

Highgate Air Quality Assessment

RMC

Highgate School

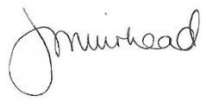
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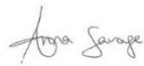
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1. Introduction

- 1.1 This report sets out the results of an assessment of the likely significant effects on air quality as a result of the proposed redevelopment of the Richard's Music Centre Building as part of Highgate School (hereafter referred to as the 'proposed development') in the London Borough of Haringey.
- 1.2 The proposals comprise the demolition of a two storey building originally constructed as a school sports pavillion, between the World Wars. The building is currently used as a temporary base for the Sports and Exercise (SpEx) department and limited pupil sports use (changing and storage). The extensions at the east end of the building currently accommodate the School IT department.
- 1.3 Once demolition has been completed, construction of a new two and a half-storey educational building including a single storey basement will be undertaken. The building provides drama classrooms, a double height Studio Theatre, offices for SpEx and Drama staff, and sports changing rooms with direct access to the synthetic all-weather pitch.
- 1.4 The report covers a qualitative air quality assessment of public exposure and ecological sensitive receptors during operation, with a focus on nitrogen dioxide (NO₂), nitrogen oxides (NO_x) and particulates (PM_{2.5} and PM₁₀). These are the pollutants that are most likely to give rise to pollutant levels near or above air quality objectives due to vehicle emissions. The assessment also considers the impact of particulate matter (PM_{2.5} and PM₁₀) and dust during the construction phase qualitatively. All other pollutants are scoped out of the assessment.

2. Legislation, Policy and Guidance

- 2.1 This assessment has been undertaken taking into account relevant legislation and guidance set out in national, regional and local planning policy (summarised in the sections below). The legislation and policy requirements have informed the preparation of this ES chapter.

Legislation

European Union Ambient Air Quality Directive

- 2.2 The Clean Air for Europe (Ref 1) programme revisited the management of air quality within the European Union (EU) and replaced much of the existing air quality legislation with a single legal act called Directive 2008/50/EC on Ambient Air Quality and Cleaner Air for Europe (Ref 2). This Directive repealed and replaced the EU Framework Directive 96/62/EC on Ambient Air Quality Assessment and Management and its associated Daughter Directives 1999/30/EC (Ref 3), 2000/69/EC (Ref 4), 2002/3/EC (Ref 5), relating to limit values for ambient air pollutants and the Council Decision 97/101/EC (Ref 6) which established a reciprocal exchange of information and data within Member States.
- 2.3 Directive 2008/50/EC is transcribed into UK legislation by the Air Quality Standards Regulations 2010, which came into force on 11th June 2010 and as amended in 2016 (Ref 7). This sets binding limit values or objectives on pollutants with the aim of avoiding, preventing or reducing harmful effects on human health and on the environment.
- 2.4 Air pollution limits set by the EU remain in UK law post Brexit, as EU legislation that applied directly or indirectly to the UK before 11.00 p.m. on 31 December 2020 has been retained in UK law as a form of domestic legislation known as 'retained EU legislation'. This is set out in sections 2 and 3 of the European Union (Withdrawal) Act 2018 (c. 16) (Ref 8). Section 4 of the Withdrawal Act 2018 ensures that any remaining EU rights and obligations, including directly effective rights within EU treaties, continue to be recognised and available in domestic law after exit. However, the EU will no longer have a role in enforcement.

National Air Quality Strategy (AQS)

- 2.5 The UK AQS was initially published in 2000 under the requirements of the Environment Act 1995 (Ref 9). A further revision of the AQS (Ref 10) set objective values to help local authorities manage local air quality improvements in accordance with the EU Air Quality Framework Directive. Some of these objective values have been laid out within the Air Quality (England) Regulations 2000 (Ref 11) and later amendments (Ref 12).
- 2.6 The AQS objective values have been set down in regulation for the purposes of local air quality management (LAQM). Under the LAQM regime, local authorities have a duty to carry out regular assessments of air quality against the AQS objective values and if it is unlikely that the AQS objective values will be met in the given timescale, they must designate an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) with the aim of achieving the objective values. The boundary of an AQMA is set by the local authority to define the geographical area that is to be subject to the management measures to be set out in a subsequent action plan. It is not unusual for the boundary of an AQMA to include within it relevant locations where air quality is not at risk of exceeding an AQS objective.
- 2.7 The AQS objective values for the pollutants of relevance to this assessment are presented in Table 2-1:

Table 2-1: Key National Air Quality Strategy Objectives

Pollutant	Averaging Period	Value	Maximum Exceedances	Permitted	Target Date
Nitrogen Dioxide (NO ₂)	Annual Mean	40 µg/m ³	N/A		31/12/2005
	Hourly Mean	200 µg/m ³	18 times per year		31/12/2005
Particulate Matter (PM ₁₀)	Annual Mean	40 µg/m ³	N/A		31/12/2004
	Daily Mean	50 µg/m ³	35 times per year		31/12/2004
Fine Particulate Matter (PM _{2.5})	Annual Mean	20 µg/m ³	N/A		2020
Nitrogen Oxides (NO _x) for ecosystems	Annual Mean	40 µg/m ³	N/A		31/12/2000

- 2.8 The principal air quality legislation within the United Kingdom is the 2010 Air Quality Standards Regulations (as amended 2016) (Ref 13), which transposes relevant EU Air Quality Directives into national legislation.

Clean Air Strategy

- 2.9 In 2019, the UK government released its Clean Air Strategy 2019 (Ref 14), which is part of its 25 Year Environment Plan. In recent years, air quality management has primarily focused on NO₂, and its principal source in the UK, i.e. road traffic. However, the Clean Air Strategy broadens the focus to other areas, including domestic emissions from wood burning stoves and from agriculture. This shift in emphasis is part of a longer-term goal to reduce the levels of PM_{2.5} in the air to below the World Health Organisation (WHO) guideline level, which is far lower than the AQS objective value.
- 2.10 The Clean Air Strategy included the provision of a clear effective guidance on how AQMAs, Clean Air Zones (CAZ) and Smoke Control Areas interrelate and how they can be used by local government to tackle pollution. The UK Clean Air Strategy sets the following reduction target:
- Nitrogen oxides (NO_x) - reduce emissions against the 2005 baseline by 55% by 2020 and by 73% by 2030.
 - PM_{2.5} - reduce emissions against the 2005 baseline by 30% by 2020 and 46% by 2030.
- 2.11 It is noted within the Clean Air Strategy document that the "current legislative framework has not driven sufficient action at a local level". New legislation will seek to shift the focus towards prevention of exceedances rather than tackling pollution when limits have been surpassed. The shift of focus encourages more of a proactive rather than reactive policy framework at regional and local levels on air quality.

National Planning Policy

National Planning Policy Framework

2.12 At a national level, the UK Government published the National Planning Policy Framework (NPPF) in 2012. The NPPF supersedes previous national planning policy guidance (PPGs) and planning policy statements (PPSs). The NPPF summarises in a single document the Government planning policies for England, and how these are expected to be applied. The NPPF was updated in July 2021 (Ref 16), superseding the previous version published in March 2012 and revised in February 2019.

2.13 Air quality is considered as an important element of the natural environment within the NPPF. On conserving and enhancing the natural environment, Paragraph 174 states that:

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

e) 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 ..."

2.14 Air quality in the UK has been managed through the Local Air Quality Management regime using national objectives. Paragraph 186 of the NPPF 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. ... 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."

2.15 Annex 2 of the NPPF provides the following definition of AQMAs: "Areas designated by local authorities because they are not likely to achieve national air quality objectives by the relevant deadlines".

2.16 Also, Paragraph 105 of the NPPF states the following:

"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".

National Planning Practice Guidance

2.17 The Planning Practice Guidance (PPG) (Ref 18) was published on the 6 March 2014 to provide more in-depth guidance to the NPPF. The PPG aims to make planning guidance more accessible, and to ensure that the guidance is kept up to date. As such, the PPG was amended in July 2017 to reflect the updated EIA Regulations, and further updated in 2019.

2.18 When deciding whether air quality is relevant to a planning application, the PPG states that the following criteria may be required to be taken into consideration:

"the 'baseline' local air quality, including what would happen to air quality in the absence of the development;

whether the proposed development could significantly change air quality during the construction and operational phases (and the consequences of this for public health and biodiversity); and

whether occupiers or users of the development could experience poor living conditions or health due to poor air quality."

2.19 On how detailed an air quality assessment needs to be, the PPG states:

"Assessments should be proportionate to the nature and scale of the development proposed and the level of concern about air quality... Mitigation options where necessary will be locationally specific, will depend on the proposed development and should be proportionate to the likely impact. It is important therefore that local planning authorities work with applicants to consider appropriate mitigation so as to ensure the new development is appropriate for its location and unacceptable risks are prevented."

A Green Future

- 2.20 The 25 Year Environment Plan, published in January 2018, sets out the actions the UK Government will take to help the natural world regain and retain good health (Ref 15). This references several actions that are being taken to improve air quality, most notably the publication of the Clean Air Strategy (referenced earlier) and tighter controls on Medium Combustion Plant. Emphasis is also placed on the 'Future of Mobility', in the establishment of flexible regulatory framework to encourage new modes of transport and encouraging opportunities to move toward zero emission transport.
- 2.21 The 25 Year Environment Plan reinforces the demand for high environmental standards for all new build development. Resilient buildings and infrastructure will more readily adapt to a changing climate, and by extension have a lesser impact on local air quality.

Regional Planning Policy

The London Plan – Spatial Development Strategy for Greater London (2021)

- 2.22 The Mayor's London Plan represents a spatial development strategy for Greater London. It is the overall strategic plan for London, and it sets out a fully integrated economic, environmental, transport and social framework for the development of the capital. It forms part of the development plan for Greater London. London boroughs' local plans need to be in general conformity with the London Plan, and its policies guide decisions on planning applications by councils and the Mayor. This new London Plan was published in March 2021 (Ref 19) displacing the former London Plan 2016 (Ref 20).
- 2.23 The policy Sustainable Infrastructure 1 (SI1) '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 proposal as part of an air quality positive approach. To achieve this, a statement should be submitted demonstrating:

a. How proposals have considered ways to maximise benefits to local air quality; and

b. What measures or design features will be put in place to reduce exposure to pollution, and how they will achieve this.

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

E) development proposals should ensure that where emissions need to be reduced, this is done on-site. Where it can be demonstrated that on-site provision is impractical or inappropriate, off-site measures to improve local air quality may be acceptable, provided that equivalent air quality benefits can be demonstrated within the area affected by the development."

2.24 The policy Sustainable Infrastructure 1 (SI3) 'Energy Infrastructure also states:

"D) Major development proposals within Heat Network Priority Areas should have a communal low-temperature heating system:

1) the heat source for the communal heating system should be selected in accordance with the following heating hierarchy:

a) connect to local existing or planned heat networks

b) use zero-emission or local secondary heat sources (in conjunction with heat pump, if required)

c) use low-emission combined heat and power (CHP) (only where there is a case for CHP to enable the delivery of an area-wide heat network, meet the development's electricity demand and provide demand response to the local electricity network)

d) use ultra-low NOx gas boilers

2) CHP and ultra-low NOx gas boiler communal or district heating systems should be designed to ensure that they meet the requirements in Part B of Policy SI 1 Improving air quality

3) where a heat network is planned but not yet in existence the development should be designed to allow for the cost-effective connection at a later date."

2.25 The London Plan also notes that whilst developments meeting Air Quality Neutral benchmarks is necessary to control the growth in London's regional emissions, this will not always suffice to prevent unacceptable local impacts, as these may be affected by other factors such as: the location of emission sources, the rate of emissions (as opposed to the annual quantum) and the layout of the development in relation to the surrounding area. Development related impacts such as concentrating emissions, increasing exposure or preventing dispersion in particular locations, therefore, need to be assessed and mitigated if required.

2.26 It is noted that the Greater London Authority (GLA) will produce guidance in order to assist developers and boroughs in identifying measures and best practice to inform the preparation of statements for developments taking an air quality positive approach. This development is not a "major development" and therefore an Air Quality Positive Statement is not required.

Mayor's London Environment Strategy

2.27 The Mayor's London Environment Strategy (Ref 21), published in 2018, sets the ambitious target for London to have the best air quality of any major world city by 2050 and goes one step further than the previous

strategy by requiring developments be 'air quality positive', though there is not yet adopted guidance demonstrating what this means from an assessment perspective.

Local Planning Policy

London Borough of Haringey New Local Plan

- 2.28 Haringey's New Local Plan is currently under development and a draft version is due to be published in 2022. In the meantime, Haringey have produced a first steps Engagement document (Ref 22) where they have outlined their key objectives which they are striving to achieve with their new Local Plan. The New Local Plan sets out a "vision and objectives for future development of the borough" to 2037 and will be the starting point in terms of the consideration of approval for planning applications. Haringey's Local Plan, in conjunction with the London Plan, forms the Development Plan against which individual planning proposals are assessed. The Council's ambition is for the numerous benefits from the opportunities created by the new local plan will extend across the whole borough, and beyond to other areas of North London, with a key focus on reducing inequalities on a large scale and addressing the Climate emergency we all face.

Other Relevant Policy, Standards and Guidance

Local Air Quality Management Guidance

- 2.29 The GLA provides and maintains guidance and tools to support local authorities in carrying out their duties under the Environment Act 1995 (Ref 9) and subsequent regulations. The London Local Air Quality Management (LLAQM) Framework is the statutory process used by local authorities in London to review and improve air quality within their areas. In order to provide consistency with the Council's own work on air quality, the guiding principles for air quality assessments, as set out in the latest guidance and tools provided by the technical guidance – LLAQM.TG(19) (Ref 23) – are followed in this assessment. Where necessary, the national guidance LAQM.TG(22) (Ref 24) is also used.

Environmental Protection UK and Institute of Air Quality Management Planning Guidance

- 2.30 When determining the significance of the air quality assessment results with the Proposed Development, this assessment follows the non-statutory best practice guidance relating to air quality and development control published by Environmental Protection UK (EPUK) and the Institute of Air Quality Management (IAQM) (Ref 25). The guidance ensures that air quality is adequately considered during land-use planning and development control process and is applicable to assessing the effect of changes in exposure of members of the public consequential to residential and mixed-use developments. This is of particular importance in urban areas where air quality is of a poorer standard. The guidance states that:

"Land-use planning can play a critical role in improving local air quality. At the strategic level, spatial planning can provide for more sustainable transport links between the home, workplace, educational, retail and leisure facilities, and identify appropriate areas for potentially polluting industrial development. For an individual development proposal, there may be associated emissions from transport or combustion processes providing heat and power."

Air Quality Neutral: London Plan Guidance

- 2.31 Air Quality Neutral' is a term for developments that do not contribute to air pollution beyond allowable benchmarks. The GLA have prepared guidance outlining the acceptable benchmarks within which Proposed Development must lie, based on research and evidence carried out by building and transport consultants (Ref 26).
- 2.32 There are two sets of benchmarks, which cover the two main sources of air pollution from new developments:
- Building Emissions Benchmark (BEB) - emissions from equipment used to supply heat and energy to the buildings

- Transport Emissions Benchmark (TEB) - emissions from private vehicles travelling to and from the development.

A development must meet both benchmarks separately in order to be considered Air Quality Neutral. If one or both benchmarks are not met, appropriate mitigation or offsetting will be required.

Air Quality Positive: London Plan Guidance

2.33 It is a requirement of the GLA that large-scale development sites and masterplan areas prepare an Air Quality Positive Statement (AQPS) in adherence with the GLA's Air Quality Positive London Plan Guidance (Ref 27). New developments play an important role in improving London's poor air quality; an AQPS should be produced as part of the evidence base outlining the Air Quality Positive approach taken, demonstrating consideration of air quality at all stages of a proposed development.

2.34 The guidance states:

"The Air Quality Positive approach maximises the benefits to local air quality in and around a development site or masterplan area and minimises exposure to existing sources of poor air quality. It requires planners, designers, architects and air quality experts to show what measures have been taken during the design stages to achieve the best possible outcomes for air quality. This approach goes beyond compliance with both the Air Quality Neutral benchmarks and the minimum requirements of an air quality assessment and sets out the measures taken to benefit local air quality and reduce exposure to poor air quality."

Supplementary Planning Guidance on the Control of Dust and Emissions During Demolition and Construction

2.35 The Control of Dust and Emissions during Construction and Demolition SPG (2014) (Ref 29) sets out the requirements for an Air Quality Statement, a dust risk assessment, emission control measures, air quality monitoring and cleaner construction machinery for developments in London. An Air Quality Statement is required to be submitted to the Local Planning Authority during the application stage, prior to works commencing on site.

2.36 Non-Road Mobile Machinery (NRMM) to be used on any construction sites need to comply with the latest European emission standards, as set out in the SPG. This policy is enforced through the planning process, and compliance with the NRMM standards should be secured by the local authorities as a planning condition or s106 agreement. If emissions of NRMM are unknown, developers will be required to provide a written statement of their commitment and ability to meet the NRMM standards as part of the Air Quality Statement. An inventory of all NRMM should be kept, stating the emission limits for all equipment, and be made available to local authority officers.

3. Assessment Methodology

3.1 This air quality assessment has been undertaken based on the following guidance:

- Defra's LAQM Technical Guidance (LAQM.TG (22)) (Ref 24) and LLAQM.TG(19),
- IAQM's Land-Use Planning & Development Control: Planning for Air Quality (Ref 25)

3.2 Following IAQM guidance, a detailed level of assessment is not required due to the limited size of the proposed development. The proposed development will not result in an increase in staffing or student numbers and thus is highly unlikely to have any impact on local highway or transport networks.

3.3 A Dust Risk Assessment has been undertaken by Highgate School, and is attached in Appendix A.

4. Baseline Conditions

Existing Baseline

Local Air Quality Management

- 4.1 The London Borough of Haringey (LBH) declared a borough wide AQMA in July 2001 for the 24-Hour mean objective for PM₁₀ and the annual mean objective for NO₂. Road traffic has been identified as a prominent source of these pollutants in conjunction with domestic and commercial gas sources.
- 4.2 The designation of an AQMA requires any development within the AQMA with the potential to impact air quality adversely to carry out an air quality impact assessment and a site suitability study.
- 4.3 The GLA has declared 183 Air Quality Focus Areas (AQFAs) in London, identifying areas of high human exposure which exceed the national / EU air quality objective(s) for NO₂ (Ref 32). The Focus Area designation was designed to address concerns relating to forecasted air pollution trends, or those raised during the LAQM review process. It is noted, however, that this designation does not represent an exhaustive list of London's air pollution hotspot locations, rather where the GLA believe the problem to be most acute. There are eight AQFAs within LBH and the Site is located approximately 960m from AQFA No. 81: Highgate A1 Archway Junction Alymer Road.
- 4.4 LBH undertakes continuous air quality monitoring at three locations: an urban background monitoring location in Priory Park approximately 2.1 km north-west of the Site, a roadside background monitoring location in Wood Green approximately 3.7 km north-west and a roadside monitoring location on Haringey High Road approximately 6.3 km north-west of the site. These locations are not considered to be representative of the conditions at the Site, due to their distance.

2021 Monitoring Data

- 4.5 LBH's monitoring data for 2021 has been reviewed, as it is the most recent full year of available data.
- 4.6 Automatic monitoring of NO₂ was undertaken by LBH at the three monitoring locations during 2021 (Ref 33). The highest recorded annual mean NO₂ concentration was 44 µg/m³ at Site HG005 in Wood Green (3.7km from the site) which is above the annual mean AQS objective. The other two automatic monitoring locations recorded NO₂ concentrations below the annual mean AQS objective. There were no exceedances of the hourly mean NO₂ objective during 2021 at any of the sites.
- 4.7 Automatic monitoring of PM₁₀ and PM_{2.5} was undertaken by LBH at one monitoring location during 2021 (Site HG005 in Wood Green). The PM₁₀ and PM_{2.5} concentrations were 16 µg/m³ and 10 µg/m³ respectively which are below annual AQS Objectives. There were no exceedances of the 24-hourly PM₁₀ objective during 2021.
- 4.8 During 2021, non-automatic (passive) monitoring of NO₂ was undertaken by LBH via a network of 35 diffusion tubes (Ref 33). Of these, 16 sites were located in the vicinity of schools, 11 sites were located along main roads, two sites next to GP Surgeries and the remaining six sites are distributed across the borough. The closest monitoring location to the Site is Tube HR06 (200A Archway Road, N6 5BA) approximately 570 m northwest of the Site. This monitoring location is considered to be representative of the likely conditions at the Site. In 2021, the air quality at this location was good, measuring an NO₂ annual mean of 32.8 µg/m³, below the annual mean AQS objective

Background Pollutant Concentrations

- 4.9 The total concentration of a pollutant comprises those contributions from explicit local emission sources such as roads and chimney-stacks, and those that are transported into an area from indeterminate sources (e.g. by wind from further away). If all the explicit local sources were removed, all that would remain is that which comes from indeterminate sources; it is this component that is called 'background'. A good understanding of background concentrations is important when completing air quality assessments, as it allows for a good understanding of local pollutant sources.

- 4.10 Background data has been sourced from Defra's 2018-based background maps (Ref 34). Defra publishes maps of background pollutant concentrations for each 1 km x 1 km grid square covering the whole of the United Kingdom. The most recent release of the background maps uses 2018 data as the reference year and provides projections of background concentrations of NO₂ and NO_x from 2018 to 2030. The maps generally predict a decrease in concentrations in future years, based on national projections.
- 4.11 Defra mapped background pollutant concentrations in the study area for 2022 are presented in Table 4-1.

Table 4-1: Study Area Background Pollutant Concentrations

GRID SQUARE	2022 (µg/m ³)		
	NO ₂	PM ₁₀	PM _{2.5}
528500, 187500	20.5	16.4	10.9

Future Baseline

- 4.12 Slight decreases in annual mean pollutant concentrations are anticipated to occur across the UK, primarily as a result of the uptake of cleaner and greener vehicles into the fleet and changes in energy policy (Ref 35).

5. Assessment of Effects

Construction Phase Assessment

- 5.1 A Construction Dust Risk Assessment has been carried out by Highgate School in accordance with the GLA's SPG (Ref 29), which has identified the Site as being 'medium risk'. The assessment outlines the appropriate level of mitigation required at the Site (in accordance with the guidance) to either avoid or reduce potential effects to neighbouring sensitive receptors (property and amenity; human health). This document is provided in Appendix 1.
- 5.2 Recommended mitigation measures documented within the Outline Construction and Environment Management Plan (OCEMP) produced by Highgate School based on a medium-risk site are also presented in Appendix 1. Assuming all mitigation measures are effectively implemented and monitored, at the level recommended by the Dust Risk Assessment, dust effects resulting from construction activities are anticipated to be not significant.

Operation Phase Assessment

Operational Phase Road Traffic Emissions

- 5.3 The proposed development will not result in an increase in staffing or student numbers and thus is highly unlikely to have any impact on local highway or transport networks (Ref 30). As such, no significant effects have been identified.

Air Quality Neutral Assessment

- 5.4 In order to address the GLA's policy for new developments to be 'air quality neutral', the development has been assessed in line with the methodology prescribed within the 'Air Quality Neutral' (Consultation Draft November 2021) London Plan Guidance document (Ref 26).
- 5.5 There are two sets of benchmarks, which cover the two main sources of air pollution from new developments:

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

5.6 A development must meet both benchmarks separately in order to be Air Quality Neutral.

Transport Related Emissions

- 5.7 The Proposed Development is virtually car free, with vehicular access to the Site primarily being for servicing and the limited number of blue badge car parking spaces provided across the Proposed Development. No car parking will be provided for staff or visitors within the Proposed Development. The proposals will result in the removal of the existing car parking at RMC, which supports the LBH's aspirations in relation to car parking.
- 5.8 The AQN Guidance states that developments that are defined as 'car-free' may include provision for disabled and accessible parking, and can be assumed to meet the Transport Emissions Benchmark (TEB) providing that "maximum parking standards set out in policies T6 and T6.1 to T6.5 of the London Plan are not exceeded".
- 5.9 Taxi, delivery and servicing vehicle trips are not covered by Air Quality Neutral.
- 5.10 The Proposed Development meets the criteria outlined in the AQN Guidance and identified London Plan policies to be considered 'car-free', and therefore a full calculation against Transport Emissions Benchmarks is not required for the Proposed Development.
- 5.11 Therefore, following the simplified procedure outlined in the AQN Guidance, the Proposed Development is considered to be Air Quality Neutral for Transport Related Emissions.

Building Related Emissions

- 5.12 As set out within the Energy Statement submitted with the planning application, energy demand for the Proposed Development is to be met by Ground Source Heat Pumps (ASHP), renewable energy sources (such as photovoltaic (PV) panels) and/ or through the use of off-site waste heat.
- 5.13 The AQN Guidance states that developments can be assumed to meet the Building Emissions Benchmark if "*the new heating system is a heat pump or other zero emission heat source...*"
- 5.14 The Guidance additionally states that "*backup plant installed for emergency and life safety power supply, such as diesel generators, may be excluded from the calculation of predicted building emissions.*"
- 5.15 The requirement for gas-fired boilers is not currently proposed, and therefore has not been assessed. Should gas-fired boilers be proposed, these will need to be assessed.
- 5.16 A full calculation against the Building Emissions Benchmarks has therefore not been undertaken. The Proposed Development is considered to be Air Quality Neutral for Building Related Emissions.

6. Conclusions

- 6.1 The dust risk assessment undertaken by Highgate School has set out the required mitigation in order to ensure there are no adverse effects as a result of the construction of the proposed development.
- 6.2 The air quality in the area is below the air quality objectives, and therefore suitable for the proposed use. The proposals do not give rise to additional vehicle movements, and therefore no off-site impacts on air quality are anticipated. The proposed development is air quality neutral.

7. References

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Appendix A

