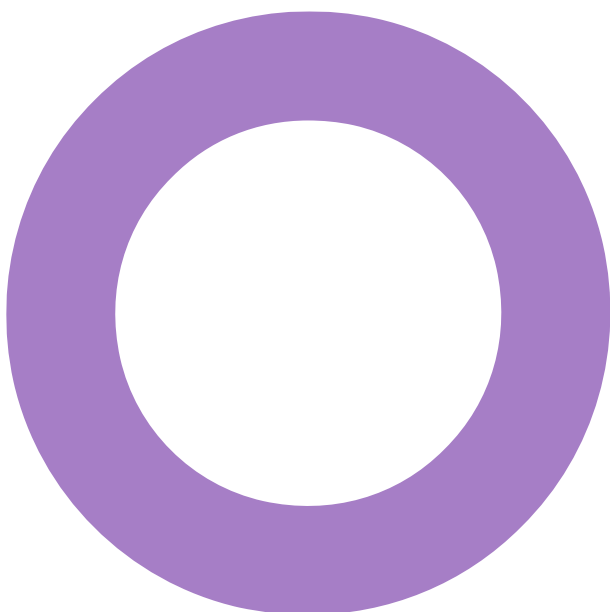


Victoria Point. Manchester. Empiric Student Property (ESP).

AIR QUALITY
AIR QUALITY ASSESSMENT

REVISION 03 – 02 MAY 2024



Audit sheet.

Rev.	Date	Description of change / purpose of issue	Prepared	Reviewed	Authorised
00	21/02/2024	First Draft	SB	RH	CE
01	17/04/2024	First Issue	SB	RH	RH
02	19/04/2024	Second Issue	SB	RH	RH
03	02/05/2024	Third Issue	SB	RH	RH

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Project number: 34/22321

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Executive Summary.

Hoare Lea have been commissioned by Empiric Student Property (ESP) to undertake an Air Quality Assessment to support the planning application for the proposed partial demolition, extensions, and internal refurbishments of the existing Victoria Point student accommodation on 44 Hathersage Road, Manchester M13 0FT (the 'Application Site').

The proposals comprise the redevelopment of existing student accommodation blocks (6 in total) to include the phased demolition and extension of existing buildings at a maximum height of 12 storeys for Purpose Built Student Accommodation (Use Class Sui Generis), including associated ancillary internal and external amenity space, ground floor community/commercial space (Use Class E, F1 and F2), hard and soft landscaping and associated highway works (the 'Proposed Development').

The Proposed Development will consist of six blocks of building providing a mix of studios, multi-bedroom apartments, amenity spaces, cycle stores, facilities management (FM) stores, gym, and terrace.

The baseline assessment has shown that the Application Site is located adjacent to the Greater Manchester Combined Authority (GMCA) Air Quality Management Area. A review of local monitoring data indicates that no likely exceedances of the respective Air Quality Objectives (AQOs) for nitrogen dioxide (NO₂), particulate matter with a diameter of below 10 µm or 2.5 µm respectively (PM₁₀ or PM_{2.5}) will occur at the Proposed Development based on 2022 data, the most recent year of representative monitoring data. The background pollution maps produced by the Department for Environment, Food & Rural affairs (Defra) indicated that no exceedances of any of the respective AQOs for NO₂, PM₁₀ and PM_{2.5} occurred in 2022 within the vicinity of the Application Site. In addition, the 2005 PM_{2.5} World Health Organisation (WHO) guideline was also not exceeded by the Defra predicted background concentrations in 2022.

The impacts of demolition and construction work on dust soiling and ambient fine particulate matter concentrations have been assessed and appropriate mitigation measures have been recommended. Provided these mitigation measures are implemented and included within a dust management plan, for example through a planning condition, the residual impacts from the construction phase are considered to be not significant.

The traffic generated by the Proposed Development was supplied by SLR Consulting and has been screened against the criteria set-out in the Environmental Protection United Kingdom (EPUK) and Institute of Air Quality Management (IAQM) planning guidance to determine the need for a detailed assessment. This screening assessment has shown that the potential impact of additional road traffic on local air quality is considered insignificant and a detailed assessment is not required.

The proposed energy strategy for the primary supply to the Proposed Development is all electric utilising centralised Air Source Heat Pump (ASHP) systems in all retained Blocks and extensions, a zero-emission technology, with no on-site fossil fuel combustion. A life safety diesel generator located above ground level is also proposed, to be used in emergencies or routine testing only. As no combustion sources are proposed for the primary energy supply, no local air quality impacts are anticipated and a detailed assessment of impacts of combustion emissions from the energy plant has been screened out of this assessment.

A qualitative Site Suitability Assessment has shown that pollutant concentrations are in compliance with the Air Quality Objectives (AQOs) and therefore, the Application Site is considered suitable for Sui Generis (Purpose Built Student Accommodation, 'PBSA') without the need for mitigation.

Based on the assessment results, the Application Site is considered suitable for the Proposed Development without the inclusion of mitigation, air quality should not be considered as a constraint to the planning consent and the Proposed Development conforms to the principles of the National Planning Policy Framework Plan and the Manchester City Council (MCC) Core Strategy Development Plan and the MCC Air Quality and Planning Technical Guidance.

1. Introduction.

Hoare Lea have been commissioned by Empiric Student Property (ESP) to undertake an Air Quality Assessment to support the planning application for the proposed partial demolition, alteration, extension, and internal refurbishment of the existing Victoria Point student accommodation on 44 Hathersage Road, Manchester M13 0FT (the 'Application Site').

1.1 Proposed Development.

The proposals comprise the redevelopment of existing student accommodation blocks (6 in total) to include the phased demolition and extension of existing buildings at a maximum height of 12 storeys for Purpose Built Student Accommodation (Use Class Sui Generis), including associated ancillary internal and external amenity space, ground floor community/commercial space (Use Class E, F1 and F2), hard and soft landscaping and associated highway works (the 'Proposed Development').

The proposed energy strategy for the primary supply to the Proposed Development is all electric utilising centralised Air Source Heat Pump (ASHP) systems in all retained Blocks and extensions, a zero-emission technology, with no on-site fossil fuel combustion. A life safety diesel generator located above ground level is also proposed, to be used in emergencies or routine testing only. As no combustion sources are proposed for the primary energy supply, no local air quality impacts are anticipated and a detailed assessment of impacts of combustion emissions from the energy plant has been screened out of this assessment.

The proposed ventilation strategy for the Proposed Development is via a mixed-mode approach, through the provision of natural ventilation via openable windows combined with mechanical ventilation with heat recovery (MVHR) systems. Each studio apartment will be served by a dedicated ceiling mounted MVHR unit to extract air from the bathroom and kitchen areas. The cluster bedrooms will be served by a wall mounted MVHR located in the shared kitchen of each cluster, providing ventilation to each bedroom, living room, bathroom, and kitchen within the cluster. The MVHR units will exhaust at the louvres on the external façade and provide continuous background ventilation.

1.2 Application Site Description and Location.

The Application Site is located within the Manchester City Council (MCC) administrative area at the approximate National Grid Reference (NGR): X 385696 Y 396032. The Application Site is bound by several residential properties to the north, northeast and south. Approximately 23 m to the west is the Octagon House building containing both corporate offices and the NHS Central Manchester Dialysis Unit. Directly south at approximately 30 m of the Application Site is Victoria Baths, a function venue within a heritage Edwardian building. St Chrysostom's Primary School is located approximately 145 m to the northwest of the Application Site.

The Application Site is currently used as the Victoria Point student residence, consisting of 6 separate blocks.

Figure 1 illustrates the location of the Application Site.

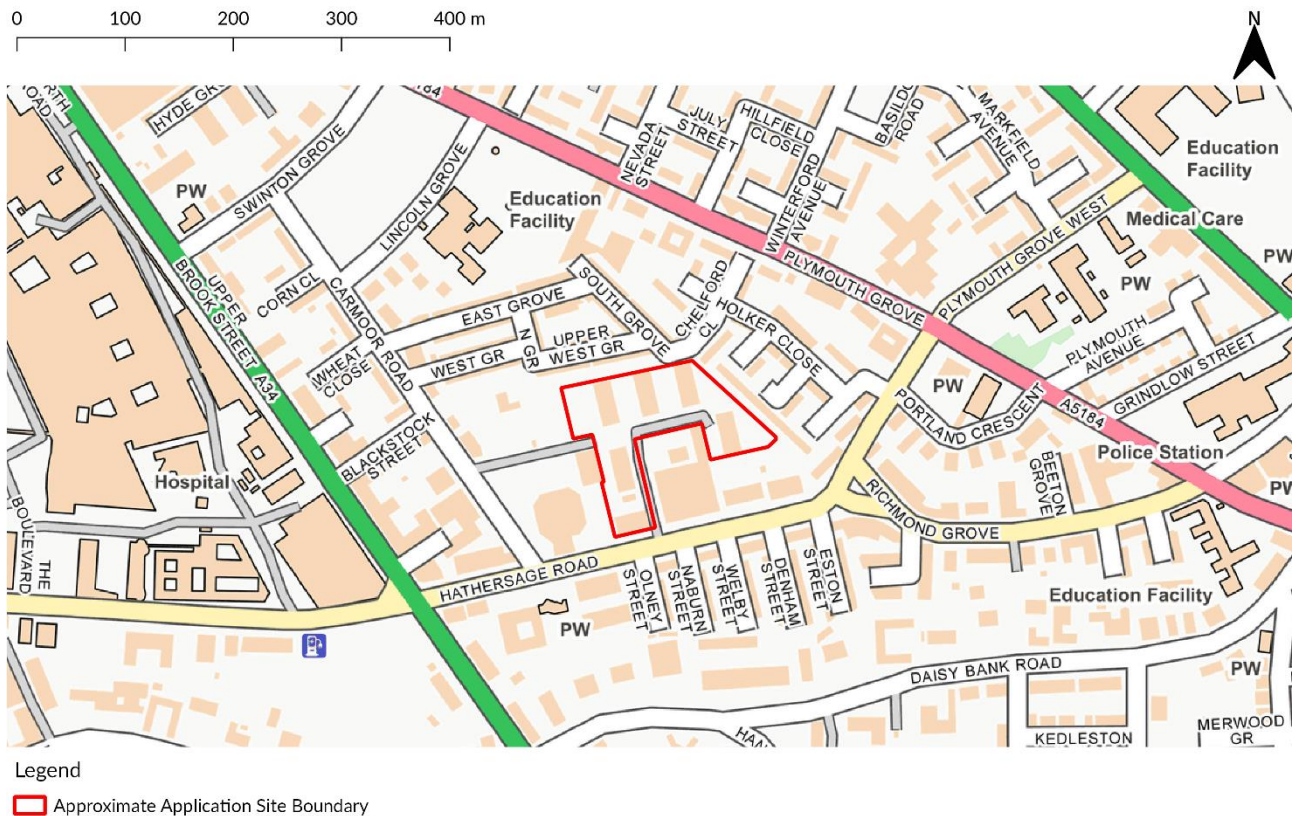


Figure 1. Location of the Application Site. Contains OS Data © Crown Copyright and Database rights 2023.

1.3 Scope of Assessment.

An email detailing the proposed methodology for the Air Quality Assessment was provided to MCC on the 7th of February 2024. A response accepting the proposed assessment methodology was received on the 15th of February 2024. A copy of the correspondence with MCC has been included in Appendix 1.

A summary of the scope of the assessment includes:

- Review of National and Local Policy;
- Determination of baseline scenario, using MCC monitoring data and Department for Environmental, Food and Rural Affairs (Defra) predicted background concentrations;
- Assessment of potential air quality impacts during the construction phase;
- Assessment of potential air quality impacts during the operational phase;
- An assessment of the suitability of the Application Site for its proposed use; and
- Identification of required mitigation measures.

2. Legislation, Policy and Guidance Documents.

2.1 Air Quality Strategy and Local Air Quality Management.

The Environment Act 1995 (Part IV)¹ requires the Secretary of State to publish an air quality strategy and local authorities to review and assess the quality of air within their boundaries. The latter has become known as Local Air Quality Management (LAQM).

The Air Quality Strategy² provides the policy framework for local air quality management and assessment in the UK. It sets out air quality standards and objectives for key air pollutants. These standards and objectives are designed to protect human health and the environment. The Strategy also sets out how the different sectors of industry, transport and local government, can contribute to achieving these Air Quality Objectives (AQOs).

Local authorities are required to identify whether the AQOs have been, or will be, achieved at relevant locations, by the applicable date. If the AQOs are not achieved, the authority must declare an Air Quality Management Area (AQMA) and should prepare an action plan within 12 months. An action plan must identify appropriate measures and policies that can be introduced in order to work towards achieving the AQO(s).

The AQOs set out the extent to which the Government expects the standards to be achieved by a certain date. They take account of economic efficiency, practicability, technical feasibility and timescale. The AQOs for use by local authorities are prescribed within the Air Quality (England) Regulations 2000³, and the Air Quality (England) (Amendment) Regulations 2002⁴.

The AQOs for Nitrogen Dioxide (NO₂) and particulate matter (PM₁₀ and PM_{2.5}) are set out in Table 1. The AQOs for NO₂, PM₁₀ and PM_{2.5} were to have been achieved by 2005, 2004 and 2020 respectively and continue to apply in all future years thereafter.

The Environment Act 2021⁵ acts as the UK's new framework of environmental protection and came into force on 1st April 2022. With regard to air quality, the Environment Act establishes a legally binding duty on government to bring forward at least two new air quality targets in secondary legislation. This was implemented through the Environmental Improvement Plan⁶ which outlines new PM_{2.5} targets for future years. These are a long term target of 10 µg/m³ by 2040 and an interim target of 12 µg/m³ by 31st January 2028. These targets are expected to focus on reducing concentrations of, and exposure to, PM_{2.5}.

Additionally, a new Air Quality Strategy has been published in April 2023 which sets out a framework which should be followed by local authorities in support of Defra's long term air quality goals including new PM_{2.5} targets⁷.

Table 1: Air Quality Objectives for NO₂, PM₁₀ and PM_{2.5}

Pollutant	Time Period	Objective
Nitrogen Dioxide (NO ₂)	1-hour Mean	200 µg/m ³ Not to be exceeded more than 18 times a year
	Annual Mean	40 µg/m ³
Fine Particles (PM ₁₀)	24-hour Mean	50 µg/m ³ Not to be exceeded more than 35 times a year
	Annual Mean	40 µg/m ³
Fine Particles (PM _{2.5}) *	Annual Mean	20 µg/m ³
Notes: Measured gravimetrically *The time period in LAQM.TG(22) states "Work towards reducing emissions/concentrations of fine particulate matter (PM _{2.5})"		

The AQOs apply at locations where members of the public are likely to be regularly present and exposed over the averaging period of the AQO. Examples of where the annual mean AQOs should apply are provided in the Local Air Quality Management Technical Guidance (LAQM.TG(22))⁸, and include: building façades of residential properties, schools, hospitals. The annual mean AQOs are not relevant for the building façades of offices or other places of work where members of the public do not have regular access, kerbsides or gardens.

The 24-hour mean AQO for PM₁₀ is considered to apply at the same locations as the annual mean AQO, as well as in gardens of residential properties and at hotels.

The 1-hour mean AQO for NO₂ also applies wherever members of the public might regularly spend 1-hour or more, including outdoor eating locations, pavements of busy shopping streets, carparks and bus stations which are not fully enclosed. The 1-hour mean AQO does not apply at kerbside sites where the public do not have regular access.

2.2 EU Limit Values.

The European Union has also set limit values for NO₂, PM₁₀ and PM_{2.5}; these are legally binding and have been implemented into English legislation by The Air Quality Standards Regulations 2010⁹ and The Air Quality Standards (Amendment) Regulations 2016¹⁰.

The limit values for NO₂, PM₁₀ and PM_{2.5} are the same as the English objectives (given in Table 1), but applied from 2010 for NO₂, 2005 for PM₁₀ and 2015 for PM_{2.5}. The limit values apply at all locations (apart from where the public does not have access, where health and safety at work provisions apply and on the road carriageway).

2.3 WHO Guideline Values

The World Health Organisation (WHO) has produced air quality guidelines¹¹ to offer global guidance on thresholds and limits for key air pollutants that pose health risks. The 2005 WHO guidelines¹¹ have been set out in Table 2 for NO₂, PM₁₀ and PM_{2.5} concentrations. MCC refer to the 2005 WHO guidelines¹¹ within the MCC Air Quality and Planning Technical Guidance¹². The WHO also released revised air quality guidelines in September 2021¹³. The revised annual mean thresholds for NO₂, PM₁₀ and PM_{2.5} are 10 µg/m³, 15 µg/m³ and 5 µg/m³ respectively. However, the revised guidelines are yet to be included in policies and carried into effect.

Table 2: 2005 WHO guidelines for NO₂, PM₁₀ and PM_{2.5}

Pollutant	Time Period	Objective
NO ₂	1-hour Mean	200 µg/m ³ 1-hour mean
	Annual Mean	40 µg/m ³ annual mean
PM ₁₀	Annual Mean	20 µg/m ³
PM _{2.5}	Annual Mean	10 µg/m ³

2.4 Statutory Nuisance Legislation.

Part III of the Environmental Protection Act (EPA) 1990 (as amended)¹⁴ contains the main legislation on Statutory Nuisance and allows local authorities and individuals to take action to prevent a statutory nuisance. Section 79 of the EPA defines, amongst other things, smoke, fumes, dust and smells emitted from industrial, trade or business premises so as to be prejudicial to health or a nuisance, as a potential Statutory Nuisance.

Fractions of dust greater than 10 µm (i.e. greater than PM₁₀) in diameter typically relate to nuisance effects as opposed to potential health effects and therefore are not covered within the UK Air Quality Strategy. In legislation there are currently no numerical limits in terms of what level of dust deposition constitutes a nuisance.

2.5 Clean Air Strategy.

The Clean Air Strategy (CAS)¹⁵, published in 2019, sets out the Government's proposals aimed at delivering cleaner air in England, and also indicates how devolved administrations intend to make emissions reductions. It sets out the comprehensive action that is required from across all parts of government and society to deliver clean air.

2.6 Building Regulations.

The Building Regulations help to ensure that new buildings, conversions, renovations and extensions (domestic or commercial) will be safe, healthy and high performing. Detailed regulations cover specific topics including structural integrity, fire protection, accessibility, energy performance, acoustic performance, protection against falls, electrical and gas safety. Part F of the Building Regulations (2021)¹⁶ provides guidance for indoor air quality and the pollutant concentrations that must not be exceeded in both buildings for dwellings and non-dwellings.

2.7 Planning Policy.

2.7.1 National Planning Policy Framework

The National Planning Policy Framework (NPPF) 2023¹⁷ sets out planning policy for England. It includes advice on when air quality should be a material consideration in development control decisions. Relevant sections are set out below:

Paragraph 8: *“Achieving sustainable development means that the planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways (so that opportunities can be taken to secure net gains across each of the different objectives): [...]*

c) an environment objective – to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy. [...]”

Paragraph 55: *“Local planning authorities should consider whether otherwise unacceptable development could be made acceptable through the use of conditions or planning obligations. Planning obligations should only be used where it is not possible to address unacceptable impacts through a planning condition.”*

Paragraph 109: *“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.”*

Paragraph 180: *“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, taking into account relevant information such as river basin management plans. [...]”

Paragraph 191: *“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.”*

Paragraph 192: *“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.”*

Paragraph 194: *“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."

The NPPF is supported by Planning Practice Guidance (PPG)¹⁸.

The PPG states that:

Paragraph 001 (Reference ID: 32-001-20191101): *"Defra carries out an annual national assessment of air quality using modelling and monitoring to determine compliance relevant Limit Values. It is important that the potential impact of new development on air quality is taken into account in planning where the national assessment indicates that relevant limits have been exceeded or are near the limit or where the need for emissions reductions has been identified."*

Paragraph 002 (Reference ID: 32-002-20191101): *"Plans may need to consider ways in which the development could be made appropriate in locations where air quality is or is likely to be a concern, and not give rise to unacceptable risks from pollution. This could, for example entail identifying measures for offsetting the impact on air quality arising from new development including supporting measures in an air quality action plan or low emissions strategy where applicable."*

Paragraph 005 (Reference ID: 32-005-20191101): *"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 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 sets out the information that may be required in an air quality assessment, stating that:

Paragraph 007 (Reference ID: 32-007-20191101): *"Assessments need to be proportional to the nature and scale of development proposed and the potential impacts (taking into account existing air quality conditions), and because of this are likely to be locationally specific. The scope and content of supporting information is best discussed and agreed between the local planning authority and applicant before it is commissioned."*

It also provides guidance on options for mitigating air quality impacts, and makes clear that:

Paragraph 008 (Reference ID: 32-008-20191101): *"Mitigation options will need to be locationally specific, will depend on the proposed development and need to be proportionate to the likely impact."*

2.8 Local Policy.

2.8.1 Manchester City Council Core Strategy Development Plan

The Manchester Core Strategy Development Plan¹⁹ was adopted in 2012 and covers the years 2012 to 2027. This document outlines the vision of the MCC for Manchester until the year 2027 alongside the planning policies used to deliver that vision. Policies relevant to air quality are given below:

Policy EN16 Air Quality

"The Council will seek to improve the air quality within Manchester, and particularly within Air Quality Management Areas, located along Manchester's principal traffic routes and at Manchester Airport. Developers will be expected to take measures to minimise and mitigate the local impact of emissions from traffic generated by the development, as well as emissions created by the use of the development itself, including from Combined Heat and Power and biomass plant.

When assessing the appropriateness of locations for new developments the Council will consider the impacts on air quality, alongside other plan objectives. This includes cumulative impacts, particularly in Air Quality Management Areas".

Policy CC 5 Transport

“The Transport Strategy for Manchester City Centre will be delivered to ensure that transport is managed in a way which supports the projected growth of the City Centre.

[...]

Proposals will be supported that improve pedestrian safety, improve air quality and increase the scope of accessible public realm improvements.”

Policy EN 7 Energy Infrastructure Opportunities

“There will be a general presumption in favour of low and zero carbon decentralised energy schemes, subject to the following considerations:

[...]

- The cumulative impact of energy schemes will be taken into account when considering applications, to include modelled impacts on air quality and landscape character, with reference to Policy EN16 Air Quality.*

[...]”

Policy DM1 Development Management

“All development should have regard to the following specific issues for which more detailed guidance may be given within a supplementary planning document:

[...]

- Effects on amenity, including privacy, light, noise, vibration, air quality, odours, litter, vermin, birds, road safety and traffic generation. This could also include proposals which would be sensitive to existing environmental conditions, such as noise.*

[...]”

2.8.2 Local Air Quality Management in Manchester.

According to the most recent Greater Manchester Combined Authority (GMCA) 2022 Air Quality Annual Status Report (ASR)²⁰ an AQMA was declared in Greater Manchester in 2016 for exceedances of the annual mean NO₂ AQO only. The AQMA covers the 10 districts of Greater Manchester including the MCC with coverage over arterial routes, district centres, and the airport. The Application Site is not located directly within this GMCA AQMA but is adjacent at approximately 175 m southwest and northeast at the two closest points.

Consequently, the Greater Manchester Air Quality Action Plan (AQAP) 2016-2021²¹ was published in 2016 to set out actions and measures to bring about an improvement in air quality, to benefit the health of the population. This AQAP expired in 2021, however it has not yet been replaced so it will be considered for the purpose of this assessment. The proposed actions cover three main themes:

- Reduce Traffic - for instance by encouraging modal shift from private vehicle use to public transport, cycling and walking.
- Increasing Efficiency - of traffic movement by reducing congestion and stop-start travel to achieve a smoother emission profile and overall lower emissions, which may be particularly significant at peak hours.
- Improve Fleet - by incentivising the replacement of older, more polluting vehicles with newer, smaller, cleaner, lower-emissions vehicles.

2.8.3 Greater Manchester Low Emission Strategy

The Greater Manchester Low Emission Strategy²² presents a long-term approach to carbon emissions and air quality in the period up to 2040. The key aims of the strategy are to:

- Support the UK Government in meeting all EU thresholds for key pollutants at the earliest date;

- Contribute to reducing Greater Manchester’s carbon footprint, in line with the Greater Manchester Climate Change Strategy; and
- Reduce air pollution as a contributor to ill-health in Greater Manchester

2.8.4 Greater Manchester Clean Air Zone

A Clean Air Zone (CAZ) covering Greater Manchester, for which an outline business case²³ was submitted in March 2019, and planned to launch in 2022 to target the most polluting commercial vehicles including older Heavy Duty Vehicles (HDVs), buses, coaches, taxis and private hire vehicles. However, it was decided on 30th May 2022 that this will no longer go ahead due to significant changes in local air quality and economic issues since the COVID-19 pandemic²⁴.

2.9 Assessment Guidance and Standards.

The primary guidance documents consulted in undertaking this assessment are detailed below.

2.9.1 Defra Local Air Quality Management Technical Guidance

Defra’s LAQM.TG(22) was published for use by local authorities in their LAQM review and assessment work. The document provides key guidance in aspects of air quality assessment, including screening, use of monitoring data, and use of background data that are applicable to all air quality assessments.

2.9.2 EPUK and IAQM ‘Air Quality Guidance for Planning’

Environmental Protection UK (EPUK) and the Institute of Air Quality Management (IAQM) have together published guidance (EPUK and IAQM planning guidance)²⁵ to help ensure that air quality is properly accounted for in the development control process. It clarifies when an air quality assessment should be undertaken, what it should contain, and how impacts should be described and assessed including guidelines for assessing the significance of impacts.

2.9.3 IAQM ‘Construction and Demolition Dust Guidance’

Guidance on the assessment of dust from demolition and construction has been published by the IAQM (IAQM construction guidance)²⁶. The guidance provides a methodology to determine the dust emission magnitude and provides a series of matrices to determine the risk magnitude of potential dust sources associated with construction activities. This allows for the identification of appropriate mitigation measures that are defined within further IAQM guidance.

2.9.4 Manchester City Council Air Quality and Planning Technical Guidance

This technical guidance was published in February 2022¹² to inform applicants, developers and air quality consultants of the ‘Our Manchester Strategy 2016-2025’. It sets out the relevant local policies and acknowledges the City’s current AQMA situation, breaches of AQOs and ambitions to reduce PM_{2.5} concentrations to below the 2005 WHO guidelines by 2030. The guidance also provides best practice recommendations for electric vehicle charging infrastructure.

3. Methodology of Assessment.

3.1 Consultation.

The approach to the assessment, as described in section 1.3, was provided to the MCC for review on the 7th of February 2024. A response accepting the proposed assessment methodology was received on the 15th of February 2024. A copy of the correspondence with MCC is provided in Appendix 1.

3.2 Existing Air Quality in the Study Area.

A baseline air quality review was undertaken to determine the existing air quality in the vicinity of the Application Site.

This desk-top study was undertaken using the following sources:

- Air quality data for MCC, including a review of the MCC air quality reports and local monitoring data;
- The UK Pollutant Release and Transfer Register²⁷;
- Background pollution maps from Defra's Local Air Quality Management (LAQM) website²⁸;
- Pollution Inventory from the Environment Agency²⁹
- The UK Ambient Air Quality Interactive Map³⁰; and
- Ordnance Survey data and Aerial photography from Google Maps.

3.3 Construction Phase Impacts.

3.3.1 Construction Dust Assessment

The assessment of construction dust impacts has been undertaken in line with the methodology outlined in the LAQM construction guidance. Activities on the proposed construction site have been divided into four types to reflect their different potential impacts. These are:

- Demolition;
- Earthworks;
- Construction; and
- Trackout.

The risk of dust emissions has been assessed for each activity with respect to:

- Potential loss of amenity due to dust soiling;
- The risk of health effects due to a significant increase in exposure to PM₁₀; and
- The risk of ecological impacts due to a significant increase in exposure to PM₁₀.

The first stage of the assessment involves screening to determine whether there are any sensitive receptors within the threshold distances defined by the LAQM construction guidance. A detailed assessment of the impact of dust from construction sites will be required where:

- A 'human receptor' is located within 250 m of the boundary of the Application Site or within 50 m of the route(s) used by construction vehicles on the public highway, up to 250 m from the Application Site entrance;
- An 'ecological receptor' is located within 50 m of the boundary of the Application Site or within 50 m of the route(s) used by construction vehicles on the public highway, up to 250 m from the Application Site entrance.

The magnitude of dust emission for each activity is determined on the basis of the guidance, indicative thresholds, information available relating to the project and expert judgement. The risk of dust effects arising is based upon the relationship between the dust emission magnitude and the sensitivity of the area. The risk of impact is then used to determine the mitigation requirements.

Descriptors for magnitude of impact and impact significance used in this assessment of construction phase dust are given in the guidance available online²⁶.

3.3.2 Construction Emissions Assessment

3.3.2.1 Construction Traffic Emissions Screening

The screening assessment has been undertaken with reference to the following EPUK and IAQM planning guidance indicative criteria:

- a change of Light Duty Vehicle (LDV) flows of more than 100 Annual Average Daily Traffic (AADT) (adjacent to an AQMA); and/or
- a change of Heavy Duty Vehicle (HDV) flows of more than 25 AADT (adjacent to an AQMA).

3.3.2.2 NRMM Emissions Screening

Non-Road Mobile Machinery (NRMM) refers to mobile machines, transportable industrial equipment or vehicles which are fitted with an internal combustion engine and not intended for transporting goods or passengers on roads. NRMM emissions have been screened following IAQM construction guidance.

3.4 Operational Phase Impacts.

3.4.1 Road Traffic Emissions Assessment

The screening assessment has been undertaken following the EPUK and IAQM planning guidance indicative criteria:

- a change of LDV flows of more than 100 AADT (adjacent to an AQMA); and/or
- a change of HDV flows of more than 25 AADT (adjacent to an AQMA).

Where these criteria are exceeded, a detailed assessment is required, although the guidance advises that “*the criteria provided are precautionary and should be treated as indicative*”, and “*it may be appropriate to amend them on the basis of professional judgement*”.

Where impacts can be screened out there is no need to progress to a more detailed assessment.

3.4.2 Site Suitability Assessment

A qualitative Site Suitability Assessment has been undertaken to consider the exposure of future occupants of the Proposed Development to existing air quality.

The assessment of Site Suitability has been assessed qualitatively using local monitoring data and Defra predicted background concentrations in the vicinity of the Application Site.

3.5 Assessment of Significance.

3.5.1 Construction Dust

The IAQM construction guidance states that the primary aim of the construction phase risk assessment is to identify site specific mitigation that, once implemented, should ensure that there will be no significant effect. Therefore, the assessment has been used to determine an appropriate level of mitigation for the construction phase.

The determination of which mitigation measures are recommended include elements of professional judgement and the professional experience of the consultants preparing this report is set out in Appendix 2.

3.5.2 Operational Impacts

The EPUK and IAQM planning guidance has been used to assess the potential for significant impacts as a result of vehicle emissions from traffic associated with the Proposed Development. The focus of the guidance is to assess traffic emission impacts and advises on how to describe the air quality impacts and their significance.

3.5.3 Site Suitability Assessment

To determine the significance of predicted air quality impacts based upon a Site Suitability Assessment, the EPUK and IAQM planning guidance states:

“Where the air quality is such that an air quality objective at the building façade is not met, the effect on residents or occupants will be judged as significant, unless provision is made to reduce their exposure by some means.”

In addition, the MCC Air Quality and Planning Technical Guidance¹² states:

“As a member of the WHO Climate and Clean Air Coalition, and UN Environment-led ‘Breathe Life’ cities network, the GMCA including MCC has pledged to achieve the 2005 WHO air quality guideline for PM_{2.5} of 10 µg/m³ (micrograms per cubic metre) by 2030.”

As such, the 2005 WHO PM_{2.5} guideline¹¹ will be taken into consideration when determining Site Suitability.

4. Baseline Environment.

This section sets out the available information on air quality in the vicinity of the Application Site.

4.1 Local Air Quality Management Review and Assessment.

As required by the Environment Act (1995)¹, GMCA has undertaken review and assessment of air quality within their area of administration. According to the most recent GMCA 2022 Air Quality ASR²⁰ an AQMA was declared in Greater Manchester in 2016 for exceedances of the annual mean NO₂ AQO only and labelled as “AQMA Greater Manchester”. The AQMA covers the 10 districts of Greater Manchester, including the MCC with coverage over arterial routes, district centres, and the airport. The Application Site is located adjacent to this AQMA at approximately 175 m southwest and northeast at the two closest points as shown in Figure 2.

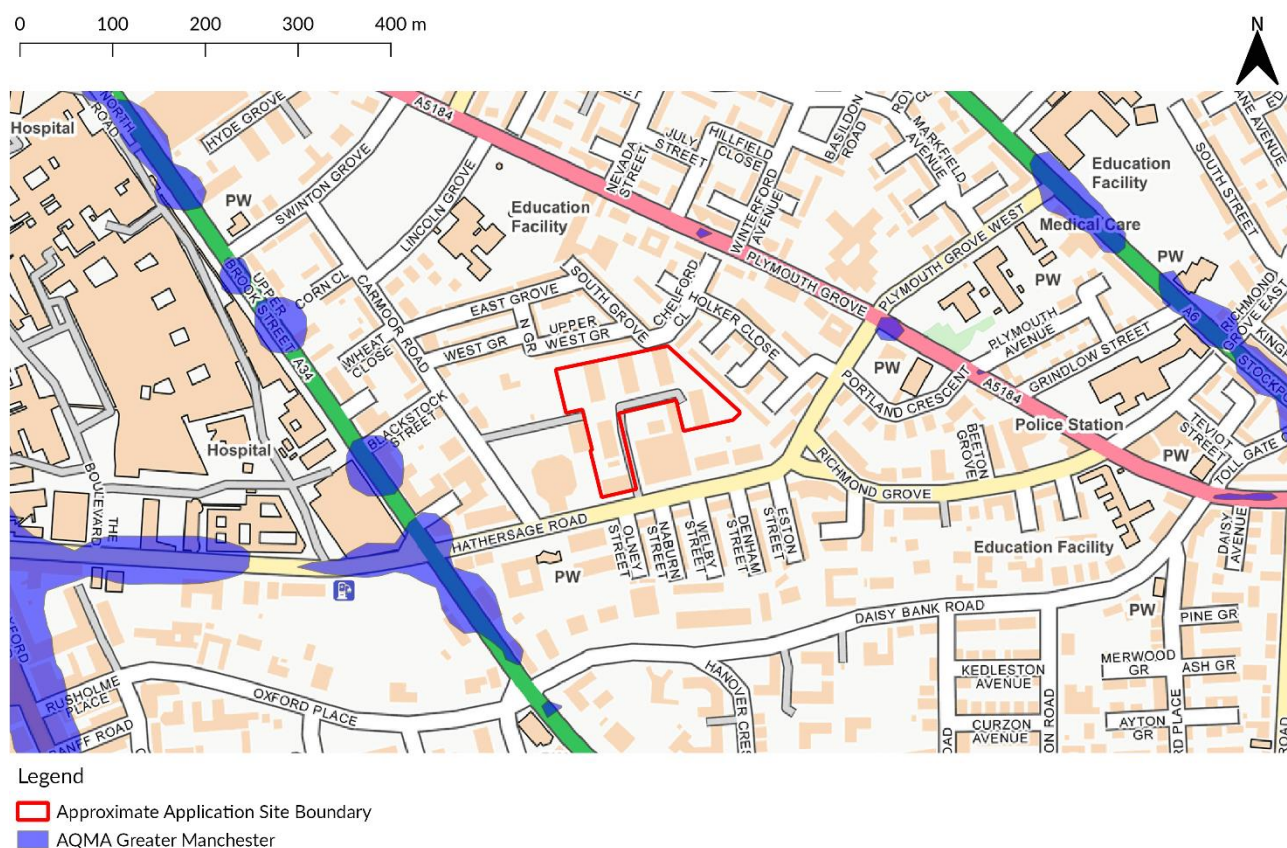


Figure 2. Application Site with Respect to the AQMA Greater Manchester. Contains OS Data © Crown Copyright and Database Rights

It should be noted that the pollutant concentrations recorded in 2020 and 2021 from the most recent GMCA Annual Status Report (ASR) are lower than previous years as a direct result of reduced traffic levels during the COVID-19 pandemic. As such the pollutant concentrations recorded in 2020 and 2021 are not considered to be representative of ‘normal’ air quality conditions. Therefore, the 2022 monitoring data has been presented and discussed as this is the latest year of available representative monitoring data.

A review of the GMCA ASR 2022²⁰ has indicated that in 2022, the most recent year of available monitoring data, exceedances of the annual mean NO₂ AQO were typically recorded at kerbside and roadside locations within the GMCA. Exceedances of the NO₂ 1-hour mean AQO and respective AQOs for both PM₁₀ and PM_{2.5} were not recorded in 2022. However, whilst the annual mean concentrations of NO₂ have generally decreased, concentrations of PM have remained steady.

4.2 Local Air Quality Monitoring.

According to the GMCA ASR 2022²⁰ MCC operate a total of 20 automatic monitoring sites, with three of these automatic monitoring stations operated within the Manchester District, with the closest site being the kerbside Manchester Oxford Road, MAN1 located approximately 1.8 km northwest from the Application Site. Recent monitoring data from Manchester Oxford Road, MAN1 is shown in Table 3 and the location of this automatic monitoring site with respect to the Application Site is illustrated in Figure 3. Site ID: MAN1 is classed as kerbside and measures pollutant concentrations of NO₂ and PM₁₀ only.

Table 3: Automatic Monitoring Locations

Monitoring site and distance (km) from site boundary (approx.)	Objective	2018	2019	2020	2021	2022
NO ₂						
Manchester Oxford Road, MAN1, 1.8 km	Annual mean (µg/m ³)	62	59	36	44	43
	Number of hours with concentration s > 200 µg/m ³	2	1	0	0	3
PM ₁₀						
Manchester Oxford Road, MAN1, 1.8 km	Annual mean (µg/m ³)	30	26	18	18	18
	Number of days with concentration s > 50 µg/m ³	15	18	5	2	8
Notes: Concentrations in bold indicate an exceedance of the relevant AQO - = no data						

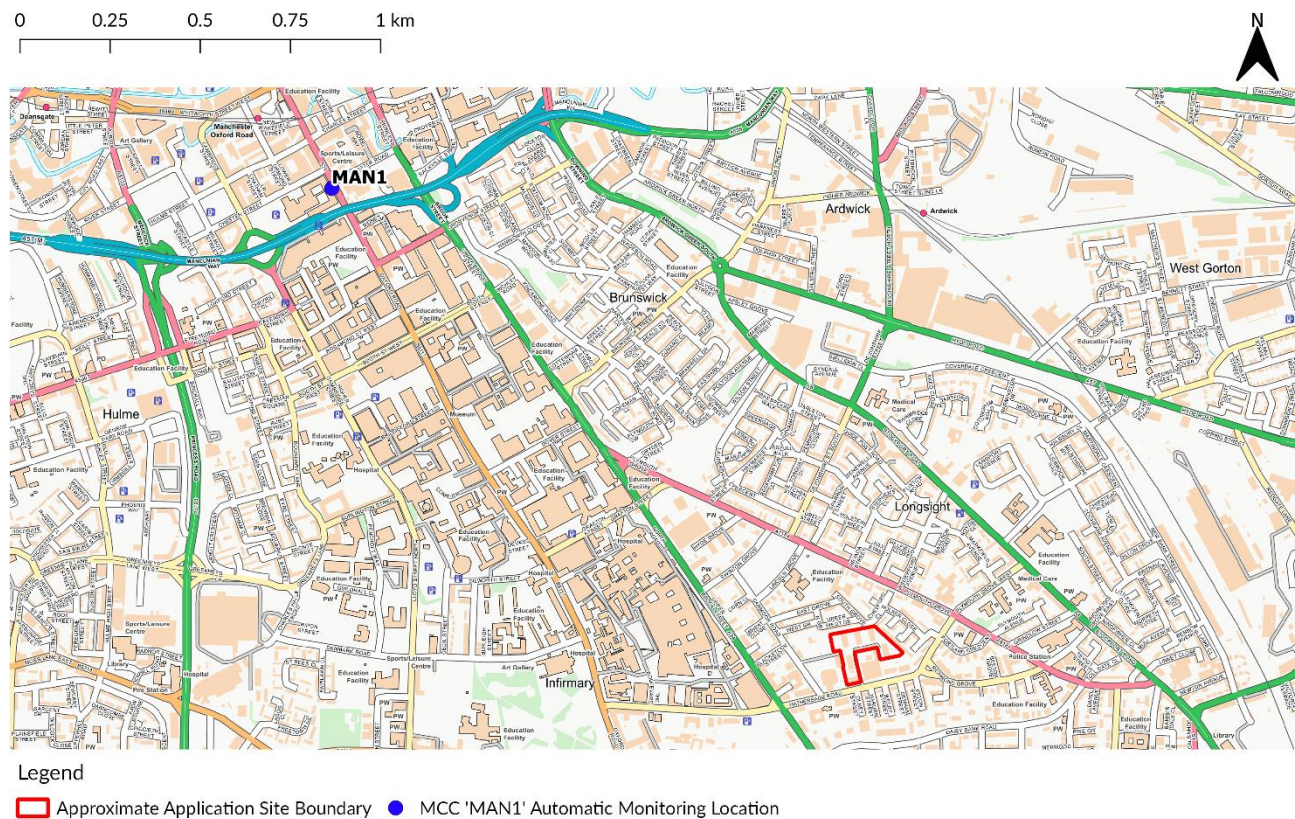


Figure 3. Automatic Monitoring Location 'MAN1, Manchester Oxford Road' with respect to the Application Site. Contains OS Data © Crown Copyright and Database rights 2023.

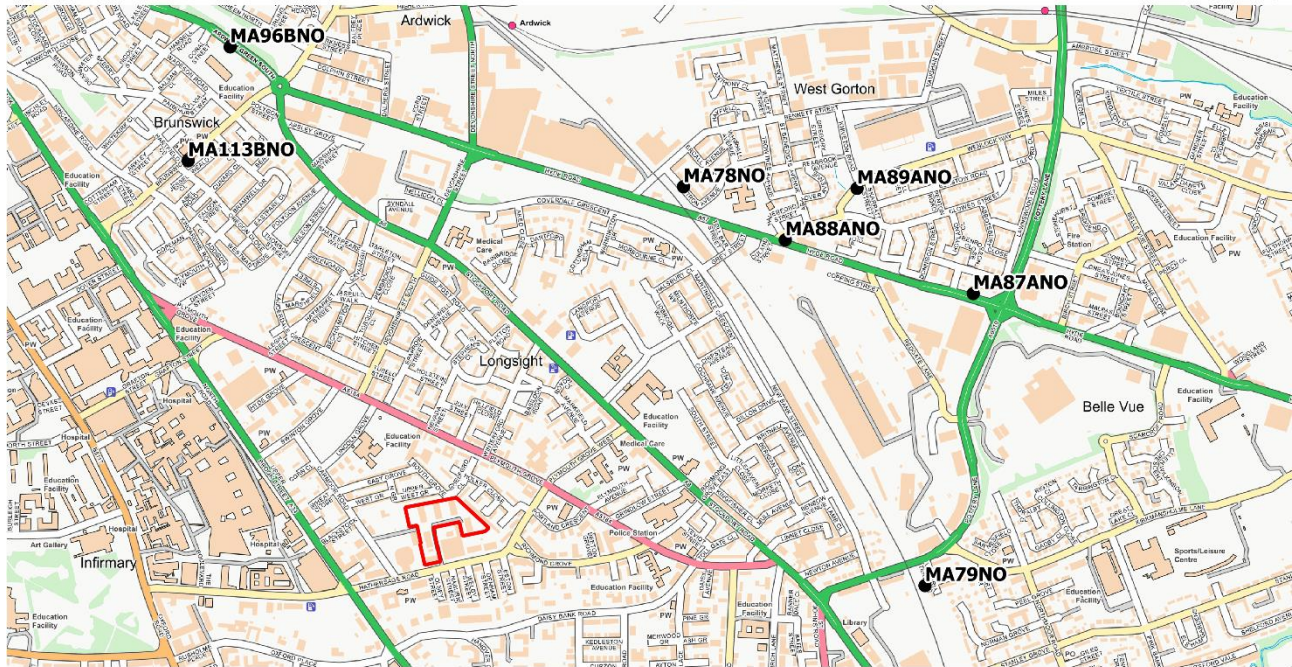
The automatic monitoring results indicate that exceedances of the annual mean NO_2 AQO were recorded at MAN1 in the years 2018-2019 alongside 2021-2022, however, since this automatic monitoring site is a kerbside site and located adjacent to the A34, a major arterial route leading out of Manchester City Centre, the air quality conditions are not considered representative of those at the Application Site on the minor Hathersage Road. As such, exceedances of the annual mean NO_2 AQO would not be expected at the Application Site as MAN1 represents worst case air quality conditions.

However, compliance with the 1-hour mean NO_2 AQO was observed at MAN1 in all years between 2018 and 2022, since less than 18 exceedances of the hourly threshold of $200 \mu\text{g}/\text{m}^3$ occurred in the five years of monitoring data. As such, since MAN1 is a worst-case scenario, compliance with the 1-hour mean NO_2 AQO would be expected at the Application Site.

Regarding the monitored PM_{10} concentrations, no exceedances of the annual mean PM_{10} AQO were recorded at MAN1 in the five years of available monitoring data. Compliance with the 24-hour mean PM_{10} AQO was also observed in all years between 2018 and 2022, as fewer than 35 days with concentrations $> 50 \mu\text{g}/\text{m}^3$ occurred. As such, compliance with both the annual mean and 24-hour mean PM_{10} AQOs is anticipated at the Application Site.

A review of the most recent monitoring data available within the GMCA ASR 2022²⁰ has indicated that there are seven passive diffusion tube monitoring locations within 1.5 km of the Application Site. Table 4 details the monitoring results for all passive diffusion tube monitoring locations for the most recent years of available monitoring data between 2018 and 2022, with the passive diffusion tube monitoring locations with respect to the Application Site illustrated in Figure 4.

0 0.25 0.5 0.75 1 km



Legend

Approximate Application Site Boundary ● MCC Passive Diffusion Tube Locations

Figure 4. Passive Diffusion Tube Monitoring Locations with respect to the Application Site. Contains OS Data © Crown Copyright and Database rights 2023.

Table 4: Passive Diffusion Tube Monitoring Results

Site ID	Site Type	Site Name	Distance (km) from site (approx.)	In the Greater Manchester AQMA?	Annual Mean NO ₂ Concentration (µg/m ³)				
					2018	2019	2020	2021	2022
MA78NO	Urban Background	78	0.9	Yes	33.2	33.0	23.2	27.5	27.2
MA113BNO	Roadside	113	1.0	Yes	-	-	-	28.1	29.2
MA88ANO	Roadside	88A	1.0	Yes	44.3	32.5	32.5	35.3	39.2
MA79NO	Urban Background	79	1.1	No	29.9	22.3	22.3	25.6	25.4
MA96BNO	Roadside	96, Ardwick Green	1.2	Yes	-	36.4	36.4	41.0	43.5
MA89ANO	Roadside	89A	1.2	Yes	30.3	23.7	23.7	25.2	25.6
MA87ANO	Roadside	87A	1.3	Yes	33.2	22.9	22.9	26.4	28.0

Notes:

Concentrations in **bold** indicate an exceedance of the relevant AQO

- = no data

As shown in Table 4 above, only one passive diffusion tube, MA96BNO, recorded an exceedance of the annual mean NO₂ AQO in 2022 at a concentration of 43.5 µg/m³ which exceeds the annual mean AQO by 8.75%. This exceedance of the annual mean NO₂ AQO at MA96BNO can be linked to its location, since this diffusion tube is located within the 'Greater Manchester' AQMA and is only set back approximately 3.0 m from the heavily trafficked A6 (Ardwick Green South). Therefore, the air quality conditions at MA96BNO are expected to be much poorer than at the Application Site on the less heavily trafficked Hathersage Road.

In 2022, the most recent year of representative monitoring data, compliance with the annual mean NO₂ AQO was observed at the other six passive diffusion tube monitoring locations within 1.5 km of the Application Site.

Furthermore, as outlined in Defra LAQM.TG(22)⁸, an annual mean NO₂ concentration of 60 µg/m³ or above is often used to indicate a possible exceedance of the 1-hour mean NO₂ AQO. There has been no recorded exceedance of the 60 µg/m³ threshold from monitored NO₂ concentrations at any of the 7 passive diffusion tube monitoring location within 1.5 km of the Application Site between 2018 and 2022. As such, exceedances of the 1-hour mean NO₂ AQO are unlikely at the Proposed Development.

4.3 Industrial Pollution.

A desk-based review of potential industrial sources using the UK Pollutant Release and Transfer Register and the Pollution Inventory from the Environment Agency identified a single industrial source of air pollution within 2 km of the Application Site that might affect the Application Site with regard to air quality. However, this source does not have significant emissions to air, as shown in Table 5, and so the impacts on air quality at the Application Site are deemed to be insignificant.

Table 5: Industrial/Waste Management Sources of Air Pollution within 2 km of the Application Site from 2015 onwards.

Source Name	Source Type	Nitrogen oxides (taken to be NO ₂ + NO), PM ₁₀ and PM _{2.5} release to air since 2015
Heineken UK Limited	Food & Drink (the treatment and processing for the production of food from only vegetable raw materials)	Emissions to air of relevant pollutants are controlled under an environmental permit and as such are not expected to be significant.

4.4 Defra Predicted Concentrations.

The background concentrations have been obtained from the national maps published by Defra²⁸. These estimated concentrations are produced on a 1 km by 1 km grid basis for the whole of the UK. The Application Site falls into the two grid squares X 385500 Y 396500 and X 385500 Y 395500.

The predicted concentrations for these two grid square for NO₂, PM₁₀ and PM_{2.5} are provided in Table 6 for 2022, the most recent year with available monitoring data, 2024, the current year and for 2027, the earliest anticipated opening year for the Proposed Development.

Table 6: Predicted Background Concentrations for grid squares X 385500 Y 396500 and X 385500 Y 395500.

Year	Predicted Background Concentration (µg/m ³)		
	NO ₂	PM ₁₀	PM _{2.5}
X 385500 Y 396500			
2022	18.5	12.4	8.2
2024	17.3	12.1	8.0
2027	16.0	12.0	7.9

Year	Predicted Background Concentration ($\mu\text{g}/\text{m}^3$)		
	NO ₂	PM ₁₀	PM _{2.5}
X 385500 Y 395500			
2022	17.1	12.7	8.5
2024	15.9	12.4	8.3
2027	14.6	12.3	8.2

As shown in Table 6, the Defra predicted background concentrations are well below the relevant AQOs and 2005 WHO guidelines for all pollutants.

4.5 Summary of Background Data.

The baseline assessment has shown that the Application Site is located adjacent to the GMCA AQMA, declared for exceedances of the NO₂ annual mean AQO in 2016, and is approximately 175 m southwest and northeast at the two closest points, with associated construction and development traffic having to drive through this AQMA to reach the Application Site.

A review of local monitoring data indicates that no likely exceedances of the respective AQOs for NO₂, PM₁₀ or PM_{2.5} will occur at the Proposed Development based on 2022 data, the most recent year of representative monitoring data. Two exceedances of the annual mean NO₂ AQO were observed in 2022 at automatic monitoring site MAN1 and passive diffusion tube MA96BNO. These exceedances observed can be attributed to the MAN1 automatic monitoring site being a kerbside site and located adjacent to the A34, a major arterial route leading out of Manchester City Centre. Additionally, the passive diffusion tube site MA96BNO is also only set back approximately 3.0 m from the heavily trafficked A6 (Ardwick Green South). Therefore, the air quality conditions at MAN1 and MA96BNO are expected to be much poorer than at the Application Site on the less heavily trafficked Hathersage Road. As such, exceedances of the annual mean NO₂ AQO would not be expected at the Application Site as both MAN1 and MA96BNO represent worst case air quality conditions.

The Defra predicted background concentrations are expected to be below the annual mean AQOs and WHO guidelines for all considered pollutants at the Application Site in 2022, 2024 and 2027, the expected opening year for the Proposed Development.

Additionally, in line with the MCC Air Quality and Planning and Technical Guidance¹², the 2005 PM_{2.5} WHO guideline¹¹ is also not expected to be exceeded in 2022, 2024 or 2027 at the Application Site.

5. Construction Phase Assessment.

The potential for air quality impacts during the construction of the Proposed Development are assessed in this section.

5.1 Construction Phase Dust Assessment.

The risk of dust impacts is based on the potential dust emissions magnitude and the sensitivity of the area. These two factors are then combined to determine the risk of dust impacts with no mitigation applied. In the absence of any site-specific information, a higher risk category has been applied to represent a worst-case scenario.

5.1.1 Assessment Screening

There are 'human receptors' within 250 m of the Application Site but no designated habitat sites within 50 m of the Application Site boundary or within 50 m of the route(s) used by construction vehicles on the public highway, up to 250 m from the Application Site entrance.

The closest ecological receptor to the Application Site is Highfield Country Park, classified as a Local Nature Reserve, located approximately 3.1 km to the southeast.

Therefore, an assessment of construction dust at human receptors is required, but an assessment of construction at ecological receptors can be screened out from this assessment.

5.1.2 Potential Dust Emission Magnitude

The potential magnitude of dust emissions from demolition, earthworks, construction and trackout have been assessed, as identified in Table 7.

Table 7: Predicted Magnitude of Dust Emissions

Activity	Magnitude	Justification
Demolition	Medium	Demolition to occur as part of the proposals includes the existing Block 4 and Block 6, with partial demolition of Blocks 2 and 3, at height of approximately 13 m at the highest point. As such, in line with the IAQM guidance, the total demolition volume is anticipated to fall into the medium category for dust emission of between 12,000 – 75,000 m ³ .
Earthworks	Small	The total site area is approximately 14,700 m ² (1.47 ha). The Site is predominantly hardstanding surrounding the existing residential Blocks; however, site wide landscaping is going to be completed as part of the works. The Soil type is loamy and clayey ³¹ which has potential for dust emission. As such, in line with the IAQM guidance, the potential magnitude of dust emissions from earthworks are expected to be small.
Construction	Medium	The total building volume is likely to fall within the medium category for dust emission of 12,000 – 75,000 m ³ including the construction of the new Block 4 and Block 6 alongside the book end extensions to Blocks 1-3 and vertical extensions adding two additional rooftop floors to Block 5. As such, in line with the IAQM guidance, the potential magnitude of dust emissions from construction are expected to be medium.
Trackout	Small	As the Application Site is predominantly hardstanding, the unpaved road length is likely to be below 50 m. The soil type at the Application Site has previously been classed as loamy and clayey ³¹ which is a potentially dusty soil type. As such, in line with the IAQM guidance, the potential magnitude of dust emissions from trackout are expected to be small.

5.1.3 Sensitivity of the Study Area

The sensitivity of the area takes into account the following factors:

- The specific sensitivities of receptors in the area;
- The proximity and number of those receptors;
- In the case of PM₁₀, the local background concentration; and
- Site-specific factors, such as whether there are natural shelters, such as trees or other vegetation, to reduce the risk of wind-blown dust.

The IAQM distance bands for sensitivity are illustrated relative to the Application Site in Figure 5.

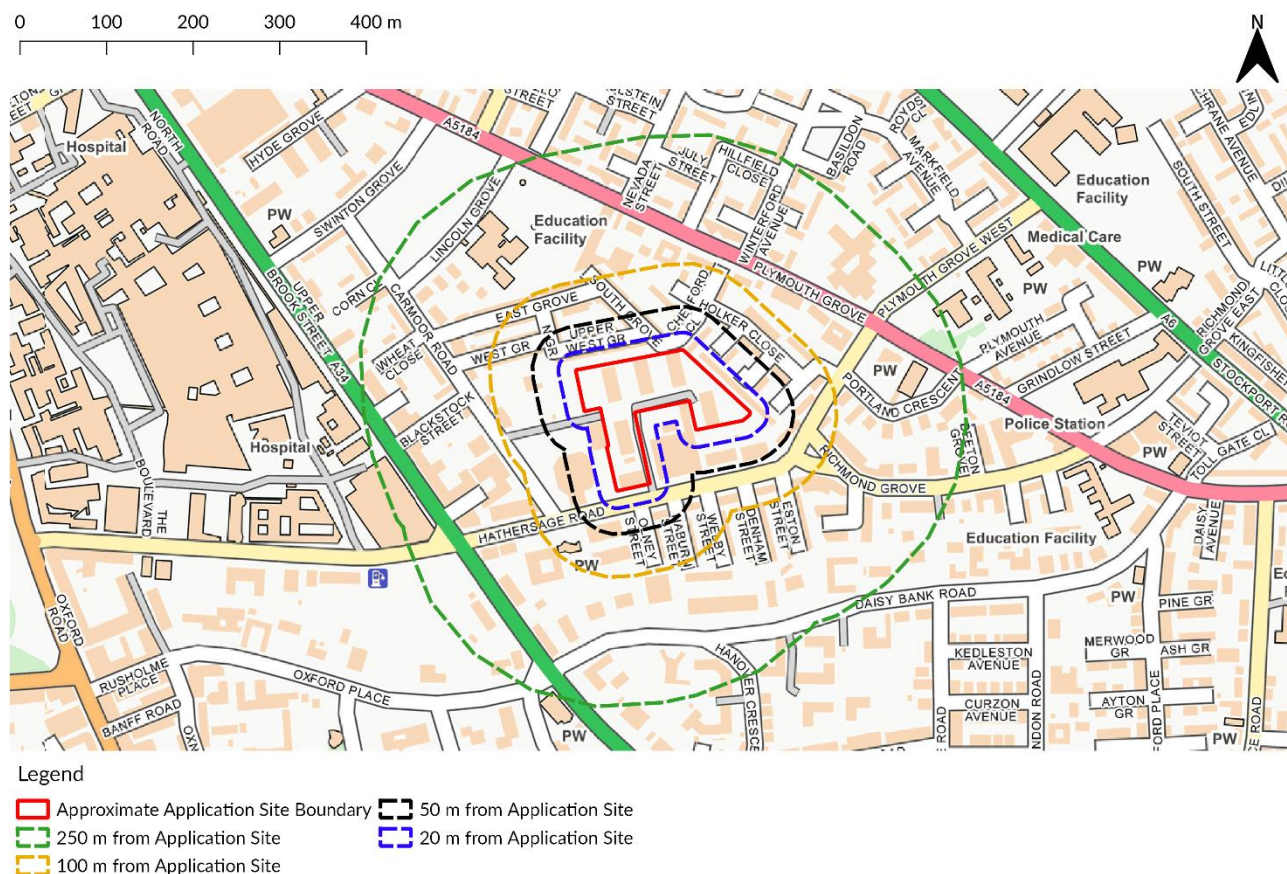


Figure 5. IAQM Demolition and Construction Dust Distance band criteria from the Application Site boundary. Contains Ordnance Survey Data © Crown Copyright 2023.

The sensitivity of the area and the factors considered are detailed in Table 8.

Table 8: Sensitivity of the Area

Sensitivity Type	Factors	Sensitivity of Area	
		On – Site Activity	Trackout
Dust Soiling	Within 50 m of the Application Site, there are between 10-100 high sensitivity residential receptors. Within 50 m west of the Application Site, the Octagon House building contains the high sensitivity receptor the NHS Central Manchester Dialysis Unit. As such, the sensitivity of the area with regards to dust soiling is classified as high.	High	High

Sensitivity Type	Factors	Sensitivity of Area	
		On – Site Activity	Trackout
	For trackout, the distances are measured within 50 m from the sides of the roads used by construction traffic up to 200 m from the exit of the Application Site. There are greater than 100 high sensitivity receptors (residential properties) within 50 m of the surrounding road network (Hathersage Road) to the south of the site, up to 200 m east and west of the Application Site entrance. The high sensitivity NHS Central Manchester Dialysis Unit is also located within 50 m of the surrounding road network. As such, the sensitivity of the area is classified as high, in line with IAQM Guidance.		
Human Health	The PM₁₀ Defra predicted background concentrations for 2022, 2024 and 2027 in the grid square X 385500 Y 395500 (which represents the worst-case grid square for PM₁₀ concentrations at the Application Site), were 12.7 µg/m³, 12.4 µg/m³ and 12.3 µg/m³, respectively. Therefore, although there are between 10-100 high sensitivity residential receptors within 50 m north and northeast of the Application Site boundary, the monitored and predicted PM₁₀ concentrations in the locale of the Application Site are well below 24 µg/m³. As such, the sensitivity of the area in regard to human health impacts is expected to be low in line with IAQM Guidance. For trackout, the distances are measured within 50 m from the sides of the roads used by construction traffic up to 200 m from the exit of the Application Site. There are greater than 100 high sensitivity receptors (residential properties) within 50 m of the surrounding road network (Hathersage Road) to the south of the site, up to 200 m east and west of the Application Site entrance. The high sensitivity NHS Central Manchester Dialysis Unit is also located within 50 m of the surrounding road network. Therefore, although there are greater than 100 high sensitivity residential receptors within 50 m of the surrounding road network (Hathersage Road) up to 200 m from the Application Site entrance, the monitored and predicted PM₁₀ concentrations in the locale of the Application Site are well below 24 µg/m³. As such, the sensitivity of the area in regard to human health impacts is expected to be low in line with IAQM Guidance.	Low	Low

5.1.4 Risk of Dust Impacts

The outcomes of the assessments of potential magnitude of dust emissions and the sensitivity of the area are combined to determine the risk of impact. This risk is then used to inform the selection of appropriate mitigation. Table 9 details the risk of dust impacts for demolition, earthworks, construction and trackout activities.

Table 9: Summary of Potential Unmitigated Dust Risks

Potential Impact	Sensitivity		Demolition	Earthworks	Construction	Trackout
	On-Site Activity	Trackout				
Magnitude			Medium	Small	Medium	Small
Dust Soiling Impacts	High	High	Medium Risk	Low Risk	Medium Risk	Low Risk
Human Health Impacts	Low	Low	Low Risk	Negligible	Low Risk	Negligible

5.2 Construction Phase – Vehicular Pollutants.

The Application Site is located adjacent to the GMCA AQMA, upon which associated construction traffic will travel through this AQMA. As such, the more stringent screening criterion (i.e. 100 LDV and/or 25 HDV within an AQMA) would apply.

It has been confirmed by SLR Consulting that the traffic movements during the construction works of the Proposed Development are not anticipated to exceed the thresholds outlined in the EPUK and IAQM planning guidance²⁵.

Therefore, in accordance with the criteria presented within EPUK and IAQM planning guidance, additional road vehicle trips during the construction phase of the Proposed Development “*can be considered to have insignificant effects*” on air quality.

5.3 Construction Phase – Non-road Mobile Machinery.

Pollutants emitted by NRMM that may have the most significant potential effects on local air quality are particulate matter (PM₁₀ and PM_{2.5}), and NO_x/NO₂. Typically, NRMM is associated with construction sites and, therefore there is a potential for NRMM emissions to adversely affect local air quality as a result of the Proposed Development.

Furthermore, the IAQM construction guidance states that “*Experience of assessing the exhaust emissions from on-site plant (also known as non-road mobile machinery or NRMM) and site traffic suggests that they are unlikely to make a significant impact on local air quality, and in the vast majority of cases they will not need to be quantitatively assessed.*”

6. Operational Phase Assessment.

The potential for air quality impacts during the operation of the Proposed Development are assessed in this section.

6.1 Road Traffic Emissions Screening Assessment.

Initial road traffic data associated with the Proposed Development has been provided by SLR Consulting, the appointed Transport Consultants for the project. The initial flows indicate that there will be a 24-hour AADT increase of 50 LDV and 2 HDVs on the local road network as a result of the Proposed Development.

This is below the indicative criteria in the EPUK and IAQM planning guidance of a change of more than 100 LDVs and 25 HDVs and therefore no further assessment is required.

In accordance with the EPUK and IAQM planning guidance, the impacts on air quality from operational phase traffic generation are considered to be not significant.

6.2 Site Suitability Assessment.

This section presents a review of GMCA monitoring data and mapped concentrations by Defra in the vicinity of the Application Site, for the purpose of identifying the suitability of the Application Site for Sui Generis (PBSA) use and to identify any requirements for potential mitigation to be embedded into the Proposed Developments design.

As presented in Section 2, and in line with LAQM.TG(22), the annual mean, 24-hour mean, and 1-hour mean AQOs apply to the Proposed Development due to its proposed Sui Generis (PBSA) use. As such, this section considers the predicted annual mean (also in line with Part F of the Building Regulations (2021)¹⁶), 24-hour mean, and the 1-hour mean pollutant concentrations at the Application Site. In line with the MCC Air Quality and Technical Planning Guidance¹² the 2005 PM_{2.5} WHO guideline will also need to be considered.

6.2.1 Predicted NO₂ Concentrations

A review of the annual mean NO₂ concentrations monitored within 1.5 km of the Application Site has been completed as part of the baseline review with recent monitoring results, presented in Table 3 and Table 4.

The most representative monitoring location of the air quality conditions expected at the Application Site can be stated to be the roadside passive diffusion tube MA113BNO, located approximately 1.1 km northwest from the Application Site and set back approximately 2.0 m from Brunswick Street, as Brunswick Street is also a connecting traffic route between Upper Brook Street (A34) and Stockport Road (A6), similar to that of Hathersage Road that the Application Site is located on.

MA113BNO is located approximately 295 m east from Upper Brook Street (A34) and approximately 310 m west from Stockport Road (A6) and the Application Site is located at similar distances from the major A34 and A6 road networks respectively, at approximately 210 m east of Upper Brook Street (A34) and approximately 690 m west from Stockport Road (A6). In 2022, the most recent year with representative monitoring data, an annual mean NO₂ concentration of 29.2 µg/m³ was recorded at MA113BNO, which represents 73% of the annual mean NO₂ AQO and is also below the indicative 60 µg/m³ threshold outlined by Defra LAQM.TG(22)⁸ for possible exceedances of the 1-hour mean NO₂ AQO. As such, compliance with both the annual mean and 1-hour mean NO₂ AQOs is anticipated at the Application Site.

Furthermore, as shown in Table 6, the Defra predicted background concentrations²⁸ for NO₂ at the Application Site are below both the 60 µg/m³ threshold and annual mean AQO of 40 µg/m³ in 2022, 2024 and 2027, the confirmed opening year for the Proposed Development (in both grid squares upon which the Application Site is located).

In 2024, the current year, the Defra predicted background concentrations for NO₂ were predicted to be 17.3 µg/m³ (X 385500 Y 396500) and 15.9 µg/m³ (X 385500 Y 395500) respectively, which represents 43.25% and 39.75% of the annual mean NO₂ AQO. As such, exceedances of both the NO₂ 1-hour mean and annual mean AQO at the Application Site are unlikely.

Therefore, NO₂ concentrations in the vicinity of the Application Site are considered to be below both the annual mean AQO (also in line with Part F of the Building Regulations (2021)¹⁶) and 1-hour mean AQO. Therefore, the Application Site is considered suitable for the proposed Sui Generis (PBSA) use without the need for additional mitigation measures.

6.2.2 Predicted PM₁₀ Concentrations

A review of the annual mean and 24-hour mean PM₁₀ concentrations has been completed as part of the baseline review, with recent monitoring results presented in Table 3.

At the closest automatic monitoring station to the Application Site, Site ID: MAN1 located 1.8 km northwest from the Application Site, there was no recorded exceedances of both the annual mean and 24-hour mean PM₁₀ AQOs in 2022, the most recent year of available monitoring data. This automatic monitoring station is classed as kerbside, set back 1.0 m from the major Oxford Road (A34) and within the 'Greater Manchester AQMA' which represents poorer air quality conditions than those likely to be experienced at the Application Site. Therefore, it is likely that concentrations of PM₁₀ recorded at the Application Site will be less than those recorded at Site ID: MAN1 and not in exceedance of the PM₁₀ annual mean or 24-hour mean AQO.

As shown in Table 6, the Defra predicted background concentrations²⁸ for PM₁₀ at the Application Site are below the annual mean PM₁₀ AQO in 2022, 2024 and 2027, the confirmed opening year for the Proposed Development (in both grid squares upon which the Application Site is located).

In 2024, the current year, the Defra predicted background concentrations for PM₁₀ were predicted to be 12.1 µg/m³ (X 385500 Y 396500) and 12.4 µg/m³ (X 385500 Y 395500) respectively, which represents 30.25% and 31% of the annual mean PM₁₀ AQO.

Therefore, PM₁₀ concentrations in the vicinity of the Application Site are considered to be below both the annual mean AQO (also in line with Part F of the Building Regulations (2021)¹⁶) and 24-hour mean AQO. As such, the Application Site is considered suitable for the proposed Sui Generis (PBSA) use without the need for additional mitigation measures.

6.2.3 Predicted PM_{2.5} Concentrations

No review of local PM_{2.5} monitoring was completed as part of the baseline review, as no automatic monitoring of PM_{2.5} concentrations was conducted in the vicinity of the Application Site.

As shown in Table 6, the Defra predicted background concentrations²⁸ for PM_{2.5} at the Application Site are below both the annual mean AQO and 2005 PM_{2.5} WHO guideline¹¹ in 2022, 2024 and 2027 the confirmed opening year for the Proposed Development (in both grid squares upon which the Application Site is located).

In 2024, the current year, the Defra predicted background concentrations for PM_{2.5} were predicted to be 8.0 µg/m³ (X 385500 Y 396500) and 8.3 µg/m³ (X 385500 Y 395500), which represents 40% and 41.5% of the annual mean PM_{2.5} AQO respectively. Additionally, both predicted PM_{2.5} concentrations at the Application Site in 2024 are below the 2005 PM_{2.5} WHO guideline¹¹ of 10 µg/m³, with 20% and 17% headroom respectively.

Therefore, PM_{2.5} concentrations in the vicinity of the Application Site are considered to be below both the annual mean AQO (also in line with Part F of the Building Regulations (2021)¹⁶) and 2005 PM_{2.5} WHO guideline¹¹ (in line with the MCC Air Quality and Planning Technical Guidance¹²). Therefore, the Application Site is considered suitable for the proposed Sui Generis (PBSA) use without the need for additional mitigation measures.

6.2.4 Significance of Air Quality Impacts

To determine the significance of predicted air quality impacts based upon a Site Suitability assessment, such as that undertaken as part of this assessment, the EPUK and IAQM planning guidance states:

"Where the air quality is such that an air quality objective at the building façade is not met, the effect on residents or occupants will be judged as significant, unless provision is made to reduce their exposure by some means."

With regards to the Proposed Development, the unmitigated impact significance associated with the Proposed Development has been predicted in accordance with the stated assessment methodology. The following factors have been considered when providing justification:

- The Proposed Development will not introduce any new receptor into an area of exceedance of the annual or 1-hour mean NO₂ AQOs based upon a review of NO₂ monitoring data and Defra predicted background concentrations²⁸ within the development locale;
- The Proposed Development will not introduce any new receptor exposure into an area of exceedance of the annual mean or 24-hour PM₁₀ AQOs based upon a review of PM₁₀ monitoring data and Defra predicted background concentrations²⁸ within the development locale; and
- The Proposed Development will not introduce any new receptor exposure into an area of exceedance of the annual mean PM_{2.5} AQO or 2005 PM_{2.5} WHO guideline based upon a review of Defra predicted background concentrations²⁸ within the development locale.

As no exceedances of the considered AQOs or WHO guidelines are predicted, mitigation measures are not required for the operational phase of the Proposed Development. As such, the overall effect is considered to be 'not significant'.

7. Mitigation.

7.1 Construction Phase.

To mitigate the potential impacts during the construction phase it is recommended that mitigation measures as detailed in the IAQM construction guidance are implemented. These mitigation measures have been carefully selected for the Proposed Development and are based upon the dust risk categories outlined in Table 9 of this report.

It is recommended that MCC approve a Dust Management Plan (DMP) prior to works commencing on site, and that this is implemented using an appropriately worded planning condition. Table 10 below details the measures that should be incorporated in the DMP. For general mitigation measures, which excludes those specifically targeted towards demolition, earthworks, construction and trackout (which are given towards the end of the table), medium risk measures have been applied as these represent the highest risk category determined in Table 9. This approach is consistent with the IAQM construction guidance.

Table 10: Mitigation Measures

Issue	Mitigation Measure
Communications	Develop and implement a stakeholder communications plan that includes community engagement before work commences on site.
	Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environment manager/engineer or the site manager.
	Display the head or regional office contact information.
Dust Management Plan	Develop and implement a Dust Management Plan (DMP), which may include measures to control other emissions, approved by the Local Authority. The DMP may include monitoring of dust deposition, dust flux, real-time PM ₁₀ continuous monitoring and/or visual inspections.
Site Management	Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.
	Make the complaints log available to the Local Authority when asked.
	Record any exceptional incidents that cause dust and/or air emissions, either on- or off- site, and the action taken to resolve the situation in the log book.
Monitoring	Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to the Local Authority when asked. This should include regular dust soiling check of surfaces such as street furniture, cars, windowsills within 100 m of the site boundary, with cleaning to be provided if necessary.
	Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to the Local Authority when asked.
	Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.
	Agree dust deposition, dust flux, or real-time PM ₁₀ continuous monitoring locations with the Local Authority. Where possible, commence baseline monitoring at least three months before work commences on site or, if it is a large site, before work on a phase commences.
Preparing and maintaining the site	Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible.

Issue	Mitigation Measure
	Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site.
	Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period.
	Avoid site runoff of water or mud.
	Keep site fencing, barriers and scaffolding clean using wet methods.
	Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used cover as described below.
	Cover, seed or fence stockpiles to prevent wind whipping.
Operating vehicles/machinery and sustainable travel	Ensure all vehicles switch off engines when stationary – no idling vehicles.
	Avoid the use of diesel or petrol-powered generators and use mains electricity or battery powered equipment where practicable.
	Impose and signpost a maximum-speed-limit of 15 mph on surfaced and 10 mph on unsurfaced haul roads 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 applicable).
	Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking and car-sharing)
Operations	Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems.
	Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate.
	Use enclosed chutes and conveyors and covered skips.
	Minimize drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.
	Ensure equipment is readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.
Waste management	Avoid bonfires and burning of waste materials.
Demolition	Soft strip inside building before demolition.
	Ensure effective water suppression is used during demolition activities. Hand held sprays are more effective than hoses attached to equipment as the water can be directed to where it is needed. In addition, high volume water suppression systems, manually controlled, can produce fine water droplets that effectively bring the dust particles to the ground.
	Avoid explosive blasting, using appropriate manual or mechanical alternatives.
	Bag and remove any biological debris or damp down such material before demolition.
Earthworks	Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable.

Issue	Mitigation Measure
	Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable.
	Only remove the cover in small areas during work and not all at once.
Construction	Avoid scabbling (roughening of concrete surfaces) if possible.
	Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.
	Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery.
	For smaller supplies of fine powder materials, ensure bags are sealed after use and stored appropriately to prevent dust.
Trackout	Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being in continuous use.
	Avoid dry sweeping of large areas.
	Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.
	Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable.
	Record all inspections of haul routes and any subsequent action in a site log book.
	Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned.
	Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).
	Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits.
	Access gates to be located at least 10 m from receptors where possible.

Potential dust effects during the construction phase are considered to be temporary and short term in nature. The impacts are determined to be temporary as they will only potentially occur throughout the construction phase and short-term because these will only arise at particular times when certain activities and meteorological conditions combine to create the predicted level of magnitude.

However, with the application of the above dust control and mitigation measures, it is considered that impacts at all receptors will be 'not significant' in accordance with the IAQM construction guidance.

7.1.1 Construction Phase Road Traffic Emissions

Potential air quality impacts associated with construction phase road traffic emissions, principally HDV movements, have been screened out for further assessment with associated impacts on air quality predicted to result in an 'insignificant' effect. Therefore, mitigation measures are not considered to be required.

7.1.2 Construction Phase NRMM Emissions

In accordance with Part 4 of the IAQM construction guidance, all NRMM would need to adhere to the emissions standards for NO₂ and PM₁₀ set out for NRMM. It is therefore considered the likely effects of construction plant on local air quality would be insignificant.

7.2 Operational Phase.

7.2.1 Road Traffic Emissions

Potential air quality impacts associated with operational phase development trips have been screened out from further assessment as *'the impacts [on air quality from operational phase movements] can be considered to have insignificant effects'* in accordance with the EPUK and IAQM planning guidance. Therefore, mitigation measures such as a sustainable travel plan are not considered to be required.

7.2.2 Site Suitability Assessment

A review of MCC monitoring data in consideration of the Application Site, and mapped concentrations by Defra²⁸ in the locale of the Application Site, indicates no likely exceedance of the respective annual mean AQOs (also in line with Part F of the Building Regulations (2021)¹⁶), 1-hour mean NO₂ AQP or 24-hour mean PM₁₀ AQP. The 2005 PM_{2.5} WHO guideline¹¹ is also not predicted to be exceeded at the Application Site.

As no exceedances of any considered AQOs are predicted, this follows the 1st hierarchy principle of the EPUK and IAQM planning guidance to *'prevent and avoid'* exposure'. Therefore, no embedded mitigation into the Proposed Development design (in the form of mechanical ventilation, for example) is required.

8. Summary and Conclusions.

This report details the potential air quality impacts associated with the partial demolition, extension, internal refurbishment and operation of the existing Victoria Point student accommodation on 44 Hathersage Road, Manchester M13 0FT (the 'Application Site').

The findings of the assessment are as follows:

- The baseline assessment has shown that the Application Site is not located within the Greater Manchester AQMA but is approximately 175 m southwest and northeast at the two closest points. Local monitoring data within the MCC area of administration including a single automatic monitoring station, passive diffusion tube monitoring locations within 1.5 km of the Application Site, in addition to background pollution maps from Defra²⁸ indicated that no exceedances of any of the respective AQOs for NO₂, PM₁₀ and PM_{2.5} occurred in 2022 within the vicinity of the Application Site. In addition, the 2005 PM_{2.5} WHO guideline¹¹ was also not exceeded by Defra predicted background concentrations in 2022, 2024 or 2027, the confirmed opening year for the Proposed Development;
- A qualitative assessment of the potential dust impacts during the construction of the Proposed Development has been undertaken. Through good practice and implementation of appropriate mitigation measures, it is expected that the release of dust would be effectively controlled and mitigated, with resulting impacts considered to be 'not significant'. All dust impacts are considered to be temporary and short-term in nature;
- The results of the operational phase traffic screening assessment indicate that the impacts on air quality from operational phase traffic generation are considered to be not significant.
- The proposed energy strategy for the primary supply to the Proposed Development is all electric utilising centralised Air Source Heat Pump (ASHP) systems in all retained Blocks and extensions, a zero-emission technology, with no on-site fossil fuel combustion. A life safety diesel generator located above ground level is also proposed, to be used in emergencies or routine testing only. As no combustion sources are proposed for the primary energy supply, no local air quality impacts are anticipated and a detailed assessment of impacts of combustion emissions from the energy plant has been screened out of this assessment.
- A qualitative Site Suitability Assessment has been undertaken to assess the suitability of the Application Site for the proposed Sui Generis (PBSA) use, in line with both Part F of the Building Regulations (2021)¹⁶ and the MCC Air Quality and Planning Technical Guidance¹². Based on the assessment results, no exceedances of the relevant AQOs for any pollutant in addition to the 2005 PM_{2.5} WHO guideline¹¹ are expected to occur. Therefore, embedded mitigation within the design of the Proposed Development is not required.

Based on the information above, it is considered that air quality should not be viewed as a constraint to planning and the Proposed Development conforms to the principles of National Planning Policy Framework, the MCC Core Strategy Development Plan¹⁹ and the MCC Air Quality and Planning Technical Guidance¹².

9. Glossary of Terms.

AADT	Annual Average Daily Traffic
AQAP	Air Quality Action Plan
AQDMP	Air Quality Dust Management Plan
AQMA	Air Quality Management Area
AQO	Air Quality Objective
ASHP	Air Source Heat Pump
ASR	Annual Status Report
DMP	Dust Management Plan
Defra	Department for Environment, Food and Rural Affairs
EPA	Environment Protection Act
EPUK	Environmental Protection UK
GMCA	Greater Manchester Combined Authority
HDV	Heavy Duty Vehicles (> 3.5 tonnes gross vehicle weight)
IAQM	Institute of Air Quality Management
LAQM	Local Air Quality Management
LDV	Light Duty Vehicles ($\leq$ 3.5 tonnes gross vehicle weight)
$\mu\text{g}/\text{m}^3$	Micrograms per cubic metre
MCC	Manchester City Council
NGR	National Grid Reference
NO_2	Nitrogen dioxide
NO_x	Nitrogen oxides (taken to be $\text{NO}_2 + \text{NO}$)
NPPF	National Planning Policy Framework
NRMM	Non-Road Mobile Machinery
Objectives	A nationally defined set of health-based concentrations for nine pollutants, seven of which are incorporated in Regulations, setting out the extent to which the standards should be achieved by a defined date. There are also vegetation-based objectives for sulphur dioxide and nitrogen oxides
PBSA	Purpose Built Student Accommodation
PM_{10}	Particulate matter with an aerodynamic diameter less than 10 micrometres
$\text{PM}_{2.5}$	Particulate matter with an aerodynamic diameter less than 2.5 micrometres
PPG	Planning Practice Guidance
Standards	A nationally defined set of concentrations for nine pollutants below which health effects do not occur or are minimal
Trackout	The transport of dust and dirt from the construction / demolition site onto the public road network, where it may be deposited and then re-suspended by vehicles using the network. This arises when heavy duty vehicles (HDVs) leave the construction / demolition site with dusty materials, which may then spill onto the road, and/or when HDVs transfer dust and dirt onto the road having travelled over muddy ground on site
WHO	World Health Organisation

References.

- ¹ The Stationery Office (1995) The Environment Act 1995 (Part IV), London
- ² Defra (2007) The Air Quality Strategy for England, Scotland, Wales and Northern Ireland – [online] (Last accessed: 15/02/2024), Available at: www.gov.uk/government/publications/the-air-quality-strategy-for-england-scotland-wales-and-northern-ireland-volume-1
- ³ The Stationery Office (2000) Statutory Instrument 2000, No 928, The Air Quality (England) Regulations 2000, London
- ⁴ The Stationery Office (2002) Statutory Instrument 2002, No 3043, The Air Quality (England) (Amendment) Regulations 2002, London
- ⁵ The Stationery Office (2021) Statutory Instrument 2021, The Environment Act 2021, London
- ⁶ Department for Environment, Food & Rural Affairs (2023) Environmental Improvement Plan 2023 –[online], (Last accessed: 15/02/2024), Available at: <https://www.gov.uk/government/publications/environmental-improvement-plan>
- ⁷ Defra (2023) Air Quality Strategy: framework for local authority delivery [online] (Last accessed: 15/02/2024) <http://www.gov.uk/government/consultations/revised-national-air-quality-strategy>
- ⁸ Defra (2022) Local Air Quality Management Technical Guidance (TG22) [online] (Last accessed: 15/02/2024), Available at: <https://laqm.defra.gov.uk/wp-content/uploads/2022/08/LAQM-TG22-August-22-v1.0.pdf>
- ⁹ The Stationery Office (2010) Statutory Instrument 2010, No 1001, The Air Quality Standards Regulations 2010, London
- ¹⁰ The Stationery Office (2016) Statutory Instrument 2016, No 1184, The Air Quality Standards (Amendment) Regulations 2016, London
- ¹¹ WHO (2005) Air Quality Guidelines [online], (Last accessed: 15/02/2024), Available at: https://apps.who.int/iris/bitstream/handle/10665/69477/WHO_SDE_PHE_OEH_06.02_eng.pdf?jsessionid=66E22FDBE284CBF2CA8161756C3FF958?sequence=1
- ¹² Manchester City Council (2022) Air Quality and Planning Guidance – [online], (Last accessed: 15/02/2024), Available at: https://www.manchester.gov.uk/downloads/download/5199/environmental_and_public_protection_information_for_developers
- ¹³ World Health Organisation (2021) WHO Global Air quality guidelines– [online] (Last accessed: 15/02/2024), Available at: <https://apps.who.int/iris/bitstream/handle/10665/345329/9789240034228-eng.pdf?sequence=1&isAllowed=y>
- ¹⁴ The Stationery Office (1990) Environmental Protection Act 1990 [online] (Last accessed: 15/02/2024), Available at: legislation.gov.uk/ukpga/1990/43/part/III
- ¹⁵ Defra (2019) The Clean Air Strategy – [online] (Last accessed: 15/02/2024), Available at: www.gov.uk/government/publications/clean-air-strategy-2019
- ¹⁶ HMSO (2021). The Building Regulations 2021. Approved Document Part F: Ventilation
- ¹⁷ Department for Levelling Up, Housing and Communities, (2023) National Planning Policy Framework, Department for Levelling Up, Housing and Communities, London. Available: National Planning Policy Framework - GOV.UK (www.gov.uk)
- ¹⁸ Ministry of Housing, Communities & Local Government (2019) Planning Practice Guidance, London
- ¹⁹ Manchester City Council (2012) Core Strategy Development Plan Document – [online], (Last accessed: 15/02/2024). Available at: https://www.manchester.gov.uk/downloads/download/5672/core_strategy
- ²⁰ Greater Manchester Combined Authority (2023) 2022 Air Quality Annual Status Report (ASR) –[online] (Last accessed: 15/02/2024), Available at: https://assets.ctfassets.net/tlpgbvy1k6h2/3eJDZpHcCKNK0ZOTcUkl/3363e762b28868a832ab2200286a4841/Greater_Manchester_Air_Quality_Annual_Status_Report_2022.pdf
- ²¹ Greater Manchester Combined Authority, Transport for Greater Manchester (2016) Greater Manchester Air Quality Action Plan 2016-2021 – [online]. (Last accessed: 15/02/2024). Available at: https://www.manchester.gov.uk/downloads/download/4166/air_quality_reports
- ²² Greater Manchester Combined Authority, Transport for Greater Manchester (2016) Greater Manchester Low-Emission Strategy –[online] (Last accessed: 15/02/2024), Available at: greatermanchester-ca.gov.uk/media/1276/low-emission-strategy-dec-2016.pdf
- ²³ Transport for Greater Manchester (2019) Greater Manchester's Outline Business Case to tackle Nitrogen Dioxide Exceedances at the Roadside – [online] (Last accessed: 15/02/2024), Available at: assets.ctfassets.net/qwn52pjrtij/1UTXtx1sZoj9ecwPzmKVCG/97077e8c2d4e1df2bbe0c7cd48388fbc/CAP_Exec_Summary_FINAL.pdf
- ²⁴ Clean Air Greater Manchester (2022) Next Steps for Greater Manchester Clean Air Plan –[online], (Last accessed: 15/02/2024), Available at: <https://cleanairgm.com/>
- ²⁵ Environmental Protection UK and Institute of Air Quality Management (2017), Land-Use Planning & Development Control: Planning For Air Quality v1.2 – [online] (Last accessed: 15/02/2024), Available at: iaqm.co.uk/text/guidance/air-quality-planning-guidance.pdf
- ²⁶ Institute of Air Quality Management (2024) Guidance on the assessment of dust from demolition and construction v2.2 – [online], (Last accessed: 15/02/2024), Available at: <https://iaqm.co.uk/wp-content/uploads/2013/02/Construction-Dust-Guidance-Jan-2024.pdf>
- ²⁷ Defra (2014) UK Pollutant Release and Transfer Register – [online], (Last accessed: 15/02/2024), Available at: www.gov.uk/guidance/uk-pollutant-release-and-transfer-register-prtr-data-sets
- ²⁸ Defra (2020) Background Pollution Maps – 2018 – [online], (Last accessed: 15/02/2024), Available at: uk-air.defra.gov.uk/data/laqm-background-maps?year=2018
- ²⁹ Environment Agency (2020) Pollution Inventory – [online], (Last accessed: 15/02/2024), Available at: data.gov.uk/dataset/cfd94301-a2f2-48a2-9915-e477ca6d8b7e/pollution-inventory
- ³⁰ Defra (n.d) UK Ambient Air Quality Interactive Map – [online], (Last accessed: 15/02/2024), Available at: uk-air.defra.gov.uk/data/gis-mapping
- ³¹ Cranfield Soil and Agrifood Institute Soilscape map – [online], (last accessed: 15/02/2024), Available at: <http://www.landis.org.uk/soilscape/>

Appendix 1 - EHO Consultation.

From: [REDACTED]
Sent: 15 February 2024 11:20
To: [REDACTED]
Subject: Victoria Point - Air Quality Assessment

Good morning,

I have reviewed the proposed air quality assessment methodology for the above and we have no additional comments at this time.

Please be advised for future assessments, if the methodology meets the criteria set out in our guidance document (which can be found on our website) then there is no need to consult us beforehand.

Kind regards

[REDACTED]
Environmental Protection Officer
Environmental Protection
Environmental Health
The Neighbourhoods Directorate
Manchester City Council

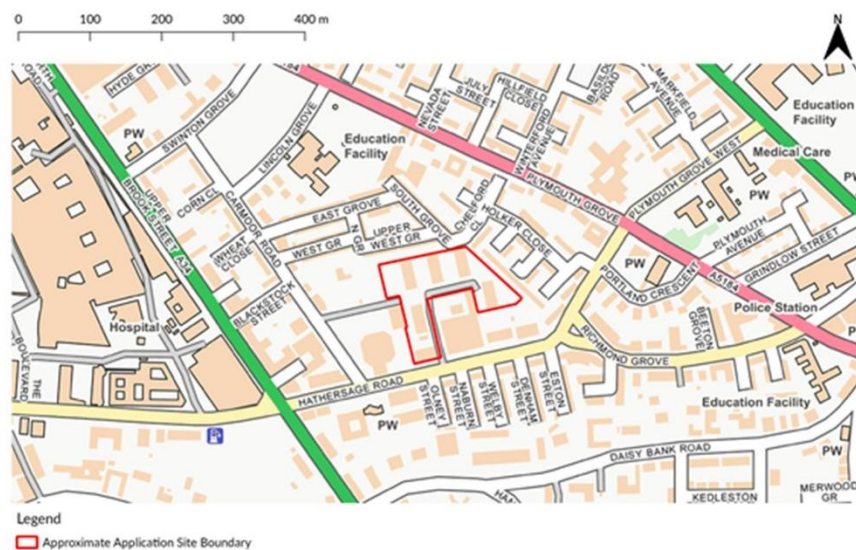
email: [REDACTED]
website: www.manchester.gov.uk

From: [REDACTED]
Sent: 07 February 2024 12:12
To: [REDACTED]
Cc: [REDACTED]
Subject: Victoria Point - Air Quality Assessment

Hi,

Hoare Lea have been instructed to undertake an Air Quality Assessment to support the planning application for the proposed partial demolition, extension, internal refurbishment, and operation of a student residential development consisting of six blocks at the existing Victoria Point student accommodation site on 44 Hathersage Road, Manchester M13 0FT (the 'Application Site').

I have set out our proposed assessment approach below and would invite any comments or local air quality considerations you may have. The site is located at the below location (red outline):



The Proposed Development comprises the intensification of the existing Victoria Point student accommodation, increasing the number of beds to 858 total. This will be done by the demolition and rebuild of Block 4, book end extensions to Blocks 2 and 3 and vertical extensions to Block 5. The proposals also consist of the internal refurbishment of the existing student accommodation rooms in Blocks 1-3 and 5-6 to a higher standard.

Hoare Lea propose to undertake the assessment using the following methodology:

- A baseline assessment of air quality will be undertaken using Greater Manchester Combined Authority (GMCA) data, taken from the most recently available 2022 Annual Status Report.
- Monitoring data for 2020 and 2021 will not be included as part of our assessment, owing to the effects of the COVID-19 pandemic. Monitoring data from 2022 will be used to establish the baseline.
- A review of Manchester City Council's (MCC's) Core Strategy Development Plan will be carried out.
- A review of relevant supplementary planning guidance including MCC's Air Quality and Planning Technical Guidance.

- DEFRA's background pollution maps will be used to establish background concentrations in the area.
- An assessment of the construction impacts on air quality and dust using the IAQM methodology, in compliance with 'The Control of Dust and Emissions During Construction and Demolition'.
- Any construction or operational phase mitigation will be recommended as necessary in line with IAQM guidance.
- The energy strategy for the Proposed Development is likely to be all electric, utilising zero emission technologies. There may also be diesel generators, for back up use only. As no combustion sources are proposed during normal operation and within the primary energy strategy, no local air quality impacts are anticipated and a detailed assessment of impacts of combustion emissions from the energy plant has been screened out of this assessment. Should there be any changes to the above an appropriate assessment will be considered.
- Initial road traffic data associated with the Proposed Development has been provided by SLR Consulting Limited, the appointed Transport Consultants for the project. It is expected that the annual average daily traffic (AADT) increase associated with the Proposed Development will be below the EPUK and IAQM criteria, indicating that the potential for air quality impacts from road traffic emissions associated with the Proposed Development, is unlikely. As such, a detailed assessment is not required and a screening assessment will be undertaken.
- An assessment of Site Suitability will be undertaken qualitatively with a desk-based review of the existing baseline air quality undertaken to inform the exposure of future users of the development. Local air quality monitoring and DEFRA's background pollution maps will be used to understand concentrations at the Application Site.

I would also be grateful if you could please confirm your acceptance of the proposed methodology and provide me with any comments you may have. However, if you would like to discuss further, please do not hesitate to contact me on the number below.

In the meantime, if you have any questions, do not hesitate to contact me.

Many thanks,

[Redacted] (She / Her)
Graduate Air Quality Consultant

DDI
Tel
Email

[Redacted]

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Appendix 2 - Professional Experience.

Christelle Escoffier (Hoare Lea) MsEng. Msc. PhD MIES MIAQM

Christelle Escoffier is a Senior Associate and technical lead for air quality group with Hoare Lea. She is a Full Member of the Institution of Environmental Sciences and the Institute of Air Quality Management. She graduated with a Master in Science Diploma from Paris VI University, France and holds a Doctor of Philosophy degree in Physical Oceanography, Meteorology and Environment, from the same University.

In her twenty-two years of professional experience, she has managed and delivered air quality services for a wide range of industries in the United Kingdom (UK), the United States of America (USA) and the Middle East. Her portfolio of experience comprehends projects for diverse sectors from road transport, planning and development, wastewater and waste, oil and gas to power (energy centres, landfill gas plant, power reserve facilities, gas-fired and oil-fired combustion turbine stations). Christelle has in-depth knowledge of atmospheric dispersion models. She has delivered dispersion modelling training courses to government agencies, academic, industrial and commercial professionals worldwide since 2005.

Rachael Harrison (Hoare Lea) BSc(Hons) AMIEnvSc, AMIAQM

Rachael is a Senior Air Quality Consultant with Hoare Lea. She is an Associate Member of both the Institution of Environmental Sciences and Institute of Air Quality Management. Rachael has experience in managing Air Quality and Odour Assessments for a wide range of UK and international clients covering sectors including; residential, commercial, energy and industrial operations. With experience in quantitative and qualitative atmospheric assessments, complex dispersion modelling, air pollutant monitoring surveys for rail, road transport and energy projects. Rachael's interest's lie in the health implications attributed to poor air quality.

Sophie Brough (Hoare Lea) MChem, BSc (Hons)

Sophie is a Graduate Air Quality Consultant with Hoare Lea. She is an integrated MChem Chemistry graduate from the University of Leeds. During her MChem research project, Sophie conducted research in atmospheric chemistry, with particular focus on the impact of the oxidation of volatile organic compounds on air pollution. Sophie has experience in air quality assessments and producing indoor air quality plans. Sophie's interests lie within promoting indoor air quality and recognising the impacts of poor air quality on the individual.



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