University of Manchester
CPU Relocation – Hulme Hall

Air Quality Assessment

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1 Introduction

1.1 Proposed Development

1.1.1 University of Manchester (the 'Applicant') has commissioned Stantec to undertake an air quality assessment to support a full planning application for the erection of new operational facilities, plant and equipment at Hulme Hall within the Victoria Park Campus, Oxford Place (‘the Site’) in order to facilitate the relocation of the University’s Central Processing Unit (‘CPU’) from the nearby Fallowfield Campus. The Site is located within the administrative boundary of Manchester City Council (MCC), one of nine districts brought together by the Greater Manchester Combined Authority (GMCA).

1.2 Scope of Assessment

1.2.1 This report describes existing air quality within the study area and assesses the impact of the operation of the Proposed Development on air quality in the study area. The Site itself is not considered sensitive to poor air quality due to the nature of the proposed end- use (i.e. non-residential).

1.2.2 The main air pollutants of concern associated with the Proposed Development during the operational period are NO_2, PM_{10} and $PM_{2.5}$ emissions associated with road traffic.

1.2.3 The energy strategy for the Proposed Development is anticipated to be all-electric, in accordance with the latest building regulations, policy and guidance requirements. As no on-site combustion sources are proposed to meet the energy demand of the Proposed Development, there will be no emissions to air associated with on-site combustion-based energy plant and the impacts on local air quality will not be significant. A detailed assessment of combustion-based energy plant emissions has therefore been scoped out of this assessment.

1.2.4 An assessment of the impacts of road traffic emissions on nearby ecological receptors is not required as there are no habitats sensitive to air pollution located within designated sites within 200 m of a road with a ‘potentially significant change’. Research shows (Natural England, 2018) that there is no credible risk of a significant effect which might undermine a site’s conservation objectives beyond 200 m from a road and therefore further assessment is not required.

1.2.5 The assessment has been prepared taking into account relevant local and national guidance, policy and legislation.

1.2.6 A glossary of terms used in this assessment is provided in **Appendix A**.

1.3 Consultation

1.3.1 Consultation has been carried out between Stantec and Manchester City Council (MCC) in the form of email correspondence to discuss and agree the scope and methodology of the assessment with the Environmental Health Department in July 2026.

2 Legislation, Policy and Guidance

2.1 Air Quality Regulations

2.1.1 The Air Quality (England) Regulations 2000 (AQR) defined National Air Quality Objectives (NAQOs, a combination of concentration-based thresholds, averaging periods and compliance dates) for a limited range of pollutants. Subsequent amendments were made to the AQR in 2001 and 2002 to incorporate 'limit values' and 'target values' for a wider range of pollutants as defined in European Union (EU) Directives.

2.1.2 These amendments were consolidated by the Air Quality Standards Regulations 2010 (AQSR) (with subsequent amendments most notably in 2016 and for the devolved administrations), which transposed the EU's Directive on ambient air quality and cleaner air for Europe (2008/50/EC).

2.1.3 Following the Transition Period after the UK's departure from the EU in January 2020, the Air Quality (Amendment of Domestic Regulations) (EU Exit) Regulations 2019 (and subsequent amendments for the devolved administrations) have amended the AQ Standards Regulations 2010 to reflect the fact that the UK has left the EU. The Environment (Miscellaneous Amendments) (EU Exit) Regulations 2020 amended the $PM_{2.5}$ limit value in the AQSR to 20 µg/m^3.

2.1.4 The relevant NAQOs for this assessment are shown in **Table 2-1**.

Table 2-1 Relevant Air Quality Objectives

Pollutant	Time Period	NAQOs	Source
NO_2	1-hour mean	200 µg/m^3 not to be exceeded more than 18 times a year	NAQO and AQSR limit value
	Annual mean	40 µg/m^3	NAQO and AQSR limit value
PM_{10}	24-hour mean	50 µg/m^3 not to be exceeded more than 35 times a year	NAQO and AQSR limit value
	Annual mean	40 µg/m^3	NAQO and AQSR limit value
$PM_{2.5}$	Annual mean	20 µg/m^3	NAQO and AQSR limit value

2.1.5 The NAQOs for NO_2 and PM_{10} were to have been achieved by 2005 and 2004 respectively but also continue to apply in all future years thereafter.

2.1.6 The 2019 Clean Air Strategy includes a commitment to set a *"new, ambitious, long-term target to reduce people's exposure to $PM_{2.5}$"* which the Environment Act 2021 commits the Secretary of State to setting. Two $PM_{2.5}$ targets were published via The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 and are set out below:

- an annual mean concentration target for $PM_{2.5}$ levels in England to be 10 µg/m^3 or below by 2040; and
- a population exposure reduction target for a reduction in $PM_{2.5}$ population exposure of 35% compared to 2018 to be achieved by 2040.

2.1.7 The Government has published an Environmental Improvement Plan 2025 (DEFRA, 2025a) which sets out the following interim $PM_{2.5}$ targets to be met by the end of December 2030:

- the highest annual mean concentration in the most recent full calendar year must not exceed 10 µg/m^3 of $PM_{2.5}$; and

- compared to 2018, the reduction in population exposure to $PM_{2.5}$ in the most recent full calendar year must be 30% or greater.

2.1.8 DEFRA is developing guidance to ensure that the above $PM_{2.5}$ targets are appropriately considered in planning applications and planning decisions. Interim guidance (DEFRA, 2024a) has been published, requiring applicants to evidence that key sources of air pollution have been identified within their schemes and appropriate action taken to minimise exposure (of existing and proposed receptors) to of $PM_{2.5}$ as far as reasonably practicable.

National Air Quality Plan for NO_2 in the UK

2.1.9 The National Air Quality Plan for NO_2 (The Plan) (DEFRA, 2018) sets out how the Government plans to deliver reductions in NO_2 throughout the UK, with a focus on reducing concentrations to below the EU Limit Values throughout the UK within the 'shortest possible time'.

2.1.10 The plan requires all local authorities in England which DEFRA identified as having exceedances of the limit values in their areas past 2020 to develop local plans to improve air quality and identify measures to deliver reduced emissions, with the aim of meeting the limit values within their area within "*the shortest possible time*". Potential measures include changing road layouts, encouraging public and private ultra-low emission vehicle (ULEV) uptake, the use of retrofitting technologies and new fuels and encouraging public transport. In cases where these measures are not sufficient to bring about the required change within 'the shortest possible time' then local authorities may consider implementing access restrictions on more polluting vehicles (e.g. Clean Air Zones (CAZs)). A CAZ is defined within the plan as being "*an area where targeted action is taken to improve air quality and resources are prioritised and coordinated in a way that delivers improved health benefits and supports economic growth*" and may be charging or non-charging.

2.2 Air Quality Management

The Air Quality Strategy

2.2.1 Part IV of the Environment Act 1995 (Statutory Instrument, 1995) required the Secretary of State to prepare and publish and 'strategy' regarding air quality.

2.2.2 The Air Quality Strategy (2007) establishes the policy framework for ambient air quality management and assessment in the UK (DEFRA in partnership with the Scottish Executive, The National Assembly for Wales and the Department of the Environment for Northern Ireland, 2007). The primary objective of the Air Quality Strategy is to ensure that everyone can enjoy a level of ambient air quality which poses no significant risk to health or quality of life. The Air Quality Strategy sets out the NAQOs and Government policy on achieving these.

2.2.3 The Environment Act required an updated Air Quality Strategy (DEFRA, 2023) which sets out six priorities including boosting active travel and public transport. The Air Quality Strategy sets out the Government policy on achieving the NAQOs, including the new targets for $PM_{2.5}$.

2.2.4 The Clean Air Strategy (2019) aims to lower national emissions of pollutants, thereby reducing background pollution and minimising human exposure to harmful concentrations of pollution. The Strategy aims to create a stronger and more coherent framework for action to tackle air pollution (DEFRA, 2019).

Local Air Quality Management

2.2.5 Part IV of the Environment Act 1995 (Statutory Instrument, 1995) introduced a system of Local Air Quality Management (LAQM) which requires local authorities to regularly and systematically

review and assess air quality within their boundary and appraise development and transport plans against these assessments.

2.2.6 Where a NAQO is unlikely to be met, the local authority must designate an Air Quality Management Area (AQMA) and draw up an Air Quality Action Plan (AQAP) setting out the measures it intends to introduce in pursuit of the NAQOs within its AQMA.

2.2.7 The Local Air Quality Management Technical Guidance 2022 ((LAQM.TG(22); (DEFRA, 2022)), issued by the DEFRA for local authorities provides advice as to where the NAQOs apply. These include outdoor locations where members of the public are likely to be regularly present for the averaging period of the objective (which vary from 15 minutes to a year) as summarised in **Table 2-2**.

Table 2-2 Relevant Public Exposure

Averaging Period	NAQOs should apply at:	NAQOs don't apply at:
Annual mean	All locations where members of the public might be regularly exposed For example: Building façades of residential properties, schools, hospitals, care homes etc	Façades of offices or other places of work where members of the public do not have regular access Hotels, unless people live there as their permanent residence Gardens of residences Kerbside sites Any other location where public exposure is expected to be short term
24-hour mean and 8-hour mean	All locations where the annual mean NAQO would apply, together with hotels and gardens of residences	Kerbside sites Any other location where public exposure is expected to be short term
1-hour mean	All locations where the annual mean and 24 and 8-hour mean NAQOs apply as well as: Kerbside sites Those parts of car parks, bus stations and railway stations etc. which are not fully enclosed, where members of the public might reasonably be expected to spend one hour or more. Any outdoor locations where members of the public might reasonably be expected to spend one hour or longer.	Kerbside locations where the public would not be expected to have regular access
15-minute mean	All locations where members of the public might reasonably be regularly exposed for a period of 15 minutes or longer.	

2.3 Planning Policy

National Planning Policy

2.3.1 The National Planning Policy Framework (NPPF), published by the Ministry of Housing, Communities and Local Government (MHCLG), sets out the Government's planning policies for England and how they are expected to be applied (MHCLG, 2026). The following policies are relevant to new development from an air quality perspective:

"P1: Planning for clean and safe places

1. To support efforts to avoid and mitigate risks from natural and man-made hazards, minimise levels of pollution and create clean, liveable and safe places for people to live, work and visit, development plans should:

a. Allocate land for development where, taking into account the potential for mitigation:

[…]

iii. Development proposals will not cause unacceptable levels of pollution, either alone or in combination with other pollution sources, taking into account communities which may be particularly vulnerable to its effects, such as children and older people, as well as habitats and species which may be vulnerable to pollution; and

iv. The intended uses will not place unreasonable restrictions on the operation of existing businesses, community facilities, public services, defence and security activities.

b. Consider any wider opportunities to reduce air, water, soil, noise or other forms of pollution, and contribute to compliance with national and local environmental targets and objectives, through the spatial strategy and policies for specific parts of the plan area […]."

"P3: Living conditions and pollution

1. *Development proposals should be appropriate for their location, taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, whether these effects are on or off-site; and whether this is a result of the development itself or the product of preexisting conditions in its vicinity. In assessing the potential effects of pollution, consideration should be given to the potential sensitivity of the site, and its intended occupiers and users, as well as that of the environment and population in the surrounding area (including where certain groups could be particularly vulnerable to its effects, such as children and older people).*

2. *Within this context development proposals should:*

   a. Provide healthy living conditions for occupiers and users in terms of adequate access to light and avoiding exposure to levels of air, noise, artificial light or other sources of pollution which could have an unacceptable adverse effect on health and the quality of life. Where necessary suitable mitigation measures should be incorporated to secure acceptable living conditions;

   b. Not give rise to, or contribute to, an unacceptable level of access to daylight and sunlight for neighbouring residents and occupiers, or unacceptable levels of air, noise artificial light, water, soil or other forms of pollution on or beyond the site. Adverse impacts of this nature should be avoided where possible, or else mitigated to an acceptable degree. Where possible, opportunities should be taken to reduce pollution affecting the wider area (such as through traffic and travel management or improved external lighting);

   c. Sustain and contribute to compliance with the relevant limit values or national objectives and targets for air pollutants including $PM_{2.5}$. Development proposals should take account on Air Quality Management Areas and be consistent with the objectives of relevant Air Quality Action Plans, Clean Air Plans and Local Air Quality Strategies;

   […]

3. In applying this policy, it should be assumed, unless there is clear evidence to the contrary, that separate regulatory regimes for the control of pollution will operate effectively, as set out in

policy DM7. This means that it will be appropriate to take into account emissions limits set through those other regimes."

P4: Impact of development on existing activities

1. Existing businesses, community facilities, public services and defence and security activities should not have unreasonable restrictions placed on their current or permitted operation as a result of development being approved after they were established. This means that development proposals should be capable of being integrated effectively with existing business, community and public service activities and infrastructure in their vicinity (including, but not limited to, uses such as pubs, music venues, places of worship, sports clubs, blue light services, defence, electricity network infrastructure and industrial and waste sites).

2. Where the operation of an existing activity could have a significant adverse effect on a proposed new development in its vicinity, development proposals should:

> *a. Identify the nature of the potential impacts, informed where necessary by early discussions between the applicant (i.e. the 'agent of change') and those existing uses which could be affected by the proposal to inform the scope for mitigation; and*
>
> *b. Be able to demonstrate that suitable mitigation can be provided before first occupation of the development, if it is to be acceptable. Planning conditions or obligations should be used to secure agreed mitigation measures. […]*

3. This policy applies to new development involving changes of use of land and property, as well as new construction […]. Both lawful current and permitted levels of operation of existing activities should be taken into account when applying this policy."

"TR3: Locating development in sustainable locations

1. So that development is located where it can support sustainable patterns of movement, enable good accessibility for different users and make the most of existing and proposed transport infrastructure, development proposals should reflect the following principles, taking into account the vision for the site, the type of development and its location:

> *[…]*
>
> *d. The environmental impacts of traffic and transport infrastructure should be identified, assessed and taken into account – including taking opportunities to avoid or mitigate any adverse environmental effects, and to secure net environmental gains such as reductions in air pollution;*

National Planning Practice Guidance

2.3.2 Paragraph 005, Reference 32-005-20191101 (revision date 01.11.2019), of the Planning Practice Guidance (PPG) (MHCLG, 2019) provides guidance on how considerations regarding air quality can be relevant to the development management process as follows:

"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.

- *Where air quality is a relevant consideration the local planning authority may need to establish:*

- *The 'baseline' local air quality, including what would happen to air quality in the absence of the development;*
- *Whether the proposed development could significantly change air quality during the construction and operational phases (and the consequences of this for public health and biodiversity); and*
- *Whether occupiers or users of the development could experience poor living conditions or health due to poor air quality."*

2.3.3 Paragraph 006, Reference 32-006-20191101 (revision date 01.11.2019), of the PPG identifies what specific air quality issues need to be considered in determining a planning application:

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

- *Lead to changes (including any potential reductions) in vehicle-related emissions in the immediate vicinity of the proposed development or further afield. This could be through the provision of electric vehicle charging infrastructure; altering the level of traffic congestion; significantly changing traffic volumes, vehicle speeds or both; and significantly altering the traffic composition on local roads. Other matters to consider include whether the proposal involves the development of a bus station, coach or lorry park; could add to turnover in a large car park; or involve construction sites that would generate large Heavy Goods Vehicle flows over a period of a year or more;*
- *Introduce new point sources of air pollution. This could include furnaces which require prior notification to local authorities; biomass boilers or biomass-fuelled Combined Heat and Power plant; centralised boilers or plant burning other fuels within or close to an air quality management area or introduce relevant combustion within a Smoke Control Area; or extraction systems (including chimneys) which require approval or permits under pollution control legislation;*
- *Expose people to harmful concentrations of air pollutants, including dust. This could be by building new homes, schools, workplaces or other development in places with poor air quality;*
- *Give rise to potentially unacceptable impacts (such as dust) during construction for nearby sensitive locations; and*
- *Have a potential adverse effect on biodiversity, especially where it would affect sites designated for their biodiversity value."*

2.3.4 Paragraph 007, Reference 32-007-20191101 (revision date 01.11.2019), of the PPG provides guidance on how detailed an assessment needs to be:

"Assessments need to be proportionate 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".

and

"The following could form part of assessments:

A description of baseline conditions and any air quality concerns affecting the area, and how these could change both with and without the proposed development;

- *Sensitive habitats (including designated sites of importance for biodiversity);*
- *The assessment methods to be adopted and any requirements for the verification of modelling air quality;*

- *The basis for assessing impacts and determining the significance of an impact;*
- *Where relevant, the cumulative or in-combination effects arising from several developments;*
- *Construction phase impacts;*
- *Acceptable mitigation measures to reduce or remove adverse effects; and*
- *Measures that could deliver improved air quality even when legally binding limits for concentrations of major air pollutants are not being breached."*

2.3.5 Paragraph 008, Reference 32-008-20140306 (revision date 01.11.2019), of the PPG provides guidance on how an impact on air quality can be mitigated:

"Mitigation options will need to be locationally specific, will depend on the proposed development and need to be proportionate to the likely impact. It is important that local planning authorities work with applicants to consider appropriate mitigation so as to ensure new development is appropriate for its location and unacceptable risks are prevented. Planning conditions and obligations can be used to secure mitigation where the relevant tests are met.

Examples of mitigation include:

- *Maintaining adequate separation distances between sources of air pollution and receptors;*
- *Using green infrastructure, trees, where this can create a barrier or maintain separation between sources of pollution and receptors;*
- *Appropriate means of filtration and ventilation;*
- *Including infrastructure to promote modes of transport with a low impact on air quality (such as electric vehicle charging points);*
- *Controlling dust and emissions from construction, operation and demolition; and*
- *Contributing funding to measures, including those identified in air quality action plans and low emission strategies, designed to offset the impact on air quality arising from new development."*

Local Planning Policy

Manchester's Local Development Framework Core Strategy Development Plan Document

2.3.6 MCC has adopted a Core Strategy in July 2012 (MCC, 2012). The document sets out the vision and planning policies for growth and development in the district up to 2027. The Core Strategy was developed alongside the Sustainability Appraisal and Manchester's Infrastructure Development Plan. The strategy contains policies relevant to air quality such as:

2.3.7 Policy EN16 on Air Quality which states:

"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 development the Council will consider the impacts on air quality, alongside other plan objectives. This includes cumulative impacts, particularly in Air Quality Management Areas."

2.3.8 Policy DM 1 on Development Management which states:

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

- *Appropriate siting, layout, scale, form, massing, materials and detail.*
- *Impact on the surrounding areas in terms of the design, scale and appearance of the proposed development. Development should have regard to the character of the surrounding area.*
- *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.*
- *Accessibility: buildings and neighbourhoods fully accessible to disabled people, access to new development by sustainable transport modes.*
- *Community safety and crime prevention.*
- *Design for health.*
- *Adequacy of internal accommodation and external amenity space.*
- *Refuse storage and collection."*

2.3.9 Policy T1 Sustainable Transport which states:

"To deliver a sustainable, high quality, integrated transport system to encourage modal shift away from car travel to public transport, cycling and walking, to support the needs of residents and businesses and to prepare for carbon free modes of transport, the Council will support proposals that:

[…]

- *Facilitate modes of transport that reduce carbon emissions e.g by incorporating charging points for electric vehicles, subject to their appropriate design and location.*
- *Would reduce the negative impacts of road traffic, for example, congestion, air pollution and road accident casualties."*

2.3.10 Policy JP-S5: Clean Air which states:

"A comprehensive range of measures will be taken to support improvements in air quality, focusing particularly on locations where people live, where children learn and play, where there are impacts on the green infrastructure network and where air quality targets are not being met, including:

1. *Locating and designing development, and focusing transport investment, so as to reduce reliance on forms of transport that generate air pollution;*
2. *Determining planning applications having regard to the most recent development and planning control guidance published jointly by the Institute of Air Quality Management (IAQM) and Environmental Protection UK (EPUK), and the most recent IAQM*

Guidance on the Assessment of Dust from Demolition and Construction, or relevant successor guidance, including the requirement for developers to submit construction management plans as appropriate;

3. *Requiring applications for developments that could have an adverse impact on air quality to submit relevant air pollution data so that adverse impacts on air quality can be fully assessed and development only permitted where they are acceptable and/or suitable mitigation can be provided;*

4. *Restricting developments that would generate significant point source pollution such as some types of industrial activity and energy generation;*

5. *Significantly expanding the existing commercial network of electric vehicle charging points, both for public and private use, including as part of new developments;*

6. *Implementing the Clean Air Plan and associated measures;*

7. *Facilitating the more sustainable distribution of goods within the urban area, including through accommodating urban consolidation centres and urban distribution centres that use ultra-low-emission vehicles, and local delivery facilities to reduce repeat delivery attempts;*

8. *Designing streets to avoid trapping air pollution at ground level, including through the appropriate location and scale of buildings and trees;*

9. *Controlling traffic and parking within and around schools, early years sites and other locations that are particularly sensitive to air quality;*

10. *Promoting actions that help remove pollutants from the air, such as enhancing the green infrastructure network and using innovative building materials that capture air pollutants; and*

11. *Development should be located in areas that maximise the use of sustainable travel modes and be designed to minimise exposure to high levels of air pollution, particularly for vulnerable users."*

2.4 Assessment Guidance

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

DEFRA 'Local Air Quality Management Technical Guidance (LAQM.TG (22))'

2.4.2 DEFRA LAQM.TG(22) was published for use by local authorities in their LAQM review and assessment work (DEFRA, 2022). The document provides key guidance on aspects of air quality assessment, including screening, use of monitoring data, and use of background data that are applicable to all air quality assessments.

EPUK-IAQM 'Land-Use Planning & Development Control: Planning for Air Quality

2.4.3 Environmental Protection UK (EPUK) and the Institute of Air Quality Management (IAQM) have together published guidance to help ensure that air quality is properly accounted for in the development control process (EPUK & IAQM, 2017). 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.

IAQM 'Guidance on the Assessment of Dust from Demolition and Construction'

2.4.4 Guidance on the assessment of dust from demolition and construction has been published by the IAQM (IAQM, 2024). The guidance provides a series of matrices to determine the risk magnitude of potential dust sources associated with construction activities in order to identify appropriate mitigation measures that are defined within further IAQM guidance.

2.4.5 Within the IAQM guidance, an 'impact' is described as a change in pollutant concentrations or dust deposition and an 'effect' is described as the consequence of an impact.

Manchester City Council Air Quality & Planning Technical Guidance

2.4.6 The MCC Air Quality and Planning Technical Guidance (MCC, 2022) is a supplementary planning document developed to improve air quality across the region and encourage emission reductions from development, primarily from reducing air pollution form road transport. The guidance also provides consistency in the approach to assessing air quality as part of the planning regime.

2.4.7 The document provides a screening process to identify when a detailed air quality assessment is required and an approach to assessing potential impacts in monetary terms through a damage cost calculation and the process by which developments should implement mitigation measures to reduce emissions.

3 Methodology

3.1 Introduction

3.1.1 The assessment methodology detailed in the following sections has been applied to ascertain the potential impacts of emissions to air in order to identify their significance and compliance with policy and regulatory requirements (outlined in **Section 2** of this report), and whether or not additional mitigation is required.

3.1.2 This assessment first outlines the existing air quality within the study area, assesses the impact of operational activities on air quality and sensitive receptors in the study area and then considers the suitability of the Site for the proposed end-use.

3.2 Baseline Air Quality

3.2.1 Any exceedances of the limit values (and compliance date where relevant) for the zone or agglomeration which the Site is located in have been identified from DEFRAs latest Compliance Assessment report (DEFRA, 2025b) and exceedance along roads within the study area have been identified using the 2020 NO_2 and PM Projections Data published by DEFRA (DEFRA, 2020).

3.2.2 Information on baseline air quality in the study area has been obtained by collating the results of monitoring carried out by GMCA and their LAQM reports to identify potential AQMAs. Background concentrations for the study area have been defined using the national pollution maps published by DEFRA which cover the whole country on a 1x1 km grid (DEFRA, 2024b).

3.3 Construction Dust Impacts

3.3.1 During demolition and construction, dust from on-site activities and off-site trackout by construction vehicles has the potential to impact on sensitive human receptors within the study area. The main potential impacts are loss of amenity (as a result of dust soiling) and deterioration of human health (as a result of increased concentrations of PM_{10}.

3.3.2 The suspension of particles in the air is dependent on surface characteristics, weather conditions and on-site activities. Impacts have the potential to occur when dust generating activities coincide with dry, windy conditions, and where sensitive receptors are located downwind of the dust source(s).

3.3.3 Separation distance is also an important factor. Large dust particles (greater than 30 µm), can be potentially responsible for most dust annoyance, will largely deposit within 100 m of sources. Intermediate particles (10-30 µm) can travel 200-500 m. Consequently, significant dust annoyance is usually limited to within a few hundred metres of its source. Smaller particles (less than 10 µm), which are the predominant fraction that can be potentially responsible for human health impacts largely remain airborne. However, the impact on the short-term concentrations of PM_{10} occurs over a shorter distance due to the rapid decrease in concentrations with distance from the source due to dispersion.

3.3.4 The assessment of the risk of potential construction dust impacts has been undertaken with reference to relevant guidance (IAQM, 2024). The assessment methodology considers three separate potential dust impacts:

- loss of amenity due to dust soiling;
- human health effects due to increases in concentrations of PM_{10}; and
- harm to ecological receptors due to increased dust deposition.

3.3.5 The first stage of the assessment involves screening to determine if there are sensitive receptors within threshold distances of the activities associated with the construction phase of the Proposed Development; defined as the study area. No further assessment is required if there are no receptors within the study area.

3.3.6 The IAQM guidance outlines that an assessment is only required in cases where:

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

3.3.7 The assessment of potential risk is determined by considering the risk of dust impacts arising from four activities in the absence of mitigation demolition, earthworks, construction and trackout.

3.3.8 The dust emission class (or magnitude) for each activity, receptor sensitivity and the overall sensitivity of the area are determined using the criteria outlined in **Table B-1** to **Table B-5** in **Appendix B** (based on the IAQM guidance), indicative thresholds and professional judgement. The risk of dust impacts arising is a product of the relationship between the dust emission magnitude and the area sensitivity and is based on the criteria outlined in **Table B-6** (based on the IAQM guidance). The risk of impact is then used to determine the mitigation requirements.

3.3.9 The IAQM guidance recommends that no assessment of the significance of effects is made without mitigation in place, as mitigation is assumed to be secured by planning conditions, legal requirements or required by regulations.

3.3.10 With appropriate mitigation in place, the IAQM guidance indicates that the residual effect dust emissions associated with the demolition and construction can be classified as being 'not significant'.

3.4 Operational Road Traffic Emission Impacts

3.4.1 The potential for significant impacts on existing sensitive receptors within the study area as a result of emissions from operational traffic generated by the Proposed Development is determined based on the screening criteria outlined in the EPUK / IAQM Guidance (EPUK & IAQM, 2017) (see **Appendix C)** which includes consideration of the volume and composition of traffic generated by the Proposed Development and existing local air quality conditions (i.e. the presence of any declared AQMAs). It should be noted that if traffic from a development exceeds these levels, then it does not necessarily mean that a modelling assessment is necessary, only that the air quality impacts of traffic require more detailed consideration.

3.4.2 As the Proposed Development is a relocation of facilities it has been assumed that there will be minimal / no traffic generation.

3.5 Site Suitability

3.5.1 An assessment to determine whether there is a potential for exceedances of the relevant NAQOs / limit values at sensitive locations within the Proposed Development has been undertaken qualitatively, taking into account local monitoring, estimated background

concentrations, the layout of the Proposed Development and the proximity of worst-case sensitive locations within the Proposed Development to nearby sources of emissions (i.e. the local road network).

3.6 Consideration of $PM_{2.5}$ Targets

3.6.1 A qualitative assessment has been undertaken in accordance with the $PM_{2.5}$ Target: Interim Planning Guidance (DEFRA, 2024a). The qualitative assessment outlines how exposure to $PM_{2.5}$ has been considered when selecting the Development Site (i.e. site suitability) and what actions and/or mitigations have been considered to reduce $PM_{2.5}$ exposure for development-users and nearby receptors (houses, hospitals, schools etc.) and to reduce emissions of $PM_{2.5}$ and its precursors. The predicted $PM_{2.5}$ concentrations at worst-case proposed receptor locations within the Site will also be taken into account when considering the likelihood of the targets being met within the Proposed Development.

4 Baseline Environment

4.1 Site Context

4.1.1 The Site lies to the east of Oxford Road and west of Upper Brook Street and is surrounded by existing residential properties. The local area is predominately residential. The Site is currently occupied by Hulme Hall, student halls.

4.2 Study Area

4.2.1 The study area adopted for this assessment is as follows:

- For the construction phase dust assessment, the study area (based on IAQM, 2024 guidance) is defined as up to 250 m from the Site or 50 m from the route of construction vehicles (up to 250 m from the Site Entrance).

- For the construction and operational phase road traffic emissions assessment, the study area (based on EPUK / IAQM, 2017 guidance) is defined as all roads within 250 m of the Site and any other roads which could potentially exceed the screening criteria outlined in **Appendix C.**

4.3 Ambient Air Quality

Limit Values

4.3.1 The study area does not contain any predicted exceedances of a limit values either in the existing year (2024[1]) or in the future (DEFRA, 2020).

LAQM

4.3.2 MCC has investigated air quality within its area as part of its responsibilities under the LAQM regime. An Air Quality Management Area (AQMA) has been declared in Manchester City Center for exceedances of the annual mean nitrogen dioxide (NO_2) NAQO. The AQMA contains all of central Manchester and the majority of busy roads in the surrounding area. The Site lies approximately 120 m from the AQMA boundary.

Local Monitoring Data

NO_2

4.3.3 GMCA undertakes automatic monitoring of NO_2 concentrations at 24 locations across the nine combined districts, the closest of which to the Site is the Manchester Oxford Road monitoring station. GMCA also undertakes monitoring using NO_2 diffusion tubes at 27 locations within MCC. The closest diffusion tube monitoring location to the Site, MA113BNO, is located approximately 1,210 m north of the Site on Brunswick Street. The closest monitoring sites to the Site are described in **Table 4-1** and **Table 4-2** and their locations are shown in **Figure 4-1** below. Whilst 2020 and 2021 monitoring results have been included below, it should be noted that these are not considered to be representative due to COVID-19 restrictions in place during these years.

[1] 2024 has been chosen as the 'existing' year as it is the latest year with available monitoring data.

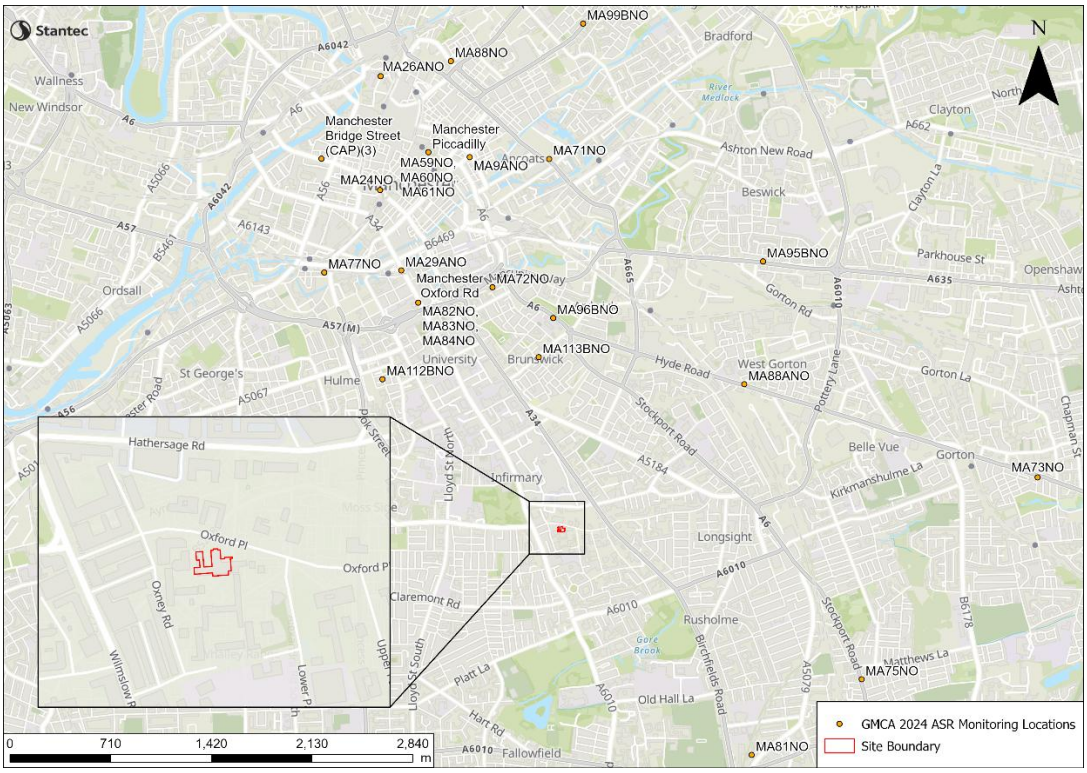


Figure 4-1 Monitoring Locations in the vicinity of the Site. Contains OS Data © Crown Copyright and Database rights 2026. Contains data from OS Zoomstack.

Table 4-1 Measured Annual Mean NO_2 Concentrations 2020-2024

Site ID	Site Type	Within AQMA	Annual Mean NO_2 (µg/m^3)				
			2020	2021	2022	2023	2024
Automatic Monitors							
Manchester Oxford Road	Kerbside	2016 AQMA	36.0	**44.0**	**43.0**	**40.9**	**44.2**
Manchester Bridge Street	Roadside	2016 AQMA	-	-	-	**53.5**	**51.9**
Manchester Piccadilly	Urban Center	2016 AQMA	27.0	30.0	29.0	26.8	27.0
Diffusion Tubes							
MA9ANO	Kerbside	2016 AQMA	32.5	35.7	37.5	36.2	33.8
MA24NO	Kerbside	2016 AQMA	26.8	31.8	32.4	29.8	27.2
MA26ANO	Urban Background	2016 AQMA	22.9	25.9	27.5	24.5	24.6
MA29ANO	Roadside	2016 AQMA	39.0	**44.8**	**49.8**	**49.6**	**51.3**
MA59NO, MA60NO, MA61NO	Urban Background	2016 AQMA	22.4	24.6	25.3	24.4	24.4
MA71NO	Roadside	2016 AQMA	31.4	34.2	34.4	30.7	29
MA72NO	Urban Background	2016 AQMA	24.5	27.5	26.3	24.3	24.0
MA73NO	Roadside	2016 AQMA	27.3	31.6	31.5	29.5	28.0
MA75NO	Kerbside	2016 AQMA	33.7	39.0	38.8	39.6	37.2
MA77NO	Urban Background	2016 AQMA	26.9	30.8	33.1	31.6	28.4
MA81NO	Urban Background	No	16.6	18.1	18.8	17.0	16.3
MA82NO, MA83NO, MA84NO	Roadside	2016 AQMA	34.1	**40.7**	**42.6**	**41.4**	**41.7**
MA88NO	Kerbside	2016 AQMA	30.1	36.8	35.7	32.7	30.3
MA88ANO	Roadside	2016 AQMA	32.5	35.3	39.2	36.1	31.9
MA95BNO	Roadside	2016 AQMA	31.5	34.1	33.7	31.5	27.3
MA96BNO	Roadside	2016 AQMA	36.4	**41.0**	**43.5**	39.7	36.4
MA99BNO	Roadside	2016 AQMA	26.9	32.9	32.7	31.3	27.5
MA112BNO	Roadside	2016 AQMA	-	21.4	22.7	19.8	19.3
MA113BNO	Roadside	2016 AQMA	-	28.1	29.2	28.2	27.6
NAQO		**40**					

Exceedances of the NAQO are highlighted bold.
2020 - 2024 data taken from the GMCA 2024 Air Quality Annual Status Reports (GMCA, 2025)

4.3.4 There have been exceedances of the annual mean NO_2 NAQO at 5 of the monitoring locations above. However, at the two closest monitoring locations to the Site, MA112BNO and MA113BNO, there were no exceedances recorded. At the majority of monitoring locations described in **Table 4-1**, there is a generally decreasing trend in measured concentrations over time which reflects the national trend (Air Quality Consultants, 2022).

Table 4-2 Measured Exceedances of the Hourly Mean NO_2 NAQO 2020-2024

Site ID	Number of Hours >200µg/m^3				
	2020	**2021**	**2022**	**2023**	**2024**
Manchester Oxford Road	0	0	3	0	0
Manchester Bridge Street	-	-	-	10	3
Manchester Piccadilly	0	0	0	0	0
NAQO	**18 (hours >200µg/m^3)**				

2020-2024 data taken from the GMCA 2024 Air Quality Annual Status Reports (GMCA, 2025)

4.3.5 **Table 4-2** shows that there have been no exceedances of the hourly mean NO_2 NAQO between 2018-2022.

PM_{10}

4.3.6 The results of the PM_{10} monitoring at GMCA automatic monitoring locations close to the Site are shown in **Table 4-3** and **Table 4-4**.

Table 4-3 Measured Annual Mean PM_{10} Concentrations 2020-2024.

Site ID	Annual Mean PM_{10} (µg/m^3)				
	2020	**2021**	**2022**	**2023**	**2024**
Manchester Oxford Road	18	18	18	17.5	20.5
Manchester Piccadilly	15	15	17	15.1	14.8
NAQO	**40**				

2020 - 2024 data taken from the GMCA 2024 Air Quality Annual Status Reports (GMCA, 2025)

Table 4-4 Measured Exceedances of the 24-hour Mean PM_{10} NAQO 2020-2024.

Site ID	PM_{10} Number of Days >50µg/m^3				
	2020	**2021**	**2022**	**2023**	**2024**
Manchester Oxford Road	5	2	8	4	1
Manchester Piccadilly	1	2	4	1	0
NAQO	**35 (days >50 µg/m^3)**				

2020 - 2024 data taken from the GMCA 2024 Air Quality Annual Status Reports (GMCA, 2025)

4.3.7 Measured PM_{10} concentrations have been below the relevant NAQOs for the duration of the 2020-2024 monitoring period.

$PM_{2.5}$

4.3.8 The results of the $PM_{2.5}$ monitoring at GMCA automatic monitoring locations close to the Site are shown in **Table 4-5**.

Table 4-5 Measured Annual Mean $PM_{2.5}$ Concentrations 2020-2024.

Site ID	Annual Mean $PM_{2.5}$ (µg/m^3)				
	2020	**2021**	**2022**	**2023**	**2024**
Manchester Piccadilly	8	9	10	8.5	8.5
NAQO	**40**				

2020 - 2024 data taken from the GMCA 2024 Air Quality Annual Status Reports (GMCA, 2025)

4.3.9 Measured $PM_{2.5}$ concentrations have been below the relevant NAQOs for the duration of the 2020-2024 monitoring period.

Predicted Background Concentrations

4.3.10 Estimated background concentrations for the Site have been obtained from the latest 2021-based national maps provided by DEFRA (DEFRA, 2024b) and are provided in **Table 4-6** for the 'existing' year and earliest possible opening year of the Proposed Development.

4.3.11 The background concentrations are all well below the relevant NAQOs.

Table 4-6 Estimated Annual Mean Background Concentrations

Year	Location	Annual Mean (µg/m^3)		
		NO_2	PM_{10}	$PM_{2.5}$
2024	385_395	15.8	13.1	7.8
2027	385_395	14.1	12.9	7.6
NAQOs		**40**	**40**	**20**

5 Predicted Impacts

5.1 Construction Dust Impacts

Screening Assessment

5.1.1 There are a number of existing sensitive human receptors (including residential properties and a college) located within 250 m of the site boundary and within 50 m of the routes that will be used by construction vehicles. As such, further assessment of the risk of dust soiling and PM_{10} emissions is required.

5.1.2 There are no sensitive ecological receptors located within 50 m of the site boundary or within 50 m of the routes to be used by demolition and construction vehicles on the public highway. The closest designated ecological site to the Site, Highfield country park, is located approximately 3.3 km from the site boundary. As such, the potential for ecological impacts as a result of dust soiling can be screened out as being 'not significant'.

5.1.3 As the Proposed Development is a relocation of services and refurbishment of the existing Hulme Hall site, there are no proposed demolition or earthworks activities associated with the Proposed Development. Therefore, any demolition and earthworks related impacts have been screened out of further consideration within this assessment.

Further Assessment

Dust Emission Magnitude

5.1.4 The dust emissions magnitude of earthworks and construction activities and as a result of trackout have been determined in **Table 5-1** below based the criteria shown in **Table B-1, Appendix B.**

Table 5-1 Dust Emissions Magnitudes

Activity	Magnitude	Justification
Construction	Small	The total building volume to be constructed is expected to be less than 12,000 m^3. Construction materials will comprise a mixture of masonry material including those with a high potential for dust release, such as concrete, as well as those with a lower dust potential such as metals and timber. Based on this, the dust emission magnitude of construction activities is judged to be 'small'.
Trackout	Small	The number of HDVs that will exit the Site will vary depending upon the processes occurring at any one time. There are unlikely to be more than 20 outward HDV movements in any one day. Due to the nature of the Site, there is unlikely to be an unpaved road length greater than 50 m in length comprising moderately dusty surface material. Based on this, the dust emission magnitude of trackout is judged to be 'small'.

Area Sensitivity

5.1.5 The area sensitivity to dust soiling and human health impacts has been determined based on the criteria shown in

5.1.6 **Table** B-3**,**

5.1.7 **Table** B-4**, Table B-5, Appendix B.** The study area, based on the IAQM guidance is shown in **Figure 5-2** below.

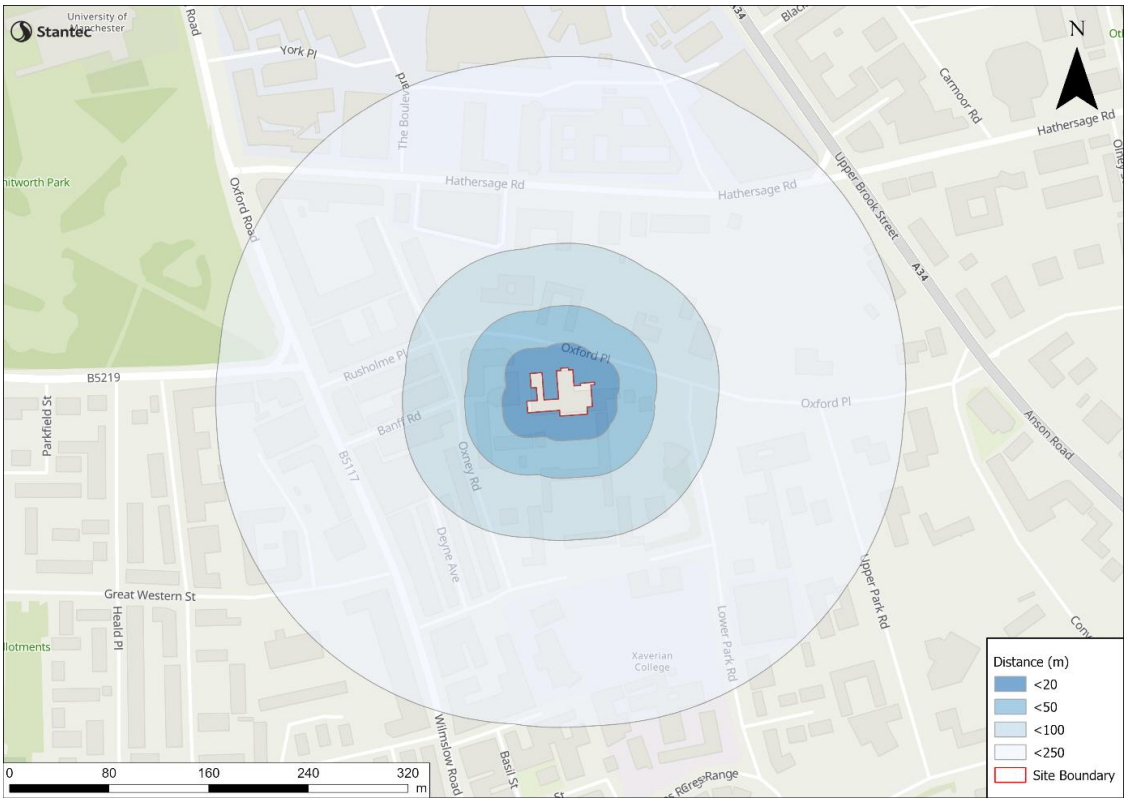


Figure 5-2: IAQM Demolition and Construction Dust band Criteria from the Site boundary. Contains OS Data © Crown Copyright and Database rights 2026. Contains data from OS Zoomstack.

5.1.8 Residential properties are classed as being 'high sensitivity' receptors to dust soiling, based on the IAQM guidance (IAQM, 2024) (see

5.1.9 **Table** B-3, **Appendix B**). There are less than ten residential properties located within 20 m of the site boundary. As such, the sensitivity of the area surrounding the Site to dust soiling is judged to be 'medium'.

5.1.10 The IAQM guidance indicates that potential impacts of trackout should be considered for sensitive receptors within 50 m of the route used by construction vehicles within a distance of up to 250 m from the site entrance. As the construction traffic routing is currently unknown, the worst-case assumption has been made that all main roads may potentially be used by HDVs leaving the site entrance. There are over ten residential properties located within 20 m of roads extending up to 250 m of the Site. As such, the sensitivity to dust soiling of the area surrounding roads along which material may be tracked is judged to be 'high'.

5.1.11 The IAQM also defines residential properties as being 'high sensitivity' receptors to human health impacts (see

5.1.12 **Table** B-4, **Appendix B**). PM_{10} concentrations at existing residential properties within the study area are anticipated to be similar to the maximum of the predicted 2024 PM_{10} concentrations at the Site (i.e. 13.1 µg/m^3). Based on the predicted existing PM_{10} concentrations and the number of sensitive receptors within 20 m of the site boundary and roads along which material may be tracked, the sensitivity to human health impacts of the areas surrounding the Site and the area surrounding roads along which material may be tracked are judged to be 'low'.

Risk of Impacts

5.1.13 The risk of construction dust impacts, without mitigation, have been defined based on the criterion shown in **Table B-6, Appendix B** and are presented in **Table 5-2**.

Table 5-2 Risk of Construction Dust Impacts without Mitigation

Potential Impact	Risk	
	Construction	Trackout
Dust Soiling	Low Risk	Low Risk
Human Health	Negligible	Negligible

5.2 Construction Road Traffic Emission Impacts

5.2.1 At present, detailed information regarding the construction methodology for the Proposed Development, specific activities and traffic movements is not available. However, a CEMP will outline measures to control and minimise the risk of adverse effects from construction activities. The CEMP will be submitted to Manchester City Council (MCC) for their approval. The CEMP will consider Heavy Goods Vehicles (HGV) and other construction traffic movements, including details of routing and times of day of movements. HGV access will be prevented or minimised, where possible, on traffic sensitive roads, residential streets, congested roads or unsuitable junctions.

5.2.2 Vehicle movements associated with access, demolition and construction will vary through the construction programme, with short periods of peak HGV movements associated with demolition and the delivery of materials during the construction phase. However, when the HGV movements are averaged over a full year period (Annual Average Daily Traffic - AADT), these will be significantly lower than peak movements. Together with the implementation of the CEMP, the impacts of emissions associated with construction road traffic on local air quality are considered to be temporary and 'not significant'. Moreover, vehicle movements associated with construction are typically significantly lower than the number of vehicle movements associated with operation of a development, which have been taken into account in this assessment.

5.3 Construction Non-Road Mobile Machinery Emission Impacts

5.3.1 At present, detailed information regarding NRMM specifications and operating hours are not available, but are expected to be minimal due to the nature of works. As the Proposed Development consists of a relocation of the Site, there will be limited construction activities, and background concentrations at the Site are below 50% of the NAQO for NO_2, PM_{10} and $PM_{2.5}$.

5.3.2 In accordance with Part 4 of the IAQM construction dust guidance, all NRMM will need to adhere to the NRMM emissions standards for NO_2 and PM_{10} outlined in the Road Vehicles and Non-Road Mobile Machinery (Type-Approval) (Amendment and Transitional Provisions) (EU Exit) Regulations 2022 (Statutory Instrument, 2022).

5.3.3 Considering the above, the impacts of emissions associated with NRMM during the construction phase of the Proposed Development are considered to be 'not significant'.

5.4 Operational Road Traffic Emission Impacts

5.4.1 As the Proposed Development is a relocation of facilities it is assumed that minimal traffic will be generated in comparison to existing use. As such, traffic generated by the Proposed Development is expected to be significantly below the EPUK / IAQM screening criteria (see **Appendix C**) and, therefore, the impacts of operational traffic generated by the Proposed Development on existing sensitive receptors within the study area can be screened and considered to be 'not significant' and no additional mitigation is therefore required.

5.5 Site Suitability

5.5.1 The NO_2 concentrations at the closest monitoring sites were below the objective at most locations in 2024, except for four sites, and there has been a general decrease in concentrations over the last five years. As NO_2 concentrations measured at the monitoring locations closest to the Site are below the annual mean, it is unlikely that the annual mean NO_2 NAQO will be exceeded within the Site. Measured concentrations in close proximity to the Proposed Development are well below 60 µg/m^3, indicating that the 1-hour mean NO_2 NAQO is unlikely to be exceeded within the site. PM_{10} and $PM_{2.5}$ are also expected to be well below the NAQO. Background concentrations of NO_2, PM_{10} and $PM_{2.5}$ are well below the annual mean of NAQOs / limit value.

5.5.2 The Site is considered suitable for the proposed use without the need for site-specific mitigation associated with air quality.

5.6 Consideration of $PM_{2.5}$ Targets

5.6.1 In terms of how $PM_{2.5}$ has influenced the selection of the Site, the maximum DEFRA background $PM_{2.5}$ concentration at the Site in the existing year (2024) is 7.8 µg/m^3 (DEFRA, 2024b) see Error! Reference source not found.. Background concentrations of $PM_{2.5}$ within the Site are therefore well below the annual mean concentration target of 10 µg/m^3 which is to be achieved by 2040.

5.6.2 Given the proposed end-use of the Site being a multi-use campus building for the University of Manchester, with no centralised combustion-based energy centre proposed, there are considered to be no significant sources of $PM_{2.5}$ emissions or precursors from the Proposed Development.

6 Mitigation

6.1 Construction

6.1.1 The following standard mitigation measures from the IAQM guidance (IAQM, 2024) are recommended to be incorporated into the CEMP, taking into account the outcomes of the construction dust risk assessment (presented in **Table 5-2**).

6.1.2 Furthermore, in accordance with Part 4 of the IAQM demolition and construction guidance, all NRMM will need to adhere to the relevant NRMM emissions standards for NO_2 and PM_{10}. These measures will be implemented through a CEMP secured by a suitably worded planning condition on any permission.

6.1.3 These mitigation measures will also contribute towards reducing the impacts of $PM_{2.5}$ emission during the construction phase.

Table 6-1 Construction Phase Mitigation Measures

Category	Mitigation Measure
Communications	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.
Management	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.
	Record all dust and air quality complaints, identify cause(s) and take 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- of off-site, and the action taken to resolve the situation in the log book.
Monitoring	Undertake daily on-site and off-site inspections, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to the local authority when asked. This should include regular dust soiling checks of surfaces such as street furniture, cars and window sills within 100 m of 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 on a phase commences.
Preparing and maintaining the site	Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible.
	Erect solid screens or barriers around dusty activities or the site boundary that are at least as a high as any stockpiles on site.
	Fully enclose site or specific operations where there is a high potential for dust productions and the site is active for an extensive period.
	Avoid site runoff of water of mud.
	Keep site fencing, barriers and scaffolding clean using wet methods.
	Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site, cover as described below.

Category	Mitigation Measure
	Cover, seed or fence stockpiles to prevent wind whipping.
Operating vehicle/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 appropriate).
Operations	Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems.
	Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate.
	Use enclosed chutes and conveyors and covered skips.
	Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.
	Ensure equipment is readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.
Waste management	Avoid bonfires and burning of waste materials.
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.
Trackout	Use water assisted dust sweeper on the site access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use.
	Avoid dry sweeping of large areas.
	Ensure vehicles entering and leaving the site are covered to prevent escape of materials during transport.
	Record all inspections of haul routes and any subsequent action in a site log book.
	Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).

6.2 Operation

6.2.1 The operational impacts of the Proposed Development are considered to be ‘not significant’ and no additional mitigation is therefore required.

6.3 Consideration of the $PM_{2.5}$ Targets

6.3.1 In terms of mitigation exposure to $PM_{2.5}$ for users of the Site, the Site itself is setback approximately 15 to 20 m from Oxford Place, thereby mitigating the risk of exposure to $PM_{2.5}$ from road traffic. This is supported as the predicted $PM_{2.5}$ concentrations at modelled proposed receptor locations are well below the annual mean concentration target of 10 µg/m^3.

6.3.2 With regards to mitigation, the construction dust mitigation measures set out in **Section 6.1** will reduce the magnitude of $PM_{2.5}$ emissions during construction. During operation it is anticipated that there will be minimal traffic generated, however measures aimed at promoting walking and

the use of existing public transport will reduce $PM_{2.5}$ emissions from transportation associated with the Proposed Development and the Proposed Development's energy demand is expected to be met through all electric technologies (i.e. no solid-fuel burning) to prevent domestic combustion-based emissions.

7 Summary and Conclusions

7.1.1 The air quality impacts associated with the Proposed Development at Hulme Hall, Oxford Place have been assessed. The Site is located within the administrative boundary of Manchester City Council (MCC).

7.1.2 MCC, in conjunction with the Greater Manchester Combined Authority (GMCA), has declared an Air Quality Management Area (AQMA) due to exceedances of the annual mean NO_2 objective. The Site lies approximately 120 m south and east from the AQMA boundary.

7.1.3 The construction activities have the potential to create dust. During construction it is recommended that in accordance with the Institute of Air Quality Management (IAQM) guidance a package of mitigation measures is put in place to minimise the risk of elevated PM_{10} concentrations and dust soiling in the surrounding area. With mitigation in place the construction impacts are judged as being 'not significant'.

7.1.4 There is unlikely to be significant increases in road traffic resulting from the Proposed Development, and it will be below the Environmental Protection UK (EPUK) / IAQM screening criteria. Taking this into account, the air quality impacts of the Proposed Development, with regards to road traffic, are considered to be 'not significant' and additional mitigation is not required.

7.1.5 Pollutant concentrations at the Site are anticipated to be below the relevant NAQOs. Therefore, the Site is considered appropriate for the proposed use without the need for further air quality mitigation.

7.1.6 The Proposed Development is therefore considered to be in accordance with the requirements of the National Planning Policy Framework (NPPF), and relevant local and national guidance regarding air quality.

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Appendix A Glossary

Abbreviations	Meaning
AADT	Annual Average Daily Traffic
AQAP	Air Quality Action Plan
AQMA	Air Quality Management Area
CAZ	Clean Air Zone
CEMP	Construction Environmental Management Plan
DEFRA	Department for Environment, Food and Rural Affairs
Diffusion Tube	A passive sampler used for collecting NO_2 in the air
EPUK	Environmental Protection UK
GMCA	Greater Manchester Combined Authority
HDV	Heavy Duty Vehicle; a vehicle with a gross vehicle weight greater than 3.5 tonnes. Includes Heavy Goods Vehicles and buses
IAQM	Institute of Air Quality Management
LAQM	Local Air Quality Management
LDV	Light Duty Vehicle; a vehicle with a gross vehicle weight less than 3.5 tonnes. Includes cars and light goods vehicles.
MCC	Manchester City Council
NAQO	National Air Quality Objective as set out in the Air Quality Strategy and the Air Quality Regulations
NO_2	Nitrogen Dioxide
NO_x	Oxides of nitrogen generally considered to be nitric oxide and NO_2. Its main source is from combustion of fossil fuels, including petrol and diesel used in road vehicles
NPPF	National Planning Policy Framework
$PM_{10}/PM_{2.5}$	Small airborne particles less than 10/2.5 µm in diameter
PPG	Planning Practice Guidance
Receptor	A location where the effects of pollution may occur
The Plan	The National Air Quality Plan for NO_2

Appendix B IAQM Dust Guidance (2024) Approach

Table B-1 Dust Emission Magnitude Classification

Activity	Dust Emission Magnitude		
	Large	Medium	Small
Demolition	Total building volume of >75,000 m^3, potentially dusty construction material, on-site crushing and screening, demolition activities >12 m above ground	Total building volume of 12,000 – 75,000 m^3, potentially dusty construction material, demolition activities 6 – 12 m above ground level	Total building volume of <12,000 m^3, construction material with low potential for dust release, demolition activities <6 m above ground, demolition during wetter months
Earthworks	Total site area of >110,000 m^2, potentially dusty soil type, >10 heavy earth moving vehicles active at any one time, formation of bunds >6 m in height	Total site area of 18,000 – 110,000 m^2, moderately dusty soil type, 5 - 10 heavy earth moving vehicles active at any one time, formation of bunds 3 - 6 m in height	Total site area of <18,000 m^2, soil type with large grain size, <5 heavy earth moving vehicles active at any one time, formation of bunds <3 m in height
Construction	Total building volume >75,000 m^3, on-site concrete batching, sandblasting	Total building volume 12,000 - 75,000 m^3, potentially dusty construction material, on-site concrete batching	Total building volume <12,000 m^3, construction material with low potential for dust release
Trackout	>50 HDV outwards movements in any one day, potentially dusty surface material, unpaved road length >100 m	20 - 50 HDV outwards movements in any one day, moderately dusty surface material, unpaved road length 50 - 100 m	<20 HDV outwards movements in any one day, surface material with low potential for dust release, unpaved road length <50 m

Table B-2 Receptor Sensitivity

Receptor Sensitivity	Impact		
	Dust Soiling	**Health Effects of PM_{10}**	**Ecological Impacts**
High	An area where: • Users can reasonably expect enjoyment of a high level of amenity; • The appearance, aesthetics or value of their property would be diminished by soiling; • The people or property would reasonably be expected to be present continuously, or at least regularly for extended periods, as part of the normal pattern of use of the land. Examples include dwellings, museums and other culturally important collections, medium and long-term car parks and car showrooms.	Locations where members of the public are exposed over a time period relevant to the air quality objective for PM_{10} (in the case of the 24-hour objective, a relevant location would be one where individuals may be exposed for eight hours or more per day). Examples include residential properties. Hospitals, schools and residential care homes should also be considered as having equal sensitivity to residential areas for the purposes of this assessment.	Locations with an international or national designation *and* the designated features may be affected by dust soiling; OR Locations where there is a community of particularly dust sensitive species such as vascular species included in the Red Data List for Great Britain. Indicative examples include a Special Area of Conservation designated for acid heathlands or a local site designated for lichens adjacent to the demolition of a large site containing concrete (alkali) buildings.
Medium	An area where: • Users would expect to enjoy a reasonable level of amenity, but would not reasonably expect to enjoy the same level of amenity as in their home; • The appearance, aesthetics or value of their property could be diminished by soiling; • The people or property wouldn't reasonably be expected to be present here continuously or regularly for extended periods, as part of the normal pattern of use of the land. Examples include parks and places of work.	Locations where people exposed are workers, and exposure is over a time period relevant to the air quality objective for PM_{10} (in the case of the 24-hour objective, a relevant location would be one where individuals may be exposed for eight hours or more per day). Examples include office and shop workers, but will generally not include workers occupationally exposed to for PM_{10}, as protection is covered by Health and Safety at Work legislation.	Locations where there is a particularly important plant species, where its dust sensitivity is uncertain or unknown; OR Locations with a national designation where the features may be affected by dust deposition. Indicative example is a Site of Special Scientific Interest with dust sensitive features.

Low	An area where: • The enjoyment of amenity would not reasonably be expected; • Property would not reasonably be expected to be diminished in appearance, aesthetics or value by soiling; • There is transient exposure, where the people or property would reasonably be expected to be present only for limited periods of time as part of the normal pattern of use of the land. Examples include playing fields, farmland (unless commercially sensitive horticultural), footpaths, short-term car parks and roads.	Locations where human exposure is transient. Examples include public footpaths, playing fields, parks and shopping streets.	Locations with a local designation where the features may be affected by dust deposition. Indicative example is a Local Nature Reserve with dust sensitive features.

Table B-3 Sensitivity of an Area to Dust Soiling Effects

Receptor Sensitivity	Number of Receptors	Distance from Source (m)			
		<20	<50	<100	<350
High	>100	High	High	Medium	Low
	10 – 100	High	Medium	Low	Low
	1 – 10	Medium	Low	Low	Low
Medium	>1	Medium	Low	Low	Low
Low	>1	Low	Low	Low	Low

Table B-4 Sensitivity of an Area to Human Health Impacts

Receptor Sensitivity	Annual Mean PM_{10} Concentration	Number of Receptors	Distance from the Source (m)			
			<20	<50	<100	<250
High	>32 µg/m^3	>100	High	High	High	Medium
		10 – 100	High	High	Medium	Low
		1 - 10	High	Medium	Low	Low
	28 - 32 µg/m^3	>100	High	High	Medium	Low
		10 – 100	High	Medium	Low	Low
		1 - 10	High	Medium	Low	Low
	24 - 28 µg/m^3	>100	High	Medium	Low	Low
		10 – 100	High	Medium	Low	Low
		1 - 10	Medium	Low	Low	Low
	<24 µg/m^3	>100	Medium	Low	Low	Low
		10 – 100	Low	Low	Low	Low
		1 - 10	Low	Low	Low	Low
Medium	>32 µg/m^3	>10	High	Medium	Low	Low
		1 - 10	Medium	Low	Low	Low
	28 - 32 µg/m^3	>10	Medium	Low	Low	Low
		1 - 10	Low	Low	Low	Low
	24 - 28 µg/m^3	>10	Low	Low	Low	Low

		1 - 10	Low	Low	Low	Low
	<24 µg/m^3	>10	Low	Low	Low	Low
		1 - 10	Low	Low	Low	Low
Low	-	≥1	Low	Low	Low	Low

Table B-5 Sensitivity of an Area to Ecological Impacts

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

Table B-6 Risk of Dust Impacts Calculation Matrix

Sensitivity of Area		**Dust Emission Magnitude**		
		Large	**Medium**	**Small**
Demolition	High	High Risk	Medium Risk	Medium Risk
	Medium	High Risk	Medium Risk	Low Risk
	Low	Medium Risk	Low Risk	Negligible Risk
Earthworks	High	High Risk	Medium Risk	Low Risk
	Medium	Medium Risk	Medium Risk	Low Risk
	Low	Low Risk	Low Risk	Negligible Risk
Construction	High	High Risk	Medium Risk	Low Risk
	Medium	Medium Risk	Medium Risk	Low Risk
	Low	Low Risk	Low Risk	Negligible Risk
Trackout	High	High Risk	Medium Risk	Low Risk
	Medium	Medium Risk	Medium Risk	Low Risk
	Low	Low Risk	Low Risk	Negligible Risk

Appendix C EPUK & IAQM Guidance (2017) Screening Criteria

The Development Will:	Indicative Criteria to Proceed to an Air Quality Assessment
Cause a significant change in LDV traffic flows on local roads with relevant receptors.	A change of LDV flow of: • >100 AADT within or adjacent to an AQMA; and • >500 AADT elsewhere.
Cause a significant change in HDV flows on local roads with relevant receptors.	A change of HDV flow of: • >25 AADT within or adjacent to an AQMA; and • >100 AADT elsewhere.
Realign roads i.e. changing the proximity of receptors to traffic lanes.	Where the change is 5 m or more and the road is within an AQMA.
Introduce a new junction or remove an existing junction near to relevant receptors.	Applies to junctions that cause traffic to significantly change vehicle acceleration / deceleration, e.g. traffic lights, or roundabouts.
Introduce or change a bus station.	A change of bus flows of: • >25 AADT within or adjacent to an AQMA; and • >100 AADT elsewhere.
Have an underground car park with extraction system.	The ventilation extract for the car park will be located within 20 m of a relevant receptor; and The car park will have >100 movements per day (total in and out).

The screening criteria presented is amended from Table 6.2 of the EPUK / IAQM guidance (EPUK / IAQM, 2017). Only the screening criteria relevant to changes in transport (including both traffic and the transport network) are outline