Former Peacock Centre and Land at Pipewell Avenue, Gorton

Air Quality Assessment

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Prepared for:
Clarion Housing Association Limited and Clarion Housing Property Development Services Limited

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1 Introduction

1.1 Proposed Development

1.1.1 Clarion Housing Association Limited and Clarion Housing Property Development Services Limited (the 'Applicant') have commissioned Stantec to undertake an air quality assessment to accompany a full planning application for permission for the development of Former Peacock Centre and Land at Pipewell Avenue, Gorton, Manchester (the 'Site'). The proposals comprise two parcels split by Buttress Street; the Former Peacock Centre and Land at Pipewell Avenue, Gorton. The Site is located within the administrative boundary of Manchester City Council (MCC).

1.1.2 The planning application is a full application for the erection of 75 dwellings (Use Class C3), including a 25-unit apartment building and 27 dwellings on the Peacock Centre Site, and 23 dwellings on the Pipewell Avenue Site, with associated access, parking, landscaping, public open space, informal play provision, drainage infrastructure, and enhanced pedestrian and cycle connections (the 'Proposed Development').

1.2 Scope of Assessment

1.2.1 This report describes existing air quality within the study area, considers the suitability of the site for residential development in relation to air quality and assesses the impacts of construction activities and operation of the Proposed Development on air quality in the surrounding area.

1.2.2 The main air pollutants of concern associated with the Proposed Development during the construction phase are dust and fine particulate matter (PM_{10}) associated with on-site construction activities and off-site trackout.

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

1.2.4 The energy strategy for the Proposed Development will be all-electric, utilising technologies such as Air Source Heat Pumps (ASHPs) and Photovoltaics (PVs), 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.

1.2.5 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 MCC in the form of email correspondence with the Environmental Health Department in February 2026. The scope and methodology of the assessment was proposed by Stantec, no agreement has been confirmed with the Environmental Health Department at MCC to date, however, Stantec have been directed towards MCC's Air Quality & Planning Technical Guidance document (MCC, 2022).

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 (Department for Environment, Food and Rural Affairs (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 (DEF24) 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 ((LAQM.TG(22); (DEFRA, 2025c)), 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) sets out the Government's planning policies for England and how they are expected to be applied (MHCLG and DLUHC, 2024). The following paragraphs are considered relevant from and air quality perspective.

2.3.2 Paragraph 109 on promoting sustainable transport states:

"Transport issues should be considered from the earliest stages of plan-making and development proposals, so that: …

f) identifying, assessing and taking into account the environmental impacts of traffic and transport infrastructure – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains."

2.3.3 Paragraph 110 goes on to state:

"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."

2.3.4 Paragraph 187 on conserving and enhancing the natural environment states:

"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 stability. 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, and…"

2.3.5 Paragraph 198 within ground conditions and pollution states:

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

2.3.6 Paragraph 199 states that:

"Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications. Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan."

2.3.7 Paragraph 200 states that:

"Planning policies and decisions should ensure that new development can be integrated effectively with existing businesses and community facilities (such as places of worship, pubs, music venues and sports clubs). Existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established. Where the operation of an existing business or community facility could have a significant adverse effect on new development (including changes of use) in its vicinity, the applicant (or 'agent of change') should be required to provide suitable mitigation before the development has been completed".

National Planning Practice Guidance

2.3.8 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."*

2.3.9 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."*

2.3.10 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."*

2.3.11 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

2.3.12 MCC adopted Manchester's Local Development Framework – Core Strategy (MCC, 2012) in July 2012. The document sets out the vision and strategic policies for growth and development up to 2027. The Core Strategy was developed as a part of the Development Plan.

2.3.13 Policy EN 16 on Air Quality 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."

2.3.14 Policy DM 1 on Development Management 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."*

2.3.15 Policy T 1 on Sustainable Transport 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: -

[…]

- *Would reduce the negative impacts of road traffic, for example, congestion, air pollution and road accident casualties. […]"*

2.3.16 MCC published an addendum to the Core Strategy (MCC, 2024) in March 2024 when the Places for Everyone (PfE) Joint Development Plan Document for Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford and Wigan 2022 to 2039 (GMCA, 2024) was adopted. Some Core Strategy policies have been partially replaced by the PfE document, any part of the policy that is not replaced remains a part of MCC's Core Strategy.

2.3.17 Policy JP-S5: Clean Air

"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 Manchester City Council has published Air Quality & Planning Technical Guidance (MCC, 2022) to support the consideration of air quality as a material planning issue within the City. The guidance sets out when air quality assessments are required, the scope and methodology expected, and appropriate mitigation measures to minimise both construction-phase and operational impacts of development, with reference to IAQM and Environmental Protection UK best practice.

2.4.7 The guidance focuses primarily on emissions from road transport, nitrogen dioxide (NO_2) and particulate matter (PM_{10} and $PM_{2.5}$), and aims to ensure that new development does not exacerbate existing air quality issues or introduce new exposure in areas of poor air quality, particularly within the Greater Manchester Air Quality Management Area. It also outlines the roles of applicants and the Council's Environmental Protection team, and the need for mitigation, including sustainable transport measures, construction dust controls, combustion plant standards, and electric vehicle charging infrastructure.

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 construction and operational activities on air quality at 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 DEFRA's 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 MCC in combination with the Greater Manchester Combined Authority (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 and 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 Construction Road Traffic Emission Impacts

3.4.1 The potential for a significant overall effect on existing sensitive receptors within the study area as a result of emissions from construction traffic generated by the Proposed Development has been determined qualitatively, taking into consideration the screening criteria outlined in the EPUK / IAQM guidance (EPUK & IAQM, 2017) (see **Appendix C**), the anticipated routing of the generated traffic and the anticipated duration of impacts associated with the generated traffic.

3.5 Construction Non-Road Mobile Machinery Emission Impacts

3.5.1 The impacts of emissions associated with Non-Road Mobile Machinery (NRMM) during the construction phase of Proposed Development has been undertaken qualitatively, taking into account the following:

- Duration of works;
- Type and number of NRMM to be used on-site;
- Operating hours of NRMM;

- Emissions standard to which NRMM comply;
- Proximity of receptors to NRMM working areas; and
- Existing background pollutant concentrations.

3.5.2 In accordance with DEFRA's LAQM TG.22 (DEFRA, 2022), with suitable controls and site management in place, emissions associated with NRMM and site traffic are unlikely to have significant impact on local air quality.

3.6 Operational Road Traffic Emission Impacts

3.6.1 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.

3.6.2 Information on the Proposed Development's trip generation has been provided by the Project's transport consultants, Stantec UK Ltd.

3.7 Site Suitability

3.7.1 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).

3.8 Consideration of $PM_{2.5}$ Targets

3.8.1 A qualitative assessment has been undertaken in accordance with the $PM_{2.5}$ Target: Interim Planning Guidance (DEF24). 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 is comprised of two parcels, the Northern Parcel is located on the site of the Former Peacock Centre and is bound to the north by Gorton Lane and to the east by Peacock Close, to the south by residential properties on Buttress Street and to the west by Taylor Street Playing Fields. The Southern Parcel, situated on Land at Pipewell Avenue, is bound in all directions by residential properties in Buttress Street, Middlewich Walk, Bryson Walk and Pipewell Avenue.

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). DEFRA published the 'Air Pollution in the UK 2024' document in September 2025, which states that the Greater Manchester Urban Area is one of only five zones which exceed the annual mean limit value for NO_2 in 2024 (DEFRA, 2025b).

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 by the GMCA across the Greater Manchester area for exceedances of the annual mean NO_2 NAQO, however there has been a decline in measured NO_2 levels over the past five years during which annual mean NO_2 levels have dropped to below the NAQO in several Greater Manchester boroughs. The Site is not located within the GMCA AQMA, and the closest point of the AQMA is located approximately 170 m to the south on the A57 Hyde Road.

Local Monitoring Data

NO_2

4.3.3 GMCA's 2024 Air Quality Annual Status Report (ASR) (GMCA, 2025) presents monitoring results from 24 automatic monitoring locations within Greater Manchester, the closest of which to the Site is the MAN1 monitoring station located at Manchester Oxford Road, over 4 km from the Site. GMCA's 2024 ASR also presents monitoring using NO_2 diffusion tubes at a number of locations. The closest diffusion tube monitoring location to the Site, MA73NO, is located approximately 475 m southeast on Hyde Road.

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

4.3.4 Monitoring sites located within 2.5 km of 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 of longer-term trends due to COVID-19 restrictions in place during these years.

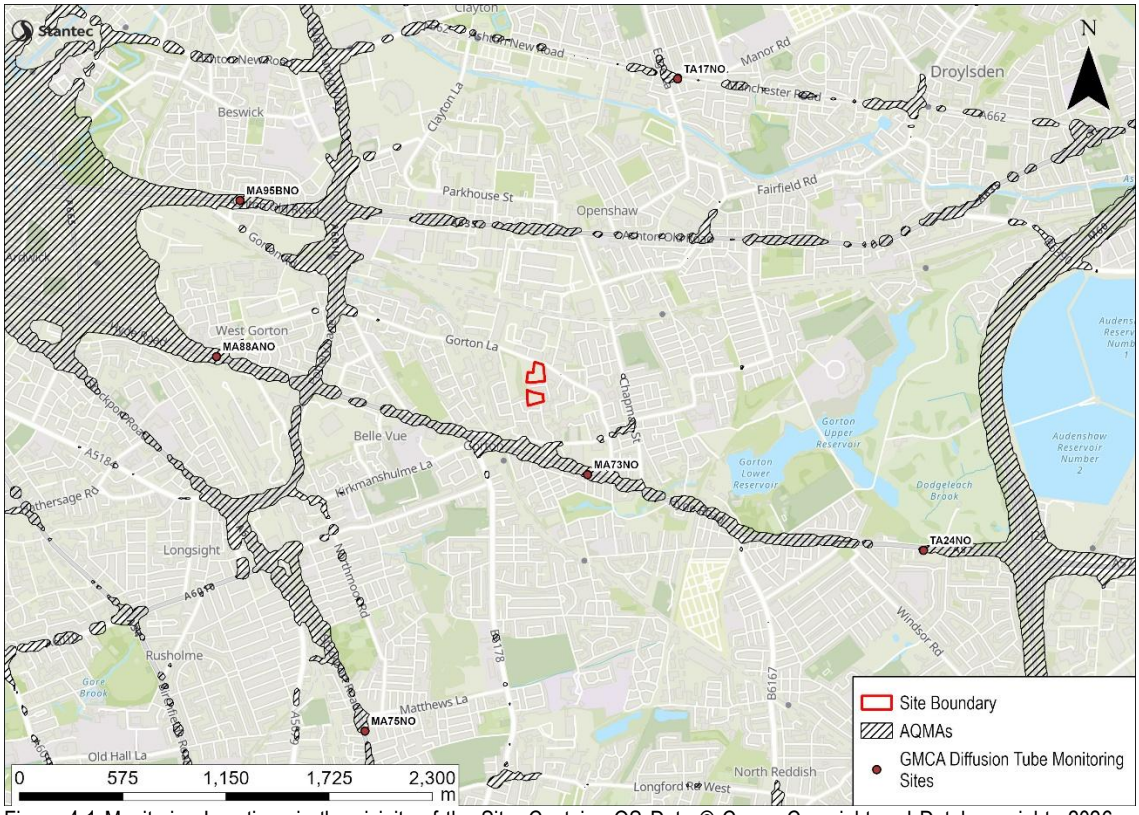


Figure 4-1 Monitoring Locations in the vicinity of the Site. Contains OS Data © Crown Copyright and Database rights 2026. Contains data from OS Zoomstack.

Table 4-1: Measured Annual Mean NO2 Concentrations 2020-2024

Site ID	Site Type	Within AQMA	Annual Mean NO_2 ($\mu g/m^3$)				
			2020	2021	2022	2023	2024
Diffusion Tubes							
MA73NO	Roadside	Yes	27.3	31.6	31.5	29.5	28.0
MA75NO	Kerbside	Yes	33.7	39.0	38.8	39.6	37.2
MA88ANO	Roadside	Yes	32.5	35.3	39.2	36.1	31.9
MA95BNO	Roadside	Yes	31.5	34.1	33.7	31.5	27.3
TA17NO	Roadside	Yes	26.6	28.7	29.0	27.5	24.3
TA24NO	Roadside	Yes	24.7	31.6	26.6	31.0	24.8
NAQO			**40**				

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

4.3.5 There have been no measured exceedances of the annual mean NO_2 NAQO between 2020-2024 at any of the monitoring locations within 2.5 km of the Site. 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). Additionally, all monitored annual mean concentrations of NO_2 are significantly below 60 $\mu g/m^3$, therefore indicating that the 1-hour mean NO_2 NAQO is unlikely to be exceeded.

PM_{10} & $PM_{2.5}$

4.3.6 GMCA have not published any data for PM_{10} or $PM_{2.5}$ monitoring in close proximity to the Site.

Predicted Background Concentrations

4.3.7 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 4-2** for the 'existing' year (corresponding to the latest year for which monitoring data is available) and anticipated opening year of the Proposed Development.

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

Table 4-2: Estimated Annual Mean Background Concentrations

Year	Location	Annual Mean (µg/m^3)		
		NO_2	PM_{10}	$PM_{2.5}$
2024	388_396	15.2	13.0	7.9
2028	388_396	12.9	12.7	7.7
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) 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 construction vehicles on the public highway. The closest designated ecological site to the Site is located approximately 1.5 km north of the Site boundary. As such, the potential for ecological impacts as a result of dust soiling can be screened out as being 'not significant'.

Further Assessment

Dust Emission Magnitude

5.1.3 The dust emissions magnitude of demolition, 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
Demolition	N/A	No demolition is required at the Site.
Earthworks	Small	Proposed earthworks activities comprise clearance of vegetation, soil preparation and landscaping across an area less than 18,000 m^2. The soil at the Site is largely classified as slowly permeable, seasonally wet acid loamy and clayey soils (Cranfield University, 2026) which are considered to have a low to medium potential for dust, particularly during periods of dry weather. Based on this, the dust emission magnitude of earthworks activities is judged to be 'small'.
Construction	Medium	The total building volume to be constructed is expected to be between 12,000 m^3 and 75,000 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 'medium'.
Trackout	Medium	The number of Heavy Duty Vehicles (HDVs) that will exit the Site will vary depending upon the processes occurring at any one time. There are unlikely to be more than 50 outward HDV movements in any one day. Due to the nature of the Site, there could be an unpaved road length up to 100 m in length comprising moderately dusty surface material. Based on this, the dust emission magnitude of trackout is judged to be 'medium'.

Area Sensitivity

5.1.4 The area sensitivity to dust soiling and human health impacts has been determined based on the criteria shown in **Table B-3, Table B-4**, and **Table B-5**, **Appendix B.** The study area, based on the IAQM guidance is shown in **Figure 5-1** below.

5.1.5

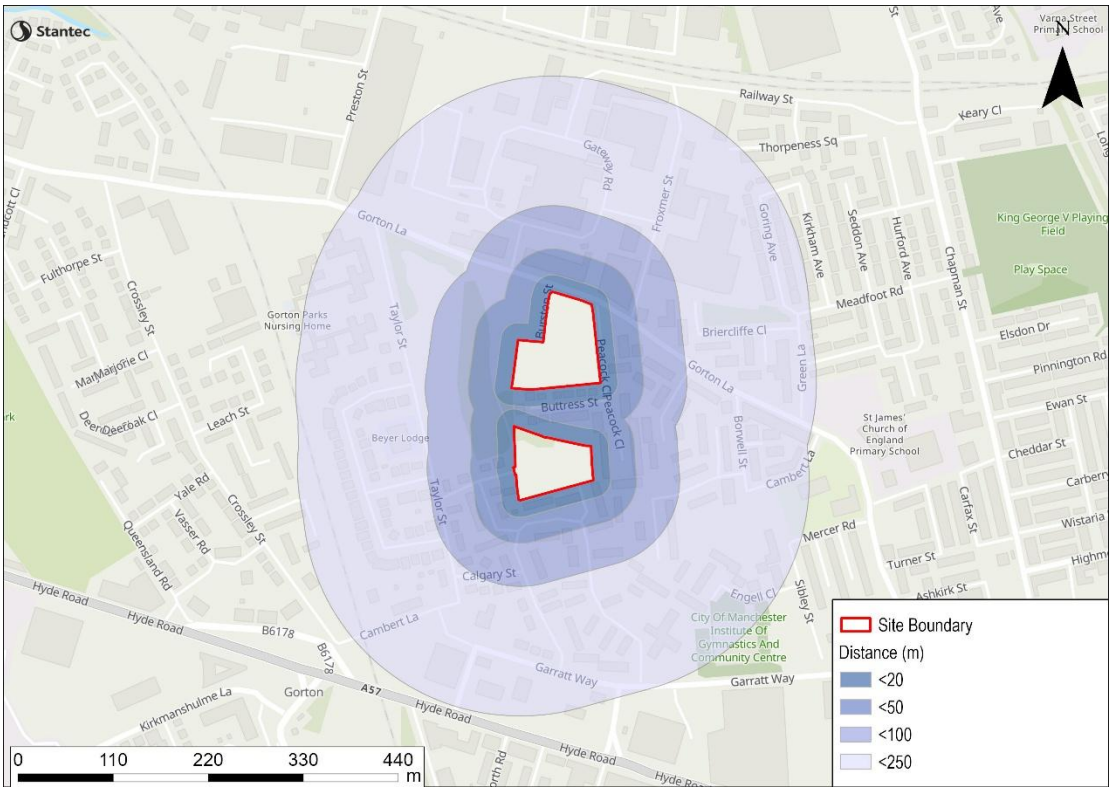


Figure 5-1: IAQM Demolition and Construction Dust band Criteria from the Site boundary. Contains OS Data © Crown Copyright and Database rights 2026. Contains data from OS Zoomstack.

5.1.6 Residential properties are classed as being 'high sensitivity' receptors to dust soiling, based on the IAQM guidance (IAQM, 2024) (see **Table B-3**, **Appendix B)**. There are over 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 'high'.

5.1.7 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(s). There are between 10 - 100 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'.

5.1.8 The IAQM also defines residential properties as being 'high sensitivity' receptors to human health impacts (see **Table B-4**, **Appendix B).** PM_{10} concentrations at existing residential properties within the study area are anticipated to be similar to the 2024 PM_{10} background concentrations at the Site (i.e. 13.0 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

5.1.9 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			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	N/A	Low Risk	Medium Risk	Medium Risk

Potential Impact	Risk			
	Demolition	Earthworks	Construction	Trackout
Human Health	N/A	Negligible	Low Risk	Low Risk

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 Construction Environmental Management Plan (CEMP) will outline measures to control and minimise the risk of adverse effects from construction activities. The CEMP will be submitted to 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 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. However, construction works are expected to be temporary, and background concentrations presented in **Table 4-2** are significantly below the relevant NAQOs.

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). Additionally, in line with the MCC Air Quality and Planning SPD, all NRMM will be required to comply with EU emissions standards, with a minimum standard of Stage IIIA and a preference for Stage IV compliance (MCC, 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 Projected traffic generation has been provided by the Project's Transport Consultants, Stantec. The Proposed Development across the two parcels will generate approximately 348 AADT, all of which are expected to be Light Duty Vehicles (LDVs). It is understood that the calculated trip generation is a worst-case scenario, and is likely to be lower due to the Site location and the proximity to the surrounding public transport provisions, and the limited number of parking spaces (a total of 59 spaces for 75 dwellings) provided on Site.

5.4.2 The projected trip generation is below the EPUK / IAQM screening criteria (see **Appendix C**) outside an AQMA, although following distribution onto the surrounding road network, it is expected that there could be a slight exceedance of the EPUK / IAQM screening criteria inside an AQMA, likely at the Gorton Lane / Pottery Lane and Wellington Street / Hyde Road junctions. It is expected that trips will quickly distribute below the 100 LDV AADT threshold after these two junctions.

5.4.3 Within the section of the GMCA AQMA present on Hyde Road, in close proximity to the Wellington Street / Hyde Road junction, there is diffusion tube monitoring site MA73NO, which recorded an annual mean NO_2 concentration of 28.0 µg/m^3 in 2024, which is significantly below the NAQO. Additionally, to the west MCC diffusion tubes MA88ANO (Hyde Road / Clowes Street) and MA95BN (Ashton Old Road) are both located within the GMCA AQMA, and recorded an annual mean NO_2 concentration of 31.9 µg/m^3 and 27.3 µg/m^3 respectively in 2024, which are both well below the NAQO.

5.4.4 Therefore, it is considered that whilst the EPUK/IAQM screening criteria may be marginally exceeded at two junctions in the AQMA, this level of additional movements will not have a significant effect on local air quality or create a risk of a NAQO exceedance. For that reason, the impacts of operational traffic generated by the Proposed Development on existing sensitive receptors within the study area is considered to be 'not significant' and no additional assessment is therefore required.

5.5 Site Suitability

5.5.1 As the Site is for residential use, the annual mean NO_2, PM_{10} and $PM_{2.5}$, the 1-hour mean NO_2 and the 24-hour mean PM_{10} NAQOs all apply.

5.5.2 The NO_2 concentrations at the local monitoring sites were below the annual mean NAQO at all locations in 2024 and there has been a general decrease in concentrations over the last five years. The closest diffusion tube to the Site, MA73NO, recorded an annual mean NO_2 concentration of 28.0 µg/m^3 in 2024, despite its location within an AQMA. As NO_2 concentrations measured at the roadside monitoring locations are below the annual mean, it is unlikely that the annual mean NO_2 NAQO will be exceeded within the Site (which is located over 250 m back from the Hyde Road).

5.5.3 Measured concentrations in close proximity to the Proposed Development site are also well below 60 µg/m^3, indicating that the 1-hour mean NO_2 NAQO is unlikely to be exceeded within the site. Background concentrations of NO_2, PM_{10} and $PM_{2.5}$ are well below the annual mean of NAQOs / limit value, therefore PM_{10} and $PM_{2.5}$ are also expected to be well below the NAQO.

5.5.4 The Site is considered suitable for the proposed residential 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 7.9 µg/m^3 (DEFRA, 2024b) as presented in **Table 4-2.** Background concentrations of $PM_{2.5}$ within the Site are therefore well below the national annual mean concentration target of 10 µg/m^3 which is to be achieved by 2040, and the GMCA commitment of achieving the WHO Air Quality Guideline for $PM_{2.5}$ of 10 µg/m^3 by 2030.

5.6.2 Given the proposed end-use of the Site being residential, with no centralised combustion-based energy centre proposed and traffic movements resulting from the Proposed Development generally being below the EPUK / IAQM screening criteria on surrounding roads, 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	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.
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.

Category	Mitigation Measure
	Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site, cover as described below.
	Cover, seed or fence stockpiles to prevent wind whipping.
Operating vehicle/machinery and sustainable travel	Ensure all 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).
	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.
	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.
	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 site access and local roads, to remove, as necessary, any material trackout 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.
	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.

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. Nevertheless, as a proactive sustainability measure and in line with local policy objectives to promote low-emission transport, all on-site parking spaces will be provided with electric vehicle charging facilities, ensuring the development supports the transition to cleaner vehicles over its operational lifetime.

6.3 Consideration of the $PM_{2.5}$ Targets

6.3.1 In terms of mitigation exposure to $PM_{2.5}$ for occupants, proposed receptors within the Site will be setback approximately 5 to 10 m from Gorton Lane, thereby mitigating the risk of exposure to $PM_{2.5}$ from road traffic.

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, cycle parking and Travel Plan measures aimed at promoting walking, cycling and the use of public transport, alongside the limitation of provided parking spaces within the Site, and committing to 100% electric vehicle charging spaces across the Site 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 the Former Peacock Centre and Land at Pipewell Avenue, Gorton, Manchester have been assessed. The Site is located within the administrative boundary of Manchester City Council.

7.1.2 Manchester City Council, in conjunction with the Greater Manchester Combined Authority (GMCA), has declared one AQMA due to exceedances of the annual mean NO_2 objective. The Site is not located within the GMCA AQMA, the closest point of the AQMA is located approximately 170 m to the south on the A57 Hyde Road.

7.1.3 The construction activities have the potential to create dust. During construction it is recommended that in accordance with the 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 The increase in road traffic resulting from the Proposed Development is below the EPUK / IAQM screening criteria outside the AQMA, however, marginal exceedances of this criteria are possible at the Gorton Lane / Pottery Lane and Wellington Street / Hyde Road junctions within the GMCA AQMA. However, annual mean NO_2 concentrations have been well below the NAQO within this area of the GMCA AQMA for a number of years. 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 assessment or 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 residential 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.
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
NRMM	Non-Road Mobile Machinery
MCC	Manchester City Council
$PM_{10}/PM_{2.5}$	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
SPD	Supplementary Planning Document
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	<250
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 outlined.