



Former Police Station, Bury

Air Quality Assessment

On behalf of

Exemplar Health Care



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1 Introduction

1.1 Proposed Development

- 1.1.1 Exemplar Health Care (the 'Applicant') has commissioned Stantec to undertake an air quality assessment to accompany a planning application for the Proposed Development at the Former Police Station, Bury (the 'Site'). The Site is located within the administrative boundary of Bury Council (BC).
- 1.1.2 The planning application is for two 40 bed care homes with associated parking and landscaping (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 care home development and assesses the impacts of construction activities and operation of the development on air quality in the surrounding area.
- 1.2.2 The main air pollutants of concern related to construction are dust and fine particulate matter (PM₁₀) associated with on-site construction activities and off-site trackout.
- 1.2.3 The main air pollutants of concern during the operational period are NO₂, PM₁₀ and PM_{2.5} emissions associated with road traffic.
- 1.2.4 There is no energy centre associated with the scheme. The Proposed Development will obtain its heat and hot water supply through gas boilers and air source heat pumps. The impact of emissions from combustion-based energy plant have therefore been scoped out the assessment.
- 1.2.5 Railways can be a source of emissions of NO₂ and SO₂ from idling locomotives in stations and depots, as well as mobile locomotives on busy lines with a significant number of diesel or coalfired trains (DEFRA, 2022). The Proposed Development is located approximately 70 m west from Bury Bolton train station and approximately 45 m west from a railway track. Given the distance between the train station / tracks and the Proposed Development, and the low number of diesel or coalfired trains, the impacts from railway emissions are considered to be not significant and have been screened out of the assessment.
- 1.2.6 The assessment has been prepared taking into account relevant local and national guidance, policy and legislation.

1.3 Consultation

- 1.3.1 Consultation has been carried out between Stantec and BC in the form of an email correspondence with the Environmental Health Department in January 2024. BC Environmental Health Department confirmed agreement with the proposed scope and methodology of the assessment and highlighted that access east along Bolton Street is limited due to road restrictions and suggested the Bury Bridge automatic monitoring site (BUR03) should be included within the assessment.

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/m³.
- 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 NAQO's for NO₂ and PM₁₀ 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 (Statutory Instrument, 2021). 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/m³ or below by 2040; and

- a population exposure reduction target for a reduction in PM_{2.5} population exposure of 35% compared to 2019 to be achieved by 2040.

2.1.7 The Government has published an Environmental Improvement Plan 2023 (DEFRA, 2023a) which sets out the following interim PM_{2.5} targets to be met by the end of January 2028:

- the highest annual mean concentration in the most recent full calendar year must not exceed 12 µg/m³ 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 22% or greater.

National Air Quality Plan for NO₂ in the UK

2.1.8 The National Air Quality Plan for NO₂ (DEFRA, 2018) sets out how the Government plans to deliver reductions in NO₂ throughout the UK, with a focus on reducing concentrations to below the EU Limit Values throughout the UK within the 'shortest possible time'.

2.1.9 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 (Environment Act, 1995) required the Secretary of State to prepare and publish a '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, 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 and the Air Quality Strategy (DEFRA, 2023b) 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 (Environment Act, 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 NAQO's within its AQMA.
- 2.2.7 The Local Air Quality Management Technical Guidance 2022 (LAQM.TG(22); DEFRA, 2022), issued by the Department for Environment, Food and Rural Affairs (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 (Department for Levelling Up, Housing and Communities (DLUHC), 2023). The following paragraphs are considered relevant from an air quality perspective.

2.3.2 Paragraph 108 on promoting sustainable transport states:

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

d) the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; ..."

2.3.3 Paragraph 109 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 180 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 186 within habitats and biodiversity states:

"When determining planning applications, local planning authorities should apply the following principles:

a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be

integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate"

2.3.6 Paragraph 191 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."

2.3.7 Paragraph 192 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."

2.3.8 Paragraph 193 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

2.3.9 Paragraph 005, Reference 32-005-20191101 (revision date 01.11.2019), of the Planning Practice Guidance (PPG) (DLUHC and Ministry of Housing, Communities & Local Government (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."*

2.3.10 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."*

2.3.11 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."*

2.3.12 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

Bury Unitary Development Plan

2.3.13 The Bury Unitary Development Plan (UDP) was adopted by BC in 1997 (BC, 1997). The document sets out the existing planning policies and proposals for development within Bury. The following policies relate to air quality matters:

2.3.14 EN4 – Energy Conservation:

"The Council will encourage development which contributes to energy conservation in the Borough. The use of renewable energy resources and the incorporation of energy efficiency measures in built development and the transport system will be encouraged."

2.3.15 EN4/1 – Renewable Energy:

“The Council will encourage proposals for the provision of renewable energy sources, subject to compliance with other policies and proposals of the Plan. In particular, the Council will seek to ensure that proposals:

- *do not involve an unacceptable loss of amenity, for example through visual intrusion and noise;*
- *would not have an unacceptable adverse impact on the setting of scheduled ancient monuments, Conservation Areas, Listed Buildings and archaeological remains;*
- *would not have an unacceptable adverse impact on areas of Green Belt, Special Landscape Areas and areas of ecological importance;*
- *would not result in a health or safety risk, or nuisance to the public;*
- *where necessary, include an environmental assessment as part of the planning application;*
- *would not have an unacceptable adverse impact on the Borough's natural environment.”*

2.3.16 EN4/2 – Energy Efficiency:

“The Council will encourage energy efficiency in development proposals through:

- *the promotion of energy efficient modes of transport such as walking, cycling and public transport;*
- *seeking the location of new development in areas easily accessible to public transport and local facilities;*
- *promoting the efficient use of energy in the design and layout of development.”*

2.3.17 EN7 - Pollution Control:

“The Council will seek to control environmental nuisance and minimise pollution levels associated with development by limiting the environmental impact of pollution, wherever possible, in conformity with current legislation and prescribed standards.”

2.3.18 EN7/1 – Atmospheric Pollution:

“In seeking to limit atmospheric pollution the Council will not permit development which: would result in unacceptable levels of atmospheric pollution; and/or is not compatible with the achievement of the Council's long term air quality standards.”

2.3.19 BC are in the process of preparing a Local Plan to guide future development within Bury. The new Local Plan will include a wide range of local planning policies as well as identifying areas within Bury that are restricted/ controlled and areas that can be developed. The new Local Plan will replace the adopted UDP and is undergoing revisions and will be subject to consultation shortly.

Design and Layout of New Development in Bury Supplementary Planning Document (SPD)

2.3.20 BC has adopted the Design and Layout of New Development in Bury SPD in October 2008 (BC, 2008). The SPD sets out principles of good design including the following principles which relate to air quality:

2.3.21 Principle 5a states that developers should:

“[...] Contribute to the greening of the urban environment to support bio-diversity, improve air quality and reduce a heat island effect; [...].”

Place for Everyone Joint Development Plan

2.3.22 BC along with eight other local authorities in Greater Manchester are in the process of adopting the ‘Places for Everyone Joint Development Plan’. The document will include the long term plan (up until 2039) for jobs, new homes and sustainable growth for the nine Greater Manchester Districts. The draft document has undergone consultation and modifications. The Inspectors’ Report was published by the GMCA on behalf of the nine local authorities on 15 February 2024. The next step is for BC along with the other eight local authorities to consider the Inspectors’ recommendations and adoption of the Plan. Currently it is anticipated that Council meetings will be held between 28 February and 20 March 2024. . The plan includes the following in relation to air quality:

2.3.23 Objective 7 states:

“We will: [...]”

- *“[...] Promote sustainable patterns of development that minimise the need to travel and contribute to cleaner air [...].”*

2.3.24 Objective 10 states:

“We will: [...]”

- *“[...] Reduce the health impacts of air pollution through accessibility of sustainable travel such as public transport, cycling and walking [...].”*

2.3.25 Policy JP-S6: Clean Air states that a range of measures will be undertaken to support improvements in air quality including the following measures: planning applications should have regard to the most recent development and planning control guidance, developments will be restricted if they cause a significant point source pollution and electric vehicle charging points will be expanded.

Greater Manchester Strategy

2.3.26 The Greater Manchester Strategy was implemented in 2021 and sets out the authority’s plans for the next decade (up until 2031) (Greater Manchester Combined Authority (GMCA), 2021). One of the commitments within the strategy is to *“create a carbon neutral Greater Manchester by 2038, with better air quality and natural environment”*.

Greater Manchester Low-Emission Strategy

2.3.27 The Greater Manchester Low-Emission Strategy was adopted by the GMCA in 2016. The strategy sets out a framework for policies and includes measures to reduce air pollution, encourage low emission behaviour to help the UK government meet the EU air quality limits (GMCA, 2016a).

Greater Manchester Transport Strategy

2.3.28 GMCA adopted the Greater Manchester Transport Strategy 2040 in 2017 and has subsequently updated the document in 2021 (GMCA, 2017). The document sets out the long-term ambition for transport in the Greater Manchester area. The following policies are linked to air quality:

2.3.29 Policy 4 states:

“Policy 4: We will work with developers to ensure that new developments are accessible by sustainable modes, and to reduce transport emissions and impacts on the highway network.”

2.3.30 Policy 9 which states:

“Policy 9: We will work with partners and key stakeholders to bring nitrogen dioxide (NO₂) levels on local roads within legal limits, and to reduce levels of particulate matter.”

2.3.31 Policy 16 states:

“Policy 16: We will work with partners to support a rapid transition towards low emission vehicles in Greater Manchester, including developing a clear strategy on the Electric Vehicle Charging Infrastructure network required to provide greater confidence to residents and businesses to invest in electric vehicles.”

Greater Manchester Air Quality Action Plan (AQAP)

- 2.3.32 The Greater Manchester AQAP was created in 2016 with the primary objective to improve air quality across Greater Manchester and encourage low emissions behaviour to meet the EUs thresholds for air pollutants (GMCA, 2016b).

Greater Manchester Combined Authority 2022 Air Quality Annual Status Report (ASR)

- 2.3.33 The 2022 Air Quality ASR was published in June 2023 and shows the strategies that the GMCA have employed to reduce air pollution and improve air quality (GMCA, 2023). It also reports current data from the LAQM monitoring regime and reports the progress of the AQAP.

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, 2014). 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.

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 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, then considers the suitability of the Site for the proposed end-use. It also assesses the impact of construction and operational activities on air quality and sensitive receptors in the study area.

3.2 Baseline Air Quality

- 3.2.1 Any exceedances of the limit values along roads within the study area have been identified using the 2020 NO₂ Projections Data published by DEFRA (DEFRA, 2020a). Information on baseline air quality in the study area has been obtained by collating the results of monitoring carried out by BC 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, 2020b).

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 concentrations of PM₁₀).
- 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 PM₁₀ 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, 2014). 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 PM₁₀; and
 - harm to ecological receptors due to increased dust deposition.
- 3.3.5 The first stage of the assessment involves a screening to determine if there are sensitive receptors within threshold distances of the activities associated with the construction phase of

the scheme; defined as the study area. No further assessment is required if there are no receptors within the study area.

- 3.3.6 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.
- 3.3.7 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-4** in **Error! Reference source not found.**(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.
- 3.3.8 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.
- 3.3.9 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 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 traffic generated by the Proposed Development is determined based on the screening criteria outlined in the EPUK / IAQM Guidance (EPUK / IAQM, 2017) (see **Error! Reference source not found.** 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 further consideration.
- 3.4.2 Information on the Proposed Development's trip generation has been provided by the Project's transport consultants, Stantec.

3.5 Site Suitability

- 3.5.1 A qualitative assessment to determine whether there is a potential for exceedances of the relevant NAQOs at sensitive locations within the Proposed Development has been undertaken, 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).

4 Baseline Environment

4.1 Site Context

- 4.1.1 The Site is located adjacent to Irwell Street (to the west of the Site), Lower Bank Street to the north of the Site and Jubilee Way (A58) to the south of the Site. The area surrounding the Site is predominantly residential with Castle Leisure Centre to the north of the Site and Bury Grammar Schools to the south of the Site. The Bury Bolton Street train station is located approximately 70 m west of the Site.

4.2 Study Area

- 4.2.1 The study area adopted for this assessment is as follows:
- for the construction phase assessment, the study area (based on IAQM, 2014 guidance) is defined as up to 350 m from the Site or 50 m from the route of construction vehicles (up to 500 m from the Site Entrance).
 - for the operational phase 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 or measured exceedances of the limit values.

LAQM

- 4.3.2 BC 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 due to exceedances of the annual mean nitrogen dioxide (NO₂) objective within Bury as part of the GMCA AQMA. The AQMA encompasses the major road network within the borough and some larger areas within the vicinity of the M62, M66 and A58. The Site lies partially within the AQMA which extends approximately 25 m from the A58 and the location of the AQMA is shown in **Figure 4-1**.

Local Monitoring Data

NO₂

- 4.3.3 BC undertakes automatic monitoring of NO₂ concentrations at four locations in the borough, the closest to the Site is the Bury Bridge monitoring station. BC also undertakes monitoring using NO₂ diffusion tubes at several locations. The closest diffusion tube monitoring location to the Site, BU10, is located approximately 301 m north on Bolton Road (A58), Bury. Monitoring sites located within 1 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 in **Table 4-1** and **Table 4-2**, it should be noted that these are not considered likely to be representative of longer-term trends due to COVID-19 restrictions in place during 2020.

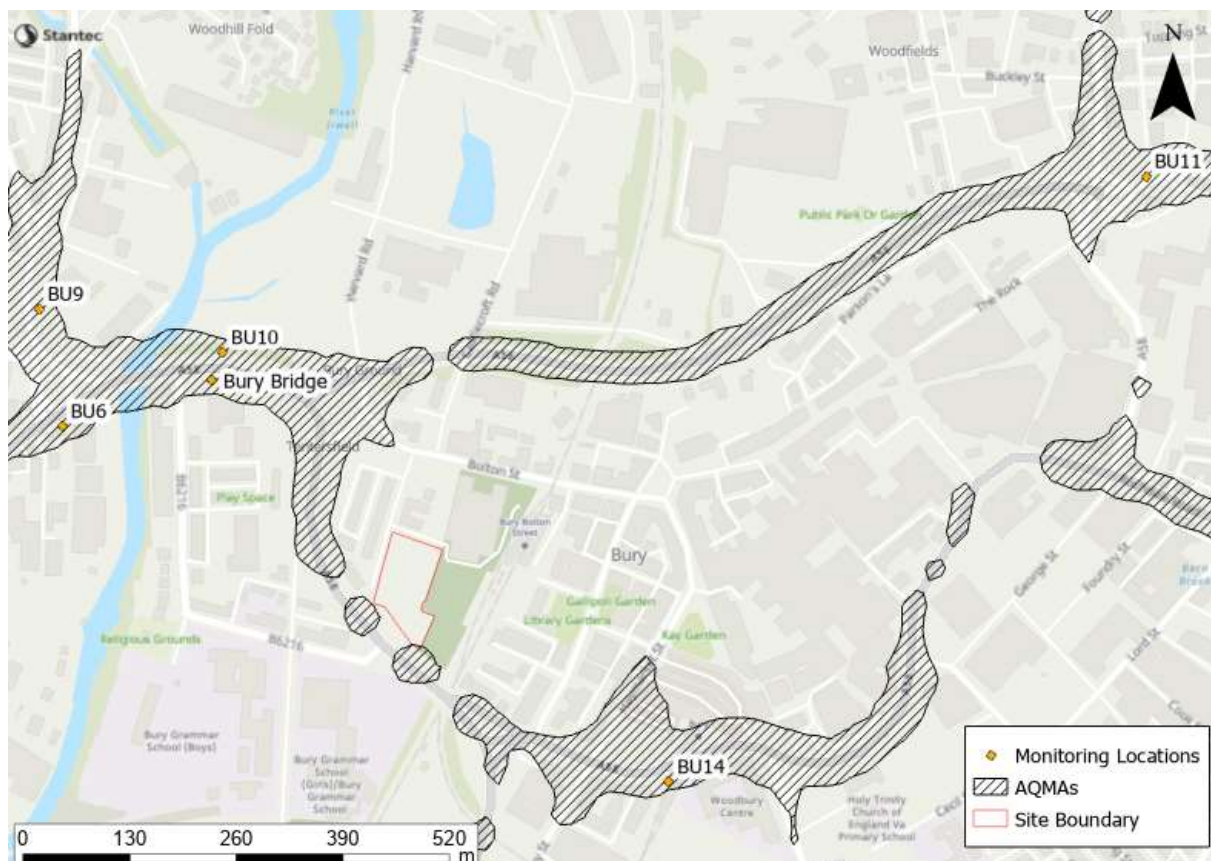


Figure 4-1 Monitoring Locations in the vicinity of the Site. Contains OS Data © Crown Copyright and Database rights 2024. Contains data from OS Zoomstack.

Table 4-1 Measured Annual Mean NO₂ Concentrations 2018 – 2022

Site ID	Site Type	Within AQMA	Annual Mean (µg/m³)				
			2018	2019	2020	2021	2022
Automatic Monitors							
Bury Bridge (BUR03)	Roadside	Y	-	-	-	-	22.6
Diffusion Tubes							
BU6	Roadside	Y	36.7	36.4	27.5	30.4	30.7
BU9	Roadside	Y	-	35.4	27.1	26.9	30.2
BU10	Roadside	Y	-	37.1	27.3	27.9	30.7
BU11	Roadside	Y	-	41.3	32.3	33.5	34.7
BU14	Roadside	Y	-	37.5	26.9	26.8	30.7
NAQO		40					

Exceedances of the NAQO are highlighted bold.

2018 – 2022 data taken from the GMCA 2022 Air Quality Annual Status Report (GMCA, 2023)

- 4.3.4 There have been no measured exceedances of the annual mean NO₂ NAQO between 2018 – 2022 at any of the monitoring locations within 1 km of the Site, except for at BU11 in 2019. BU11 is located on the roadside, near a junction in the AQMA where higher concentrations are expected compared to those anticipated within the Proposed Development. Measured concentrations at the monitoring locations within **Table 4-1** are all below 60 µg/m³, indicating

that it is unlikely that any exceedances of the 1-hour mean NAQO have occurred during the monitoring period presented.

Table 4-1 Measured Exceedances of the Hourly Mean NO₂ NAQO 2018 – 2022

Site ID	Number of Hours >200µg/m ³				
	2018	2019	2020	2021	2022
Bury Bridge	-	-	-	-	0
NAQO	18 (hours >200µg/m³)				

2018 – 2022 data taken from the GMCA 2022 Air Quality Annual Status Report (GMCA, 2023)

4.3.5 **Table 4-2** shows that there have been no exceedances of the hourly mean NO₂ NAQO in 2022.

PM₁₀ and PM_{2.5}

4.3.6 BC does not undertake PM₁₀ or PM_{2.5} monitoring within 3 km of the Site.

Predicted Background Concentrations

4.3.7 Estimated background concentrations for the Site have been obtained from the latest 2018-based national maps provided by DEFRA (DEFRA, 2020b) and are provided in **Table 4-3**.

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

Table 4-3 Estimated Annual Mean Background Concentrations

Year	Location	Annual Mean (µg/m ³)		
		NO ₂	PM ₁₀	PM _{2.5}
2023	380_410	16.2	11.7	7.9
NAQOs		40	40	20

Note: Projections in the 2018 reference year background maps and associated tools are based on assumptions which were current before the Covid-19 outbreak in the UK. In consequence these tools do not reflect short- or longer-term impacts on emissions in 2020 and beyond resulting from behavioural change during the national or local lockdowns.

5 Predicted Impacts

5.1 Construction Dust Impacts

- 5.1.1 The main potential effects during construction are annoyance and loss of amenity caused by dust soiling, human health impacts caused by PM₁₀.
- 5.1.2 There are no sensitive ecological receptors located within 50 m of the site boundary or within 50 m of the routes used by demolition and construction vehicles on the public highway within 250m of the Site entrance. As such in accordance with the IAQM guidance, the potential for ecological impacts as a result of dust soiling can be screened out as being 'not significant'.
- 5.1.3 There are no solid structures currently situated in the site boundary, therefore the potential impacts of dust emissions with respect to demolition activities has been screened out of this assessment.

Dust Emission Magnitude

- 5.1.4 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**, Error! Reference source not found.

Table 5-1 Dust Emissions Magnitudes

Activity	Magnitude	Justification
Earthworks	Medium	Proposed earthworks activities comprise of soil preparation and landscaping across an area less than 10,000 m ² . The soil at the Site is largely classified as freely draining loamy soils (British Geological Survey, 2024) which are considered to be moderately dusty, particularly during periods of dry weather. Based on this, the dust emission magnitude of earthworks activities is judged to be 'medium'.
Construction	Small	The total building volume to be constructed is expected to be less than 25,000 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	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 10 outward HDV movements in any one day. 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 Error! Reference source not found.. The IAQM demolition and construction band criteria used to determine the sensitivity of the local area is shown in below.

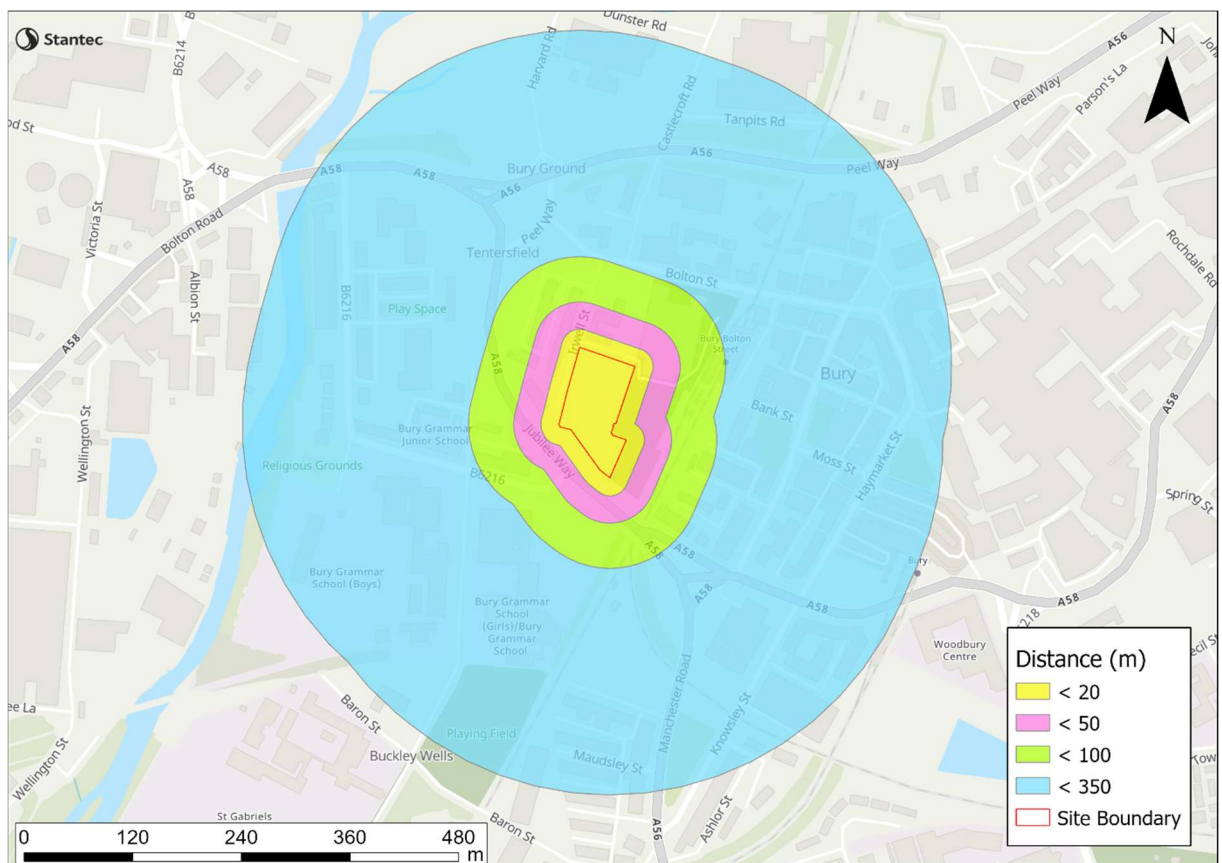


Figure 5-1: IAQM Demolition and Construction Dust band Criteria from the Site boundary. Contains OS Data © Crown Copyright and Database rights 2024. Contains data from OS Zoomstack.

- 5.1.6 Residential properties are classed as 'high sensitivity' receptors to dust soiling, based on the IAQM guidance (IAQM, 2014) (**Table B-3**, Error! Reference source not found.). There are 14 residential properties located within 20 m of the Site boundary. As such, the sensitivity of the area surrounding the Site to human health impacts and dust soiling is judged to be **'high'**.
- 5.1.7 The IAQM also defines residential properties and nurseries as being 'high sensitivity' receptors to human health impacts (see **Table B-4, Appendix B**). PM₁₀ concentrations within the study area are anticipated to be similar to the predicted background concentrations presented in Table 4-3 (i.e. 11.7 µg/m³). Based on the predicted existing PM₁₀ 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'**.
- 5.1.8 The IAQM guidance states that trackout may occur for distance of up to 50 m from small sites. The demolition and construction traffic routing are currently unknown, however it has been assumed the vehicles would travel north on Irwell Road to join Bolton Street. There are between 10 and 100 residential properties located within 20 m of roads extending up to 50 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'**.
- 5.1.9 There are no sensitive ecological receptors within 50 m of the Site or roads along which material may be tracked, therefore, the study area is not considered to be sensitive to potential impacts on sensitive ecological receptors.

Risk of Impacts

- 5.1.10 The risk of construction dust impacts, without mitigation, have been defined based on the criterion shown in **Table B-6**, Error! Reference source not found.and are presented in **Table 5-2**.

Table 5-2 Risk of Construction Dust Impacts without Mitigation

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

5.2 Road Traffic Emission Impacts

- 5.2.1 The predicted vehicle trip generation has been provided by the Project's Transport Consultants, Stantec. The Proposed Development will generate road traffic during the operational phase which will result in up to 139 AADT (including 2 HDV AADT).
- 5.2.2 The total additional traffic flow associated with the Proposed Development will be distributed west and east of Bolton Road. Due to road restrictions along The Rock, Silver Street and Market Street, the majority of the additional road traffic will travel west into the AQMA. However, it is estimated that the additional traffic flow from the Site travelling into the AQMA will be below 100 AADT. As such, traffic generated by the Proposed Development is anticipated to be below the EPUK / IAQM screening criteria (see **Appendix C**).
- 5.2.3 Therefore, the potential impacts of emission to air from operational traffic generated by the Development on air quality at existing sensitive receptors within the study area are considered to be 'not significant' and no additional assessment or mitigation is therefore required.

5.3 Site Suitability

- 5.3.1 The Proposed Development will be located on Irwell Street which is considered to be a minor road in relation to traffic flows. The closest major road to the Site is A58 Jubilee Way and the proposed care home will be set back more than 20 m from the A58. At this distance road traffic emissions from road vehicles using the A58 are unlikely to significantly impact air quality within the Site.
- 5.3.2 The NO₂ concentrations at the local monitoring sites were below the objective at all locations. As NO₂ concentrations measured at the roadside monitoring locations are below the annual mean, it is unlikely that the annual mean NO₂ NAQO will be exceeded within the Site. Measured concentrations in close proximity to the development site are well below 60 µg/m³, indicating that the one-hour mean NO₂ NAQO is unlikely to be exceeded within the Site. Background concentrations of NO₂, PM₁₀ and PM_{2.5} are well below the annual mean of NAQOs / limit value.
- 5.3.3 The Site is considered suitable for the proposed care home use without the need for site-specific mitigation associated with air quality.

6 Mitigation

6.1 Construction

The following standard mitigation measures from the IAQM guidance (IAQM, 2014) are recommended, taking into account the outcomes of the construction dust risk assessment (presented in **Table 5-2**).

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.
	Display the head or regional office contact information.
Management	Develop and implement a Dust Management Plan (DMP).
	Record all dust and air quality complaints, identify causes 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.
	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.
Preparing and maintaining the Site	Plan Site layout so that machinery and dust causing activities are located away from receptors, as far as possible.
	Erect solid screens or barriers around dusty activities or the Site boundary that are at least as high as any stockpiles on Site.
	Fully enclose Site or specific operations where there is a high potential for dust productions and the Site is active for an extensive period.
	Avoid Site runoff of water or mud.
	Keep Site fencing, barriers and scaffolding clean using wet methods.
	Remove materials that have a potential to produce dust from Site as soon as possible, unless being re-used on Site.
	Cover, seed or fence stockpiles to prevent wind whipping.
Operating vehicle/machinery	Ensure all vehicles switch off engines when stationary – no idling vehicles.

and sustainable travel	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.
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.N
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 sweepers on the Site access and local roads.
	Avoid dry sweeping of large areas.
	Ensure vehicles entering and leaving the Site are covered to prevent escape of materials.
	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).

7 Summary and Conclusions

- 7.1.1 The air quality impacts associated with the Proposed Development at the Former Police Station, Bury have been assessed. The Site is located within the administrative boundary of Bury Council.
- 7.1.2 An AQMA has been declared due to exceedances of the annual mean NO₂ NAQO within Bury as part of the GMCA AQMA. The Site lies partially within the AQMA which extends approximately 25 m from the A58.
- 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 PM₁₀ 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 road traffic resulting from the Proposed Development is below the EPUK / IAQM guidance screening criteria. Therefore, the impact of road traffic emissions associated with the Proposed Development on local air quality are considered to be 'not significant' and no additional mitigation is considered to be required.
- 7.1.5 The monitored annual mean NO₂ concentrations have been well below the NAQO within the study area since 2018, except for BU11 in 2019. However, BU11 is located near to a junction within the AQMA where higher concentrations are expected compared to those anticipated within the Proposed Development. Overall, the Site is considered to be suitable for the proposed end-use without the need for further mitigation.
- 7.1.6 The Proposed Development is therefore considered to be in accordance with the requirements of the 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
BC	Bury Council
CAZ	Clean Air Zone
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
LA	Local Authority
LAQM	Local Air Quality Management
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
SPG	Supplementary Planning Guidance

Appendix B IAQM Dust Guidance (2014) Approach

Table B-1 Dust Emission Magnitude Classification

Activity	Dust Emission Magnitude		
	Large	Medium	Small
Demolition	Total building volume of >50,000 m ³ , potentially dusty construction material, on-site crushing and screening, demolition activities >20 m above ground	Total building volume of 20,000 – 50,000 m ³ , potentially dusty construction material, demolition activities 10 – 20 m above ground level	Total building volume of <20,000 m ³ , construction material with low potential for dust release, demolition activities <10 m above ground, demolition during wetter months
Earthworks	Total site area of >10,000 m ² , potentially dusty soil type, >10 heavy earth moving vehicles active at any one time, formation of bunds >8 m in height, total material moved >100,000 tonnes	Total site area of 2,500 - 10,000 m ² , moderately dusty soil type, 5 - 10 heavy earth moving vehicles active at any one time, formation of bunds 4 - 8 m in height, total material moved 20,000 - 100,000 tonnes	Total site area of <2,500 m ² , soil type with large grain size, <5 heavy earth moving vehicles active at any one time, formation of bunds <4 m in height, total material moved <20,000 tonnes. Earthworks during wetter months
Construction	Total building volume >100,000 m ² , on-site concrete batching, sandblasting	Total building volume 25,000 - 100,000 m ² , potentially dusty construction material, on-site concrete batching	Total building volume <25,000 m ² , 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	10 - 50 HDV outwards movements in any one day, moderately dusty surface material, unpaved road length 50 - 100 m	<10 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 of 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 PM₁₀ (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 <i>and</i> 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 SAC 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 of a reasonable level of amenity, but would not reasonably expect to enjoy the same level of amenity as in their home; - The appearance, aesthetics of 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 PM₁₀ (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 PM₁₀, 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 SSSI 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 LNR with dust sensitive features.
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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	<200	<350
High	>32 µg/m ³	>100	High	High	High	Medium	Low
		10 – 100	High	High	Medium	Low	Low
		1 - 10	High	Medium	Low	Low	Low
	28 - 32 µg/m ³	>100	High	High	Medium	Low	Low
		10 – 100	High	Medium	Low	Low	Low
		1 - 10	High	Medium	Low	Low	Low
	24 - 28 µg/m ³	>100	High	Medium	Low	Low	Low
		10 – 100	High	Medium	Low	Low	Low
		1 - 10	Medium	Low	Low	Low	Low

	<24 µg/m ³	>100	Medium	Low	Low	Low	Low
		10 – 100	Low	Low	Low	Low	Low
		1 - 10	Low	Low	Low	Low	Low
Medium	>32 µg/m ³	>10	High	Medium	Low	Low	Low
		1 - 10	Medium	Low	Low	Low	Low
	28 - 32 µg/m ³	>10	Medium	Low	Low	Low	Low
		1 - 10	Low	Low	Low	Low	Low
	24 - 28 µg/m ³	>10	Low	Low	Low	Low	Low
		1 - 10	Low	Low	Low	Low	Low
	<24 µg/m ³	>10	Low	Low	Low	Low	Low
		1 - 10	Low	Low	Low	Low	Low
Low	-	≥1	Low	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	Low Risk	Negligible 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