀ and PM_{2.5} concentrations across the proposed development site.

Table 4.2 shows that the long term AQO for all pollutants will be met at the proposed community/residential building. It can therefore be concluded that the one hour mean NO₂ AQO will be met across the site.

This is further supported by the Defra PCM data in Figure 4.3. The proposed development is considered suitable for occupation in 2024 and subsequent years if construction is delayed.

According to the London Councils Air Quality and Planning Guidance, the Air Pollution Exposure Criteria (APEC) for the proposed development is APEC-A. This guidance suggests that

"No air quality grounds for refusal; however mitigation of any emissions should be considered."

5.2.2 Air Quality Neutral Assessment

The draft air quality neutral guidance provides benchmarks for transport and building emissions for each land-use class.

5.2.2.1 Building Emissions

Energy Lab, the appointed M&E consultant, have confirmed that the proposed development is all electric with no gas fired plant.

The proposed development is therefore considered to be air quality neutral with respect to building emissions.

5.2.2.2 Transport Emissions

The air quality neutral guidance provides trip length data for ten land use categories. It is understood that the community hall is an extension to the church offer and that day-to-day it will not be a trip generator.

The proposed development consists of residential land use. TTP Consulting provided a worst-case figure of 97 trips per dwelling per annum. This falls below the relevant benchmark trip rate, meaning the proposed development is air quality neutral with regards to transport emissions.

5.2.2.3 Conclusion

The proposed development is air quality neutral with regards to both building and transport emissions. Nevertheless, mitigation measures to lower both building and transport emissions are detailed in Section 6.2.



6 Mitigation Measures

6.1 Construction Phase

Particle generation from construction and demolition activities can be substantially reduced through carefully selected mitigation techniques and effective management. The most effective technique is to control at source, as once particles are airborne, it is difficult to prevent them from dispersing into the surrounding area. However, once airborne, water sprays are probably the most effective method for suppression.

Pre-project planning, implementation and on-site management issues are an essential requirement for effective dust control. This includes, for example, environmental risk assessments, method statements, training and satisfying planning requirements. Before the start of a project, it is also important to identify which construction activities are likely to generate dust and to draw up action plans to minimise emissions to the atmosphere. Dust emissions from construction sites will mainly be the sum of a large number of small activities. Therefore, attention to detail is a critical feature of effective management of the total site emissions.

Site specific mitigation measures should be set up based on the risk effects as outlined in Table 5.3. Examples of these measures are provided in the IAQM guidance document and summarised in Appendix D.

6.2 Operational Phase

6.2.1 Renewable Energy

The proposed development will be all electric, utilising PV panels on the roof.

6.2.2 Reducing Vehicle Emissions

The proposed development includes storage provision for 28 bicycles. A travel plan should also be provided to future occupants, encouraging the uptake of sustainable methods of travel.

6.2.3 Green Infrastructure

The gardens will include green infrastructure, including trees, green screening and planted borders.



7 Conclusion

This report provides an assessment on the following key issues associated with the construction and operation phases of the proposed development at Braemar Avenue Baptist Chapel:

- Nuisance, loss of amenity and health impacts associated with the construction phase of the proposed development on sensitive receptors;
- Characterising the baseline conditions at the site using monitored pollutant data from LBH and Defra resources;
- Assessing the suitability of the proposed development for the addition of new sensitive receptors;
- Determining whether the proposed development is 'air quality neutral'; and
- Making recommendations for mitigation measures if required.

A qualitative assessment on the construction phase activities has been carried out. The largest risk of these activities towards dust soiling was considered to be 'Low', while that towards human health was considered to be 'Negligible'. Following proper implementation of the measures recommended in Appendix D, the impact of emissions during construction of the development is likely to be 'Negligible' and therefore 'Not Significant'.

The proposed development is considered to be air quality neutral.

Following a review of air quality data, the proposed development is considered suitable for the introduction of new sensitive receptors.

It can therefore be concluded that the proposed development is not considered to conflict with national, regional, and local planning guidance.



Appendix A: Legislation, Policy and Non-Statutory Guidance

European Union

Whilst the UK has left the EU, it is pertinent to understand the origins of the current UK legislation. The European Union (EU) sets legally binding limit values for outdoor air pollutants to be met by EU countries by a given date. These limit values are based on the World Health Organisation (WHO) guidelines on outdoor air pollutants. These are legally binding and set out to protect human health and the environment by avoiding, preventing or reducing harmful air pollution effects.

Directive 2008/50/EC⁹ on ambient air quality and cleaner air for Europe entered into force in June 2008. This merged the existing 'Daughter' Directives^{10,11,12,13} (apart from the fourth Daughter Directive), maintaining existing air quality objectives set out by 'Daughter' Directives for:

- Sulphur dioxide (SO₂);
- Nitrogen dioxide (NO₂);
- Oxides of nitrogen (NO_x);
- Particulate matter (PM_{2.5} and PM₁₀);
- Lead (Pb);
- Benzene (C₆H₆);
- Carbon monoxide (CO); and
- Ozone (O₃).

Directive 2008/50/EC also includes related objectives, exposure concentration obligations and exposure reduction targets for PM_{2.5} (fine particles). The 'Daughter' Directives were based upon requirements set out in the first EU Ambient Air Quality Framework Directive 96/92/EEC¹⁴.

England

The 2008 EU ambient air quality directive 2008/50/EC was transposed into English law through the introduction of the Air Quality (Standards) Regulations in 2010¹⁵ which also incorporated the fourth EU Daughter Directive (2004/107/EC) that set target values for certain toxic heavy metals and polycyclic aromatic hydrocarbons₇ (PAH).

⁹ European Union. (2008), 'Ambient air quality assessment management', Framework Directive 2004/50/EC.

¹⁰ European Union. (1999), 'Ambient air quality assessment management', Framework Directive 1999/30/EC.

¹¹ European Union. (2000), 'Ambient air quality assessment management', Framework Directive 2000/3/EC.

¹² European Union. (2002), 'Ambient air quality assessment management', Framework Directive 2002/3/EC.

¹³ European Union. (2004), 'Ambient air quality assessment management', Framework Directive 2004/107/EC.

¹⁴ European Union. (1996), 'Ambient air quality assessment management', Framework Directive 96/62/EC.

¹⁵ Statutory Instrument. (2010), 'The Air Quality Standards Regulations', No. 1001. Queen's Printer of Acts of Parliament.



The UK government has a legal responsibility to meet the limit values converted into domestic law through the European Union (Withdrawal) Act 2018. Part IV of the 1995 Environment Act¹⁶ sets guidelines for protecting air quality in the UK and forms the basis of local air quality management. The Environment Act requires local authorities in the UK to review air quality in their area periodically and designate AQMAs where the objectives are not being achieved or are not likely to be achieved within the relevant period. Where an AQMA is designated, local authorities are also required to produce an 'Air Quality Action Plan' (AQAP) detailing the pollution reduction measures that need to be adopted to achieve the relevant air quality objectives within an AQMA.

As part of the Environment Act, the UK Government was required to publish a National Air Quality Strategy (NAQS) to establish the system of 'local air quality management' (LAQM) for the designation of AQMAs. This led to the introduction of the first Air Quality Strategy (AQS) in 1997¹⁷ which has since progressed through several revisions until it was replaced by the Air Quality Strategy for England, Scotland, Wales and Northern Ireland 2007¹⁸. Each revision introduced strategies and regulations that considered measures for different pollutants by tightening existing objectives and also by introducing new ones to establish a common framework to protect human health and the environment by achieving ambient air quality improvements.

National Planning Policy Framework

The principal national planning policy guidance in respect of the proposed development is the National Planning Policy Framework (NPPF)¹⁹. The most recent update of the NPPF was published in July 2021 by the Ministry of Housing, Communities & Local Government.

The NPPF 2021 contains five sections which are relevant to air quality.

Section 105 states that:

"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."

Section 174 (e) states that:

¹⁶ Parliament of the United Kingdom. (1990), 'Environmental Protection Act', Chapter 43. Queen's Printer of Acts of Parliament.

¹⁷ Department for Environment Food and Rural Affairs. (1997), 'The United Kingdom National Air Quality Strategy', Cm 3587, Department for Environment Food and Rural Affairs.

¹⁸ Department for Environment Food and Rural Affairs. (2007), 'The Air Quality Strategy for England, Scotland, Wales and Northern Ireland', Cm 7169, Department for Environment Food and Rural Affairs.

¹⁹ National Planning Policy Framework. Accessible at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf



"preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information..."

Section 185 states that:

"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."

Section 186 states that:

"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."

Section 188 states that:

"The focus of planning policies and decisions should be on whether proposed development is an acceptable use of land, rather than the control of processes or emissions (where these are subject to separate pollution control regimes). Planning decisions should assume that these regimes will operate effectively. Equally, where a planning decision has been made on a particular development, the planning issues should not be revisited through the permitting regimes operated by pollution control authorities."

National Planning Practice Guidance

The DCLG published a number of supporting web-based resources of Planning Practice Guidance (PPG)²⁰ to supplement the NPPF. With respect to air quality the PPG²¹ provides guidance on when air quality is relevant to a planning application. It states that:

"Whether air quality is relevant to a planning decision will depend on the proposed development and its location. Concerns could arise if the development is likely to have an adverse effect on air quality in areas where

²⁰ National Planning Practice Guidance web-based resource. Accessible at: <http://planningguidance.planningportal.gov.uk/>

²¹ Paragraph: 005 Ref ID 32-005-20140306, revision date 01.11.2019



it is already known to be poor, particularly if it could affect the implementation of air quality strategies and action plans and/or breach legal obligations (including those relating to the conservation of habitats and species). Air quality may also be a material consideration if the proposed development would be particularly sensitive to poor air quality in its vicinity."

The PPG also states that, when deciding whether air quality is relevant to a planning application, the applicant should consider whether the proposal will:

- *"Lead to changes (including any potential reductions) in vehicle-related emissions in the immediate vicinity of the proposed development or further afield....."*
- *Introduce new point sources of air pollution.....,*
- *Expose people to harmful concentrations of air pollutants,*
- *Give rise to potentially unacceptable impact (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."*

Statutory Nuisance

It is recognised that the planning system presents a way of protecting amenity. However, in cases where planning conditions are not applicable to a development/installation, the requirements of the Environmental Protection Act 1990 still apply. Under Part III of the Environmental Protection Act 1990, local authorities have a statutory duty to investigate any complaints of:

- *"any premises in such a state as to be prejudicial to health or a nuisance"*
- *smoke emitted from premises so as to be prejudicial to health or a nuisance*
- *fumes or gases emitted from premises so as to be prejudicial to health or a nuisance*
- *any dust, steam, smell or other effluvia arising on industrial, trade or business premises and being prejudicial to health or a nuisance*
- *any accumulation or deposit which is prejudicial to health or a nuisance"*

Where the local authority establishes that any one of these issues constitutes a statutory nuisance and believes it to be unreasonably interfering with the use or enjoyment of someone's premises and/or is prejudicial to health, an abatement notice will be served on the person responsible for the offence or the owner / occupier. Failure to comply with the notice could lead to a prosecution. It is however considered as a defence if the best practicable means to prevent or to counteract the effects of the nuisance are employed.

Regional (London)



London Plan

The London Plan 2021²² sets out an integrated economic, environmental, transport and social framework for the development of London over the next 20-25 years.

The London Plan 2021 includes one policy that is specifically related to air quality. Policy SI 1 “Improving air quality” states:

- "A *Development Plans, through relevant strategic, site-specific and area-based policies, should seek opportunities to identify and deliver further improvements to air quality and should not reduce air quality benefits that result from the Mayor's or boroughs' activities to improve air quality.*
- B *To tackle poor air quality, protect health and meet legal obligations the following criteria should be addressed:*
 - 1 *Development proposals should not:*
 - 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 retrofitted 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.*
- 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*

²² Greater London Authority. (2021), 'The London Plan: Spatial Development Strategy for London March 2021.



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

- 1) How proposals have considered ways to maximise benefits to local air quality, and*
 - 2) What measures or design features will be put in place to reduce exposure to pollution, and how they will achieve this.*
- D In order to reduce the impact on air quality during the construction and demolition phase development proposals must demonstrate how they plan to comply with the Non-Road Mobile Machinery Low Emission Zone and reduce emissions from the demolition and construction of buildings following best practice guidance.*
- E Development proposals should ensure that where emissions need to be reduced to meet the requirements of Air Quality Neutral or to make the impact of development on local air quality acceptable, this is done on-site. Where it can be demonstrated that emissions cannot be further reduced by on-site measures, off-site measures to improve local air quality may be acceptable, provided that equivalent air quality benefits can be demonstrated within the area affected by the development."*

The Mayor of London Environment Strategy

The Mayor of London Environment Strategy²³, published on 31st May 2018, integrates every aspect of London's environment into different categorised areas. The document includes several transport and non-transport related policy measures outlined in Chapter 4, highlighting the need for improvement in London's air quality.

Policy 4.2 states:

- *"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."*
- *"Reduce emissions from non-road transport sources, including by phasing out fossil fuels."*

Proposals for this policy include the phasing out of fossil fuels for private and public transport, as well as from freight vehicles, prioritising action on diesel fuels and implementing the switch to zero emission technologies. The reduction in emission from NRMM, construction and demolition sites, homes and workplaces and large-scale generators is proposed for this policy.

Policy 4.3 states:

- *"The Mayor will establish new targets for PM_{2.5} and other pollutants where needed. The Mayor will seek to meet these targets as soon as possible, working with government and other partners."*

²³ Greater London Authority. (2018), 'London Environment Strategy'.



- *"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."*
- *"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."*
- *"Work to reduce exposure to indoor air pollutants in the home, schools, workplace and other enclosed spaces."*

Proposals for this policy include the switching of fleet vehicles to zero emission capability, implementation of local zero emission zones from 2020, ensure all new large-scale developments are 'Air Quality Neutral' and maintain Air Quality Neutral requirements for all developments. The reduction in emissions from wood and other solid fuel burning, using the planning system to reduce indoor exposure through design measures, preventing poor air quality entering the building and ensuring CO₂ and pollution targets are achieved are also proposals included for this policy.

The Mayor of London Transport Strategy

In March 2018 the Mayor of London published the Mayors Transport Strategy²⁴, setting out the Mayor's policies and proposals, enabling transport in London to be reshaped over the next 20 years.

The key themes within the strategy are; healthy streets and healthy people, good public transport experiences, new homes and jobs.

Chapter 3, section C *"Improving air quality and the environment"* includes policies 6 and 7 which relate to transport and air quality.

Policy 6 states:

"The Mayor, through TfL and the boroughs, and working with stakeholders, will take action to reduce emissions – in particular diesel emissions – from vehicles on London's streets, to improve air quality and support London reaching compliance with UK and EU legal limits as soon as possible. Measures may include retrofitting vehicles with equipment to reduce emissions, promoting electrification, road charging, the imposition of parking charges/ levies, responsible procurement, the making of traffic restrictions/ regulations and local actions."

Policy 7 states:

"The Mayor, through TfL and the boroughs, and working with stakeholders, will seek to make London's transport network zero emission by 2050, contributing towards the creation of a zero carbon city, and also to deliver further improvements in air quality to help meet tighter air quality standards, including achieving a health-based target of 10µg/m³ for PM_{2.5} by 2030."

²⁴ Greater London Authority. (2018), 'Mayor's Transport Strategy'.



London's streets and transport infrastructure will be transformed to enable zero emission operation, and the switch to ultra low and zero emission technologies will be supported and accelerated."

Local (London Borough of Haringey)

Development Strategy 2013-2026

Haringey's Local Plan Development Strategy 2013-2026²⁵, adopted in March 2013, sets out the long-term vision of how Haringey, and the places within it, should develop by 2026 and sets out the Council's strategy for achieving that vision. The development plan should be taken into consideration alongside the London Plan.

The Development Strategy 2013-2026 does not contain any policies which relate directly to air quality. Policy SP7 'Transport' is indirectly linked to improving air quality.

London Borough of Haringey Air Quality Action Plan

The LBH Air Quality Action Plan (AQAP) 2019-2024²⁶, published in November 2019, outlines 25 actions that LBH will undertake to improve air quality across the borough. These actions can be grouped into seven action categories:

1. Monitoring and other core statutory duties;
2. Emissions from developments and buildings;
3. Public health and awareness raising;
4. Delivery servicing and freight;
5. Borough fleet;
6. Localised solutions; and
7. Cleaner transport.

For further details refer to the AQAP.

²⁵ London Borough of Haringey. (2013), 'Haringey's Local Plan Development Strategy 2013-2026.'

²⁶ London Borough of Haringey. (2019), 'Air Quality Action Plan 2019-2024'



Appendix B: Operational Impact Assessment

Methodology

The EPUK & IAQM guidance refers to the Town and Country Planning (Development Management Procedure) Order (England) 2010 [(Wales) 2012] for a definition of a 'major' development when scoping assessments required for the planning process. Based on the guidance, a 'major' development is such development where:

- The number of dwellings is 10 or above;
- The residential development is carried out of a site of more than 0.5ha where the number of dwellings is unknown;
- The provision of more than 1,000m² commercial floorspace; or,
- Development carried out on land of 1ha or more.

It is recommended that consideration should be given to reduce impacts from any 'major' developments by considering:

- The impact of existing sources in the local area on the proposed development; and
- The impacts of the proposed development on the local area.

The assessment process involves two stages where:

Stage 1 scope out the need for an air quality assessment and **Stage 2** provide guidance of determining the level of assessment required for a project.

Table B.1 below sets out the Stage 1 criteria to determine the need to assess impacts arising from small developments and Table B.2 provides more specific guidance as to when an air quality assessment is likely to be required to assess the impacts of the proposed development on the local area.

Table B.1: Stage 1 Criteria to Proceed to Stage 2

Criteria to Proceed to Stage 2	
A	If any of the following apply: • 10 or more residential units of a site area of more than 0.5ha • More than 1,000m² of floor space for all other uses or a site area greater than 1ha
B	Coupled with any of the following: • The development has more than 10 parking spaces • The development will have a centralised energy facility or other centralised combustion process



Table B.2: Indicative Criteria for Requiring an Air Quality Assessment

The development will	Indicative Criteria to Proceed to an Air Quality Assessment
1. Cause a significant change in Light Duty Vehicle (LDV) traffic flows on local roads with relevant receptors. (LDV = cars and small vans <3.5t gross vehicle weight).	A change of LDV flows of: - more than 100 AADT within or adjacent to an AQMA - more than 500 AADT elsewhere.
2. Cause a significant change in Heavy Duty Vehicle (HDV) flows on local roads with relevant receptors. (HDV = goods vehicles + buses >3.5t gross vehicle weight).	A change of HDV flows of: - more than 25 AADT within or adjacent to an AQMA - more than 100 AADT elsewhere.
3. Realign roads, i.e. changing the proximity of receptors to traffic	Where the change is 5m or more and the road is within an AQMA.
4. Introduce a new junction or remove an existing junction near to relevant receptors.	Applies to junctions that cause traffic to significantly change vehicle accelerate/decelerate, e.g. traffic lights, or
5. Introduce or change a bus station.	Where bus flows will change by: - more than 25 AADT within or adjacent to an AQMA - more than 100 AADT elsewhere.
6. Have an underground car park with extraction system.	The ventilation extract for the car park will be within 20 m of a relevant receptor. Coupled with the car park having more than 100 movements per day (total in and out).
7. Have one or more substantial combustion processes, where there is a risk of impacts at relevant receptors. NB. this includes combustion plant associated with standby emergency generators (typically associated with centralised energy centres) and shipping.	Typically, any combustion plant where the single or combined NO _x 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.



Appendix C: Construction Dust Risk Assessment Criteria

IAQM guidance framework on assessing the risk of dust proposes the construction phase should be split into phases dependent on their potential impacts, determining the risk for each individually. Therefore, this assessment has determined the risk of the four construction categories put forward by the IAQM guidance:

- Demolition;
- Earthworks;
- Construction; and
- Track out (transport of dust and dirt onto the public road network).

The IAQM guidance framework states that the risk of dust impacts from the four categories can be defined as 'negligible', 'low risk', 'medium risk' or 'high risk' depending upon the scale and nature of the construction activity and the sensitivity and proximity of receptors to the construction site boundary. This categorisation is used to put forward appropriate mitigation measures, reducing the level of effects from the dust impacts so they are not significant.

The assessment of dust impacts using the IAQM guidance considers three separate effects from dust:

- Annoyance due to dust soiling;
- Harm to ecological receptors; and
- The risk of health effects due to significant increase in exposure to PM₁₀.

Step 1 of the assessment is set out to screen for the requirement for a more detailed assessment for the proposed development. The screening criteria states:

A 'human receptor' within:

- 350 m of the boundary of the application site; or
- 50 m of the route(s) used by construction vehicles on the public highway, up to 500 m from the site entrance(s).

An 'ecological receptor' within:

- 50 m of the boundary of the application site; or
- 50 m of the route(s) used by construction vehicles on the public highway, up to 500 m from the site entrance(s).

Where there are no receptors and the level of risk is deemed 'negligible', there is no need for further assessment.



Step 2A of the assessment enables the overall dust emission magnitude (small, medium or large) from each dust source (demolition, earthworks, construction and trackout) to be identified in relation with the criteria outlined in Table C.1.

Table C.1: Dust emission magnitude

Source	Large	Medium	Small
Demolition	Total building volume >50,000 m ³ , potentially dusty construction material (e.g. concrete), on-site crushing and screening, demolition activities >20 m above ground level.	Total building volume 20,000 m ³ – 50,000 m ³ , potentially dusty construction material, demolition activities <10 – 20 m above ground level.	Total building volume <20,000 m ³ , construction material with low potential for dust release (e.g. metal cladding or timber), demolition activities <10 m above ground, demolition during wetter months.
Earthworks	Total site area >10,000 m ² , potentially dusty soil type (e.g. clay, which will be prone to suspension when dry due to small particle size), >10 heavy earth moving vehicles active at any one time, formation of bunds >8 m in height, total material moved >100,000 tonnes.	Total site area 2,500 m ² – 10,000 m ² , moderately dusty soil type (e.g. silt), 5-10 heavy earth moving vehicles active at any one time, formation of bunds 4 m – 8 m in height, total material moved 20,000 tonnes – 100,000 tonnes.	Total site area <2,500 m ² , soil type with large grain size (e.g. sand), <5 heavy earth moving vehicles active at any one time, formation of bunds <4 m in height, total material moved <20,000 tonnes, earthworks during wetter months.
Construction	Total building volume >100,000 m ³ , on site concrete batching or sandblasting.	Total building volume 25,000 m ³ – 100,000 m ³ , potentially dusty construction material (e.g. concrete), on site concrete batching.	Total building volume <25,000 m ³ , construction material with low potential for dust release (e.g. metal cladding or timber).
Track out	>50 HDV (>3.5t) outward movements ^a in any one day ^b , potentially dusty surface material (e.g. high clay content), unpaved road length >100 m.	10-50 HDV (>3.5t) outward movements ^a in any one day ^b , moderately dusty surface material (e.g. high clay content), unpaved road length 50 m – 100 m.	<10 HDV (>3.5t) outward movements ^a in any one day ^b , surface material with low potential for dust release, unpaved road length <50 m.



Notes:

^a Vehicle movement is a one-way journey. i.e. from A to B, and excludes the return journey.

^b HDV movements during a construction project vary over its lifetime, and the number of movements is the maximum not the average.

Step 2B allows for the sensitivity of the area (high, medium or low) to be assessed and 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 PM₁₀, the existing local background concentration; and
- Site specific factors, such as whether there are natural shelters, such as trees, to reduce the risk of wind-blown dust.

Receptor sensitivity has been based on the highest of any criteria being met thus, the assessment is considered as robust. The sensitivity of the area is further determined for dust soiling, human health and ecosystem effects by considering the criteria presented in Table C.2.

Table C.2: Magnitude of Receptor Sensitivity

Source	High	Medium	Low
Sensitivities of people to dust soiling effects	• Users can reasonably expect 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 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^b and car showrooms.	• Users would expect^a to enjoy a reasonable level of amenity, but would not reasonably expect^a 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^a 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.	• The enjoyment of amenity would not reasonably be expected^a; or • Property would not reasonably be expected^a to be diminished in appearance, aesthetics or value by soiling; or • There is transient exposure, where the people or property would reasonably be expected 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^b and roads.



Source	High	Medium	Low
Sensitivities of people to health effects of PM₁₀	• 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).^c • 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.	• Locations where the people exposed are workers^d, 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.	• Locations where human exposure is transient.^e • Indicative examples include public footpaths, playing fields, parks and shopping streets.
Sensitivities of receptors to ecological effects	• 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. • 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.	• 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.	• 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.

The final step, Step 2C allows for the risk of impacts to be defined. The dust emission magnitude derived in Step 2A is combined with the sensitivity of the area defined in step 2B to determine the risk of effects on:

- Annoyance due to dust soiling;



- Harm to ecological receptors; and
- The risk of health effects due to an increase in exposure to PM₁₀.

The criteria for each of the dust sources are presented in Table C.3, Table C.4, Table C.5 and Table C.6.

Table C.3: Demolition

Sensitivity of Area	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

Table C.4: Earthworks

Sensitivity of Area	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

Table C.5: Construction

Sensitivity of Area	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

Table C.6: Track out

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



Appendix D: Construction Phase Mitigation Measures

The mitigation measures set out below are from IAQM's 2016 guidance for construction dust and are appropriate for the mitigation of the risk determined. The points below can be formerly adopted into a construction dust management plan.

Mitigation Measures:

- Display the name and contact details of person(s) accountable for air quality pollutant emissions and dust issues on the site boundary.
- Display the head or regional office contact information.
- Record and respond to all dust and air quality pollutant emissions complaints.
- Make a complaints log available to LBH when asked.
- Carry out regular site inspections to monitor compliance with air quality and dust control procedures, record inspection results, and make an inspection log available to LBH when asked.
- Increase the frequency of site inspections by those accountable for dust and air quality pollutant emissions issues when activities with a high potential to produce dust and emissions and dust are being carried out, and during prolonged dry or windy conditions.
- Record any exceptional incidents that cause dust and air quality pollutant emissions, either on or off the site, and the action taken to resolve the situation is recorded in the log book.
- Plan site layout: machinery and dust causing activities should be located away from receptors.
- Erect solid screens or barriers around dust activities or the site boundary that are, at least, as high as any stockpiles on site.
- Fully enclosure 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 from site as soon as possible.
- Ensure all on-road vehicles comply with the requirements of the London Low Emission Zone.



- Ensure all non-road mobile machinery (NRMM) comply with the standards set within this guidance.
- Ensure all vehicles switch off engines when stationary – no idling vehicles.
- Avoid the use of diesel- or petrol-powered generators and use mains electricity or battery powered equipment where possible.
- Impose and signpost a maximum-speed-limit of 10mph on surfaced haul routes and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the local authority, where appropriate).
- Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing).
- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems.
- Ensure an adequate water supply on the site for effective dust/particulate matter mitigation (using recycled water where possible).
- Use enclosed chutes, conveyors and covered skips.
- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.
- Reuse and recycle waste to reduce dust from waste materials.
- Avoid bonfires and burning of waste materials.
- 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 water suppression is used during demolition operations.
- Avoid explosive blasting, using appropriate manual or mechanical alternatives.
- Bag and remove any biological debris or damp down such material before demolition.
- 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.
- Regularly use a water-assisted dust sweeper on the access and local roads, as necessary, to remove any material tracked out of the site.
- Avoid dry sweeping of large areas.
- Ensure vehicles entering and leaving sites are securely covered to prevent escape of materials during transport.
- Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).