

Air Quality Assessment
Royle Road, Rochdale

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Prepared by	Francine Chan	Francine Chan		
Position	Graduate Air Quality Consultant	Air Quality Consultant		
Reviewed by	Megan Pond	Megan Pond		
Position	Air Quality Consultant	Air Quality Consultant		
Authorised by	Jethro Redmore	Jethro Redmore		
Position	Director	Director		
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Serendipity Labs, Building 7, Exchange Quay, Salford, M5 3EP

info@red-env.co.uk | 0161 706 0075 | www.red-env.co.uk

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Executive Summary

Redmore Environmental Ltd was commissioned by BMC Rochdale Limited to undertake an Air Quality Assessment in support of a residential development on land off Royle Road, Rochdale.

An Air Quality Assessment was undertaken to:

- Assess potential impacts associated with fugitive dust emissions during the construction phase of the proposed development;
- Assess potential impacts associated with road transport emissions during the operational phase of the proposed development;
- Assess risk of future resident exposure to any existing air quality issues; and,
- Identify any requirement for relevant mitigation measures.

Potential construction phase impacts from fugitive dust emissions were assessed as a result of earthworks, construction and trackout activities. It is considered that the use of the identified site-specific control measures would provide suitable mitigation for a development of this size and nature and reduce potential impacts to an acceptable level.

Potential impacts during the operational phase of the proposals may occur due to road traffic exhaust emissions associated with vehicles travelling to and from the site. These were assessed using standard screening criteria. Due to the low number of vehicle trips generated by the scheme, road traffic exhaust emission impacts were not predicted to be significant.

The potential for the exposure of future residents to elevated pollution levels was assessed based on the results of a desk-top study. This indicated that pollutant concentrations are likely to be below the relevant criteria at the development location. As such, the site is considered suitable for the proposed use from an air quality perspective.

Based on the assessment results, air quality factors are not considered a constraint to planning consent for the proposals.

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Appendix 1 - Curricula Vitae

1.0 INTRODUCTION

1.1 Instruction

- 1.1.1 Redmore Environmental Ltd was commissioned by BMC Rochdale Limited to undertake an Air Quality Assessment in support of a residential development on land off Royle Road, Rochdale.

1.2 Site Location and Context

- 1.2.1 The site is located on land off Royle Road, Rochdale, at approximate National Grid Reference (NGR): 388780, 411700. The relevant Local Authority (LA) is Rochdale Borough Council (RBC). Reference should be made to Figure 1 for a map of the site and surrounding area and Figure 2 for the site layout plan.
- 1.2.2 The proposals comprise the construction of 75 self-contained apartments (Use Class C3), comprising 38 No.1-bedroom apartments and 37 No.2-bedroom apartments, with extra care light facilities, residents' facilities, associated landscaping, parking, a new access and internal access road.

1.3 Assessment Scope

- 1.3.1 The proposals have the potential to cause air quality impacts at sensitive locations. As such, an Air Quality Assessment was undertaken to:
- Assess potential impacts associated with fugitive dust emissions during the construction phase of the development;
 - Assess potential impacts associated with road transport emissions during the operational phase of the development;
 - Assess risk of future resident exposure to any existing air quality issues; and,
 - Identify any requirement for relevant mitigation measures.
- 1.3.2 This is detailed in the following report.

2.0 LEGISLATION AND POLICY

2.1 Legislation

2.1.1 The Air Quality Standards Regulations (2010) and subsequent amendments include Air Quality Limit Values (AQLVs) for the following pollutants:

- Nitrogen dioxide (NO₂);
- Sulphur dioxide;
- Lead;
- Particulate matter with an aerodynamic diameter of less than 10µm (PM₁₀);
- Particulate matter with an aerodynamic diameter of less than 2.5µm (PM_{2.5});
- Benzene; and,
- Carbon monoxide.

2.1.2 Air Quality Target Values were also provided for several additional pollutants. It should be noted that the AQLV for PM_{2.5} stated in the Air Quality Standards Regulations (2010) was amended in the Environment (Miscellaneous Amendments) (EU Exit) Regulations (2020).

2.1.3 The Air Quality Strategy (AQS) was produced by the Department for Environment, Food and Rural Affairs (DEFRA) and published on 28th April 2023¹. The document contains standards, objectives and measures for improving ambient air quality, including a number of Air Quality Objectives (AQOs). These are maximum ambient pollutant concentrations that are not to be exceeded either without exception or with a permitted number of exceedences over a specified timescale. These are generally in line with the AQLVs, although the requirements for the determination of compliance vary.

2.1.4 The Environmental Improvement Plan 2025² was published in December 2025, providing long term and Interim Targets in order to reduce population exposure to PM_{2.5}. The Concentration Target for 2040 was adopted in the Environmental Targets (Fine Particulate Matter) (England) Regulations (2023).

¹ AQS: Framework for Local Authority Delivery, DEFRA, 2023.

² Environmental Improvement Plan 2025, DEFRA, 2025.

2.1.5 Table 1 presents the AQOs, Interim Target and Concentration Target for pollutants considered within this assessment.

Table 1 Air Quality Objectives/ Interim Target/ Concentration Target

Pollutant	Air Quality Objective/ Interim Target/ Concentration Target	
	Concentration ($\mu\text{g}/\text{m}^3$)	Averaging Period
NO ₂	40	Annual mean
	200	1-hour mean, not to be exceeded on more than 18 occasions per annum
PM ₁₀	40	Annual mean
	50	24-hour mean, not to be exceeded on more than 35 occasions per annum
PM _{2.5}	10 ^(a)	Annual mean
	10 ^(b)	Annual mean

Note: (a) Interim Target to be achieved by 2030.

(b) Concentration Target to be achieved by 2040.

2.1.6 Table 2 summarises the advice provided in DEFRA guidance³ on where the AQOs for pollutants considered within this report apply.

Table 2 Examples of Where the Air Quality Objectives Apply

Averaging Period	Objective Should Apply At	Objective Should Not Apply At
Annual mean	All locations where members of the public might be regularly exposed Building façades of residential properties, schools, hospitals, care homes etc.	Building 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 residential properties Kerbside sites (as opposed to locations at the building façade), or any other location where public exposure is expected to be short term

³ Local Air Quality Management Technical Guidance (TG22), DEFRA, 2022.

Averaging Period	Objective Should Apply At	Objective Should Not Apply At
24-hour mean	All locations where the annual mean objective would apply, together with hotels Gardens of residential properties	Kerbside sites (as opposed to locations at the building façade), or 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 objectives apply. Kerbside sites (for example, pavements of busy shopping streets) 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 sites where the public would not be expected to have regular access

2.2 Local Air Quality Management

2.2.1 LAs are required to periodically review and assess air quality within their area of jurisdiction under the system of Local Air Quality Management (LAQM). This review and assessment of air quality involves comparing present and likely future pollutant concentrations against the AQOs. If it is predicted that levels at locations of relevant exposure, as summarised in Table 2, are likely to be exceeded, the LA is required to declare an Air Quality Management Area (AQMA). For each AQMA the LA is required to produce an Air Quality Action Plan, the objective of which is to reduce pollutant concentrations in pursuit of the AQOs.

2.3 Dust

2.3.1 The main requirements with respect to dust control from industrial or trade premises not regulated under the Environmental Permitting (England and Wales) Regulations (2016) and subsequent amendments, such as construction sites, is that provided in Section 79 of Part III of the Environmental Protection Act (1990). The Act defines nuisance as:

"any dust, steam, smell or other effluvia arising on industrial, trade or business premises and being prejudicial to health or a nuisance."

2.3.2 Enforcement of the Act, in regard to nuisance, is currently under the jurisdiction of the local Environmental Health Department, whose officers are deemed to provide an independent evaluation of nuisance. If the LA is satisfied that a statutory nuisance exists, or is likely to occur or happen again, it must serve an Abatement Notice under Part III of the Environmental Protection Act (1990). The only defence is to show that the process to which the nuisance has been attributed and its operation are being controlled according to best practicable means.

2.4 National Planning Policy

2.4.1 The revised National Planning Policy Framework⁴ (NPPF) was published in December 2024 and amended in February 2025. The document sets out the Government's planning policies for England and how these are expected to be applied.

2.4.2 The purpose of the planning system is to contribute to the achievements of sustainable development. In order to ensure this, the NPPF recognises three overarching objectives including the following of relevance to air quality:

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

2.4.3 Chapter 15 of the NPPF details objectives in relation to conserving and enhancing the natural environment. It states that:

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

[...]

e) preventing new and existing development from contributing to, or being put at unacceptable risk from, or being adversely affected by, unacceptable levels of

⁴ NPPF, Ministry of Housing, Communities and Local Government, 2024.

soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality [...]"

- 2.4.4 The NPPF specifically recognises air quality as part of delivering sustainable development and 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."

- 2.4.5 The implications of the NPPF have been considered throughout this assessment.

2.5 **National Planning Practice Guidance**

- 2.5.1 The National Planning Practice Guidance⁵ (NPPG) web-based resource was launched by the Department for Communities and Local Government to support the NPPF and make it more accessible. The air quality pages are summarised under the following headings:

1. What air quality considerations does planning need to address?
2. What is the role of plan-making with regard to air quality?
3. Are air quality concerns relevant to neighbourhood planning?
4. What information is available about air quality?
5. When could air quality be relevant to the planning development management process?
6. What specific issues may need to be considered when assessing air quality impacts?

⁵ <https://www.gov.uk/guidance/air-quality--3>.

7. How detailed does an air quality assessment need to be?
8. How can an impact on air quality be mitigated?

2.5.2 These were reviewed and the relevant guidance considered as necessary throughout the undertaking of this assessment.

2.6 Regional Planning Policy

2.6.1 The Places for Everyone Plan (PfEP)⁶ was produced by the Greater Manchester Combined Authority (GMCA) and became part of the statutory development plan for each of the relevant LAs on 21st March 2024.

2.6.2 A review of the PfEP indicated the following policies of relevance to air quality that have been considered throughout this assessment:

"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

⁶ PfEP, GMCA, 2024.

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."

"Policy JP-P1 Sustainable Places

We aim to become one of the most liveable city regions in the world, consisting of a series of beautiful, healthy and varied places, each having the following key attributes that all development, wherever appropriate, should be consistent with:

[...]

15. Comfortable and inviting, with indoor and outdoor environments:

A. Offering a high level of amenity that minimises exposure to pollution; and,

[...]."

2.6.3 The above policies were taken into consideration throughout the undertaking of the assessment.

2.7 Local Planning Policy

2.7.1 The Rochdale Local Plan: Core Strategy 2016-2028⁷ was adopted by RBC on 19th October 2016. Review of the document indicated the following of relevance to this report:

"Policy G9 - Reducing the Impact of Pollution, Contamination and Land Stability

We will reduce all forms of pollution, contamination and land instability in the borough, by:

a. Focusing on measures that reduce air pollution in Air Quality Management Areas, and other areas where pollution levels are unacceptable, particularly around motorways and main roads;

b. Requiring that development does not have impacts that lead to an unacceptable increase in air, water, noise, light or other pollution;

c. Ensuring sensitive new developments such as housing, schools and hospitals are not adversely affected by existing sources of pollution such as roads and certain types of industry;

d. Requiring a Low Emissions Strategy (LES) where development requires a Transport Assessment, and in other circumstances as appropriate;

⁷ Rochdale Local Plan: Core Strategy 2016 - 2028, RBC, 2016.

[...]

g. Using planning conditions or obligations to control pollution from new development, or the impact of pollution on new development."

"Policy DM1 - General Development Requirements

All development proposals, including changes of use of land and buildings, extensions and alterations, will be expected to demonstrate that they:

[...]

d. Mitigate against any impacts due to noise, air, dust, light and odour pollution, traffic generation or inadequate access, where such mitigation is identified as being necessary;

[...]

f. Do not have an adverse impact on health, through its impact or the effect of existing problems e.g. land contamination, or poor air quality;

[...]"

"DM2 - Delivering planning contributions and infrastructure

[...]

For all types of development, including housing, we will seek contributions for any infrastructure or other measures necessary to mitigate any on site or off-site impacts from the development.

These contributions may cover, dependent on need:

[...]

e. Mitigation or compensation against environmental impacts e.g. noise, air quality (particularly in Air Quality Management Areas);

[...]."

2.7.2 The above policies were taken into consideration throughout the undertaking of the assessment.

2.8 Greater Manchester Clean Air Plan

2.8.1 The UK Government has instructed a number of LAs to take rapid action to reduce harmful roadside levels of NO₂ within their areas of jurisdiction in the quickest possible timeframe. The GMCA and Transport for Greater Manchester (TfGM) have collaborated to develop a Clean Air Plan (CAP) to ensure Greater Manchester achieves compliance with the relevant AQOs for NO₂ by 2026 at the latest. The initial CAP proposal included implementation of a Class C charging Clean Air Zone. The GMCA subsequently updated the CAP proposals⁸ to comprise an investment-led, non-charging approach. This was approved by the UK Government on 23rd January 2025. The implications of the CAP were taken into account during the undertaking of this assessment.

⁸ Case for a New GM Clean Air Plan, GMCA and TfGM, 2022.

3.0 METHODOLOGY

3.1 Introduction

3.1.1 The proposed development has the potential to cause air quality impacts during the construction and operational phases, as well as expose future residents to any existing air quality issues. These factors have been assessed in accordance with the following methodology.

3.2 Construction Phase Assessment

3.2.1 There is the potential for fugitive dust emissions to occur as a result of construction phase activities. These have been assessed in accordance with the methodology outlined within the Institute of Air Quality Management (IAQM) document 'Guidance on the Assessment of Dust from Demolition and Construction V2.2'⁹.

3.2.2 Activities on the proposed construction site have been divided into three types to reflect their different potential impacts. These are:

- Earthworks;
- Construction; and,
- Trackout.

3.2.3 The potential for dust emissions was assessed for each activity that is likely to take place and considered three separate dust effects:

- Annoyance due to dust soiling;
- Harm to ecological receptors; and,
- The risk of health effects due to a significant increase in exposure to PM₁₀.

3.2.4 The assessment steps are detailed below.

⁹ Guidance on the Assessment of Dust from Demolition and Construction V2.2, IAQM, 2024.

Step 1 - Screen the Need for an Assessment

- 3.2.5 Step 1 screens the requirement for a more detailed assessment. Should human receptors be identified within 250m from the boundary or 50m from the construction vehicle route up to 250m from the site entrance, then the assessment proceeds to Step 2. Additionally, should ecological receptors be identified within 50m of the site or the construction vehicle route up to 250m from the site entrance, then the assessment also proceeds to Step 2.
- 3.2.6 Should sensitive receptors not be present within the relevant distances then **negligible** impacts would be expected and further assessment is not necessary.

Step 2 - Assess the Risk of Dust Impacts

- 3.2.7 Step 2 assesses the risk of potential dust impacts. A site is allocated a risk category based on two factors:
- The scale and nature of the works, which determines the magnitude of dust arising as: small, medium or large (Step 2A); and,
 - The sensitivity of the area to dust impacts, which can be defined as low, medium or high sensitivity (Step 2B).
- 3.2.8 The two factors are combined in Step 2C to determine the risk of dust impacts without mitigation applied.
- 3.2.9 Step 2A defines the potential magnitude of dust emission through the construction phase. The relevant criteria are summarised in Table 3.

Table 3 Construction Dust - Magnitude of Emission

Magnitude	Activity	Criteria
Large	Earthworks	• Total site area greater than 110,000m² • Potentially dusty soil type (e.g. clay, which will be prone to suspension when dry due to small particle size) • More than 10 heavy earth moving vehicles active at any one time • Formation of bunds greater than 6m in height

Magnitude	Activity	Criteria
	Construction	- Total building volume greater than 75,000m³ - On site concrete batching - Sandblasting
	Trackout	- More than 50 Heavy Duty Vehicle (HDV) trips per day - Potentially dusty surface material (e.g. high clay content) - Unpaved road length greater than 100m
Medium	Earthworks	- Total site area 18,000m² to 110,000m² - Moderately dusty soil type (e.g. silt) 5 to 10 heavy earth moving vehicles active at any one time - Formation of bunds 3m to 6m in height
	Construction	- Total building volume 12,000m³ to 75,000m³ - Potentially dusty construction material (e.g. concrete) - On site concrete batching
	Trackout	20 to 50 HDV trips per day - Moderately dusty surface material (e.g. high clay content) - Unpaved road length 50m to 100m
Small	Earthworks	- Total site area less than 18,000m² - Soil type with large grain size (e.g. sand) - Less than 5 heavy earth moving vehicles active at any one time - Formation of bunds less than 3m in height
	Construction	- Total building volume less than 12,000m³ - Construction material with low potential for dust release (e.g. metal cladding or timber)
	Trackout	- Less than 20 HDV trips per day - Surface material with low potential for dust release - Unpaved road length less than 50m

3.2.10 Step 2B defined the sensitivity of the area around the development to potential dust impacts. The sensitivities of specific receptors are summarised in Table 4.

Table 4 Construction Dust - Sensitivities of People and Ecological Receptors

Receptor Sensitivity	Examples	
	Human Receptors	Ecological Receptors
High	• Users expect high levels of amenity • High aesthetic or value property • People expected to be present continuously for extended periods of time • Locations where members of the public are exposed over a time period relevant to the AQO for PM₁₀. e.g. residential properties, hospitals, schools and residential care homes	• Internationally or nationally designated site e.g. Special Area of Conservation
Medium	• Users would expect to enjoy a reasonable level of amenity • Aesthetics or value of their property could be diminished by soiling • 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 e.g. parks and places of work	• Nationally designated site e.g. Sites of Special Scientific Interest
Low	• Enjoyment of amenity would not reasonably be expected • Property would not be expected to be diminished in appearance • Transient exposure, where people would only be expected to be present for limited periods. e.g. public footpaths, playing fields, shopping streets, farmland, short term car parks and roads	• Locally designated site e.g. Local Nature Reserve

3.2.11 The criteria for determining the sensitivity of the area to dust soiling effects on people and property is summarised in Table 5.

Table 5 Construction Dust - Sensitivity of the Area to Dust Soiling Effects on People and Property

Receptor Sensitivity	Number of Receptors	Distance from the Source (m)			
		Less than 20	Less than 50	Less than 100	Less than 250
High	More than 100	High	High	Medium	Low
	10 - 100	High	Medium	Low	Low

Receptor Sensitivity	Number of Receptors	Distance from the Source (m)			
		Less than 20	Less than 50	Less than 100	Less than 250
	1 - 10	Medium	Low	Low	Low
Medium	More than 1	Medium	Low	Low	Low
Low	More than 1	Low	Low	Low	Low

3.2.12 Table 6 outlines the criteria for determining the sensitivity of the area to human health impacts.

Table 6 Construction Dust - Sensitivity of the Area to Human Health Impacts

Receptor Sensitivity	Background Annual Mean PM ₁₀ Concentration	Number of Receptors	Distance from the Source (m)			
			Less than 20	Less than 50	Less than 100	Less than 250
High	Greater than 32µg/m ³	More than 100	High	High	High	Medium
		10 - 100	High	High	Medium	Low
		1 - 10	High	Medium	Low	Low
	28 - 32µg/m ³	More than 100	High	High	Medium	Low
		10 - 100	High	Medium	Low	Low
		1 - 10	High	Medium	Low	Low
	24 - 28µg/m ³	More than 100	High	Medium	Low	Low
		10 - 100	High	Medium	Low	Low
		1 - 10	Medium	Low	Low	Low
	Less than 24µg/m ³	More than 100	Medium	Low	Low	Low
		10 - 100	Low	Low	Low	Low
		1 - 10	Low	Low	Low	Low
Medium	Greater than 32µg/m ³	More than 10	High	Medium	Low	Low
		1 - 10	Medium	Low	Low	Low
	28 - 32µg/m ³	More than 10	Medium	Low	Low	Low
		1 - 10	Low	Low	Low	Low

Receptor Sensitivity	Background Annual Mean PM ₁₀ Concentration	Number of Receptors	Distance from the Source (m)			
			Less than 20	Less than 50	Less than 100	Less than 250
	24 - 28µg/m ³	More than 10	Low	Low	Low	Low
		1 - 10	Low	Low	Low	Low
	Less than 24µg/m ³	More than 10	Low	Low	Low	Low
		1 - 10	Low	Low	Low	Low
Low	-	1 or more	Low	Low	Low	Low

3.2.13 Table 7 outlines the criteria for determining the sensitivity of the area to ecological impacts.

Table 7 Construction Dust - Sensitivity of the Area to Ecological Impacts

Receptor Sensitivity	Distance from the Source (m)	
	Less than 20	Less than 50
High	High	Medium
Medium	Medium	Low
Low	Low	Low

3.2.14 Step 2C combines the dust emission magnitude with the sensitivity of the area to determine the risk of unmitigated impacts.

3.2.15 Table 8 outlines the risk category from earthworks, construction and trackout activities.

Table 8 Construction Dust - Dust Risk Category from Earthworks, Construction and Trackout Activities

Receptor Sensitivity	Dust Emission Magnitude		
	Large	Medium	Small
High	High	Medium	Low
Medium	Medium	Medium	Low
Low	Low	Low	Negligible

Step 3 - Site-specific Mitigation

3.2.16 Step 3 requires the identification of site-specific mitigation measures within the IAQM guidance¹⁰ to reduce potential dust impacts based upon the relevant risk categories identified in Step 2. For sites with **negligible** risk, mitigation measures beyond those required by legislation are not required. However, additional controls may be applied as part of good practice.

Step 4 - Determine Significant Effects

3.2.17 Once the risk of dust impacts has been determined and the appropriate mitigation measures identified, the final step is to determine the significance of any residual impacts. For almost all construction activity, the aim should be to control effects through the use of effective mitigation. Experience shows that this is normally possible. Hence the residual effect will normally be **not significant**.

3.2.18 The determination of significance relies on professional judgement and reasoning should be provided as far as practicable. The IAQM guidance suggests the provision of details of the assessor's qualifications and experience. These are provided in Appendix 1.

3.3 Operational Phase Assessment

Potential Development Impacts

3.3.1 The development has the potential to increase concentrations of NO₂, PM₁₀ and PM_{2.5} as a result of road traffic exhaust emissions associated with vehicles travelling to and from the site during the operational phase. An assessment was therefore undertaken using the criteria contained within the IAQM 'Land-Use Planning & Development Control: Planning for Air Quality'¹¹ guidance to determine the potential for trips generated by the development to affect local air quality.

3.3.2 The following criteria are provided to help establish when an assessment of potential impacts on the local area is likely to be considered necessary:

¹⁰ Guidance on the Assessment of Dust from Demolition and Construction V2.2, IAQM, 2024.

¹¹ Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

- The development leads to a change of Light Duty Vehicle (LDV) flows of:
 - More than 100 Annual Average Daily Traffic (AADT) within an AQMA;
 - More than 500 AADT outside of an AQMA;
- The development leads to a change of HDV flows of:
 - More than 25 AADT within an AQMA;
 - More than 100 AADT outside of an AQMA;
- Introduce a new junction that would cause traffic flow to change behaviour with respect to acceleration/deceleration or introduce queueing traffic where there previously wasn't any (such as a roundabout or traffic lights); and,
- Introduce one or more significant combustion processes where there is a risk of impact to relevant receptors.

3.3.3 Should these criteria not be met, then the IAQM guidance¹² considers air quality impacts associated with a scheme to be **not significant** and no further assessment is required.

Potential Future Exposure

3.3.4 The proposed development comprises residential land use. This is considered a location of relevant exposure for long and short term AQOs in accordance with DEFRA guidance¹³, as shown in Table 2. Existing air quality conditions at the site were therefore assessed through consideration of the following factors:

- Local monitoring results; and,
- The Air Quality Assessment produced in support of a residential development on land at Royle Road, Rochdale¹⁴ (planning reference: 18/01399/FUL).

3.3.5 The findings were subsequently used to determine the potential for exceedences of the relevant AQO at the development and determine location suitability for the proposed land use.

¹² Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

¹³ Local Air Quality Management Technical Guidance (TG22), DEFRA, 2022.

¹⁴ Air Quality Assessment - Former Royle Works, Rochdale - 2241r2, Redmore Environmental Ltd, 2018.

4.0 BASELINE

4.1 Introduction

- 4.1.1 Existing air quality conditions in the vicinity of the proposed development site were identified in order to provide a baseline for assessment. These are detailed in the following Sections.

4.2 Local Air Quality Management

- 4.2.1 As required by the Environment Act (1995), as amended by the Environment Act (2021), RBC has undertaken Review and Assessment of air quality within its area of jurisdiction. This process has indicated that annual mean concentrations of NO₂ are above the AQO within the borough. As such, a number of roads within the council's administrative extents have been included within the GMCA AQMA. This is described as follows:

"This is the part of the Greater Manchester Combined Authority AQMA located within the Rochdale Borough Council area."

- 4.2.2 The site is located adjacent to the AQMA. As such, there is the potential for vehicles travelling to and from the development to increase pollution levels in this sensitive area. This has been considered throughout the assessment.
- 4.2.3 RBC has concluded that concentrations of all other pollutants considered within the AQS are currently below the relevant AQOs. As such, no further AQMA's have been designated.

4.3 Air Quality Monitoring

- 4.3.1 Monitoring of pollutant levels is undertaken by RBC throughout its area of jurisdiction. Data has also been collected by the GMCA to inform the CAP. Recent NO₂ concentrations recorded in the vicinity of the development, as provided in GMCA's '2024 Air Quality

Annual Status Report (ASR)¹⁵ and 'CAP NO₂ Diffusion Tube Results 2011-2024'¹⁶, are shown in Table 9.

Table 9 Monitoring Results

Monitoring Site		Monitored Annual Mean NO ₂ Concentration (µg/m ³)			
		2021	2022	2023	2024
RO7ANO	Edinburgh Way Rochdale	27.7	26.4	26.1	22.6
CAP_ROCH_001	A664 (Edinburgh way)	36.4	38.8	-(a)	-(a)
CAP_ROCH_002	A664 (Edinburgh way)	-(b)	36.4	-(a)	-(a)
CAP_ROCH_003	A58 (Manchester Road)	33.4	33.5	32.9	29.1
CAP_ROCH_010	A58 (Manchester Road)	32.3	31.5	-(a)	-(a)
CAP_ROCH_012	Manchester Road	-(b)	32.6	-(a)	-(a)
CAP_ROCH_015	Edinburgh Way	-(b)	27.5	-(a)	-(a)

Note: (a) Monitor decommissioned in 2023.

(b) Monitor commissioned in 2022.

4.3.2 As shown in Table 9, annual mean NO₂ concentrations were below the AQO of 40µg/m³ at all monitors in recent years. Reference should be made to Figure 3 for a map of the survey positions.

4.3.3 Pollutant concentrations during 2021 were affected by changes to travel patterns and associated emissions caused by the COVID-19 pandemic. The results should therefore be viewed with caution. However, monitoring data for 2022 and beyond is now considered representative of post-pandemic conditions. This is supported by the IAQM¹⁷, who have adopted the following position:

"ambient air quality monitoring data for the year 2022 and beyond is generally considered to represent the current post-pandemic baseline."

¹⁵ 2024 Air Quality ASR, GMCA, 2025.

¹⁶ Greater Manchester LAQM and CAP NO₂ Diffusion Tube Results 2011-2024, GMCA, 2025.

¹⁷ Use of 2020 and 2021 Monitoring Datasets - IAQM Position Statement V1.1, IAQM, 2023.

- 4.3.4 RBC does not undertake monitoring of PM₁₀ or PM_{2.5} concentrations in the vicinity of the site.

4.4 **Background Pollutant Concentrations**

- 4.4.1 Predictions of background pollutant concentrations on a 1km by 1km grid basis have been produced by DEFRA for the entire of the UK to assist LAs in their Review and Assessment of air quality. The proposed development site is located in grid square NGR: 388500, 411500. Data for this location was downloaded from the DEFRA website¹⁸ for the purpose of the assessment and are summarised in Table 10.

Table 10 Background Pollutant Concentration Predictions

Pollutant	Predicted 2026 Background Pollutant Concentration (µg/m ³)
NO ₂	11.73
PM ₁₀	11.69
PM _{2.5}	6.85

- 4.4.2 As shown in Table 10, predicted background NO₂, PM₁₀ and PM_{2.5} concentrations are below the relevant AQOs and Concentration Target at the development site.

4.5 **Sensitive Receptors**

- 4.5.1 A sensitive receptor is defined as any location which may be affected by changes in air quality as a result of a development. Receptors sensitive to potential dust impacts during earthworks and construction were identified from a desk-top study of the area up to 250m from the development boundary. These are summarised in Table 11.

Table 11 Earthworks and Construction Dust Sensitive Receptors

Distance from Site Boundary (m)	Approximate Number of Human Receptors	Approximate Number of Ecological Receptors
Up to 20	10 - 100	0
Up to 50	More than 100	0

¹⁸ <http://uk-air.defra.gov.uk/data/laqm-background-maps?year=2021>.

Distance from Site Boundary (m)	Approximate Number of Human Receptors	Approximate Number of Ecological Receptors
Up to 100	More than 100	-
Up to 250	More than 100	-

- 4.5.2 Receptors sensitive to potential dust impacts from trackout were identified from a desk-top study of the area up to 50m from the road network within 250m of the site access. These are summarised in Table 12.

Table 12 Trackout Dust Sensitive Receptors

Distance from Site Access Route (m)	Approximate Number of Human Receptors	Approximate Number of Ecological Receptors
Up to 20	More than 100	0
Up to 50	More than 100	0

- 4.5.3 There are no ecological receptors within 50m of the development boundary or the access route within 250m of the site entrance. As such, ecological impacts have not been assessed further within this report.
- 4.5.4 Based on the criteria shown in Table 4, the sensitivity of the receiving environment to potential dust impacts was determined as **high**. This was because the identified receptors included residential properties.

5.0 CONSTRUCTION PHASE ASSESSMENT

5.1 Introduction

- 5.1.1 There is the potential for air quality impacts as a result of the construction of the proposed development. These are assessed in the following Sections.

5.2 Step 1 - Screen the Need for an Assessment

- 5.2.1 The undertaking of activities such as excavation, groundworks, cutting, concrete batching, construction and storage of materials has the potential to result in fugitive dust emissions throughout the construction phase. Vehicle movements both on-site and on the local road network also have the potential to result in the re-suspension of dust from haul roads and highway surfaces.
- 5.2.2 The potential for impacts at sensitive locations depends significantly on local meteorology during the undertaking of dust generating activities, with the most significant effects likely to occur during dry and windy conditions.
- 5.2.3 The desk-study undertaken to inform the baseline identified a number of sensitive receptors within 250m of the site boundary. As such, a detailed assessment of potential dust impacts was required.

5.3 Step 2a - Define the Potential Dust Emission Magnitude

Earthworks

- 5.3.1 Earthworks will primarily involve excavating material, haulage, tipping and stockpiling, as well as site levelling and landscaping. The area of the proposed development site is less than 18,000m². In accordance with the criteria outlined in Table 3, the magnitude of potential dust emissions from earthworks is therefore **small**.

Construction

- 5.3.2 Due to the size of the development, the total building volume is likely to be between 12,000m³ and 75,000m³. In accordance with the criteria outlined in Table 3, the magnitude of potential dust emissions from construction is therefore **medium**.

Trackout

- 5.3.3 Based on the site area, it is anticipated that the unpaved road length may be greater than 100m during certain stages of construction. In accordance with the criteria outlined in Table 3, the magnitude of potential dust emissions from trackout is therefore **large**.

5.4 Step 2b - Define the Sensitivity of the Area

Dust Soiling

- 5.4.1 Table 11 shows that there are between 10 and 100 **high** sensitivity receptors within 20m of the site boundary. The sensitivity of the area with respect to dust soiling from earthworks and construction, as defined using the criteria summarised in Table 5, is therefore considered to be **high**.
- 5.4.2 Table 12 shows that there are more than 100 **high** sensitivity receptors within 20m of the road network within 250m of the site access. The sensitivity of the area with respect to dust soiling from trackout, as defined using the criteria summarised in Table 5, is therefore considered to be **high**.

Human Health

- 5.4.3 Table 10 shows the highest annual mean PM₁₀ background concentration at the site is 11.74µg/m³. As shown in Table 6, where the background annual mean PM₁₀ concentration is below 24µg/m³ and there are between 10 and 100 **high** sensitivity receptors within 20m of the site boundary, the sensitivity of the area with respect to human health from earthworks and construction is considered to be **low**.

- 5.4.4 There are more than 100 **high** sensitivity receptors within 20m of the road network within 250m of the site access. The sensitivity of the area with respect to human health from trackout, as defined using the criteria in Table 6, is therefore considered to be **medium**.

5.5 Step 2c - Define the Risk of Dust Impacts

- 5.5.1 The derived dust emission magnitude for each activity has been combined with the sensitivity of the area to determine the risk of unmitigated impacts in line with the methodology set out in Table 8. A summary of the risk from each dust generating activity is provided in Table 13.

Table 13 Summary of Potential Unmitigated Dust Risks

Potential Impact	Activity	Step 2A - Dust Emission Magnitude	Step 2B - Sensitivity of the Area	Step 2C - Risk
Dust Soiling	Earthworks	Small	High	Low
	Construction	Medium	High	Medium
	Trackout	Large	High	High
Human Health	Earthworks	Small	Low	Negligible
	Construction	Medium	Low	Low
	Trackout	Large	Medium	Medium

- 5.5.2 As indicated in Table 13, the potential risk of dust soiling is **high** from trackout, **medium** from construction and **low** from earthworks. The potential risk of human health impacts is **medium** from trackout, **low** from construction and **negligible** from earthworks.
- 5.5.3 It should be noted that the potential for impacts depends significantly on the distance between the dust generating activity and receptor location. Risk was predicted based on a worst-case scenario of works being undertaken at the site boundary closest to each sensitive area. Therefore, actual risk is likely to be lower than that predicted during the majority of the construction phase.

5.6 **Step 3 - Site-specific Mitigation**

5.6.1 The IAQM guidance¹⁹ provides potential mitigation measures to reduce impacts as a result of fugitive dust emissions during the construction phase. These have been adapted for the development site as summarised in Table 14. These may be reviewed prior to the commencement of construction works and incorporated into a Construction Environmental Management Plan or similar if required by the LA.

Table 14 Fugitive Dust Emission Mitigation Measures

Issue	Control 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 • Develop and implement a Dust Management Plan, which may include any measures to control other emission, approved by the LA
Site management	• Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken • Make the complaints log available to the LA upon request • Record any exceptional incidents that cause dust and/or air emissions, either on- or off- site, and the action taken to resolve the situation in the log book • Hold regular liaison meetings with other high risk construction sites within 250m of the site boundary, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised
Monitoring	• Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to the LA upon request • Carry out regular site inspections, record inspection results, and make an inspection log available to the LA upon request • Increase the frequency of site inspections when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions

¹⁹ Guidance on the Assessment of Dust from Demolition and Construction V2.2, IAQM, 2024.

Issue	Control Measure
Site preparation	- 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 high as any stockpiles on site - Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period - Avoid site runoff of water or mud - Keep site fencing, barriers and scaffolding clean using wet methods - Remove materials that have a potential to produce dust from site as soon as possible - 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 - Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials
Operations	- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques - Ensure an adequate water supply on the site for effective dust suppression, using non-potable water where possible and appropriate - Use enclosed chutes and conveyors and covered skips - Minimise drop heights and use fine water sprays 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
Trackout	- Use water-assisted dust sweeper(s) on the access and local roads - Avoid dry sweeping of large areas - Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport - Implement a wheel washing system, if required - 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

5.7 Step 4 - Determine Significant Effects

- 5.7.1 Assuming the relevant mitigation measures outlined in Table 14 are implemented, the residual impact from all dust generating activities is predicted to be **not significant**, in accordance with the IAQM guidance²⁰.

²⁰ Guidance on the Assessment of Dust from Demolition and Construction V2.2, IAQM, 2024.

6.0 OPERATIONAL PHASE ASSESSMENT

6.1 Introduction

6.1.1 There is the potential for air quality impacts as a result of the operation of the proposed development. These are assessed in the following Sections.

6.2 Potential Development Impacts

6.2.1 The development has the potential to increase concentrations of NO₂, PM₁₀ and PM_{2.5} as a result of road traffic exhaust emissions associated with vehicles travelling to and from the site during operation. Impacts have therefore been assessed using the IAQM²¹ screening criteria detailed in Section 3.3. Information provided by Ashley Helme, the Transport Consultants for the scheme, indicated the development is predicted to generate 181 daily LDV movements and 2 daily HDV movement. These will be distributed along four different access routes:

- West along Silk Street then north-east along Manchester Road;
- West along Silk Street then west along Bolton Road;
- West along Silk Street then south-west along Manchester Road; and,
- South along Royle Road.

6.2.2 Based on the number of access routes available, the scheme is not likely to result in changes in LDV flows of more 100 AADT or HDV flows of more than 25 AADT on any individual road link. Additionally, the proposals do not include significant highway realignment or the introduction of an off-site junction. As such, potential air quality impacts associated with the operational phase road vehicle exhaust emissions are predicted to be **not significant**, in accordance with the IAQM criteria shown in Section 3.3.

6.3 Potential Future Exposure

6.3.1 The proposed development includes land use sensitive to long and short-term pollutant concentrations. As such, there is the potential for new receptors to be introduced into an

²¹ Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

area of poor air quality. Existing conditions within the vicinity of the site have therefore been considered below.

Local Monitoring Results

- 6.3.2 As outlined in Table 9 and Figure 3, RBC undertook monitoring of NO₂ concentrations at seven locations in the vicinity of the site in recent years. The closest of these to the development is CAP_ROCH_002, which is located approximately 30m north of the boundary. The monitor and the site are both located adjacent to the A664, and the proposed apartment building is set back from the A664 by 55m, as indicated in Figure 2. As such, concentrations would be expected to be lower at the proposed building than those recorded at the monitor. As shown in Table 9, the annual mean NO₂ concentration at the CAP_ROCH_002 monitor during 2022 was 36.4µg/m³. This is below the AQO of 40µg/m³. Exceedences of the annual mean AQO are therefore considered unlikely at the proposed apartment building.

Air Quality Assessment

- 6.3.3 Redmore Environmental previously undertook an Air Quality Assessment²² in support of the planning application for the Former Royle Works, a residential development on land at Royle Road, Rochdale, OL11 3EH (planning reference: 18/01399/FUL). The Former Royle Works site is located immediately to the south of the proposed development. The Air Quality Assessment included dispersion modelling of road vehicle exhaust emissions and contour plots were produced to show pollutant concentrations across the assessment extents. As shown on Figure 6 of the report, NO₂ concentrations were below the annual mean AQO of 40µg/m³ across the proposed development site. As such, exceedences of the annual mean AQO are therefore considered unlikely at the proposed apartment building.

Summary

- 6.3.4 Pollutant concentrations are anticipated to be below the relevant AQOs at the proposed development site for the following reasons:

²² Air Quality Assessment - Former Royle Works, Rochdale - 2241r2, Redmore Environmental Ltd, 2018.

- Analysis of local monitoring results in the context of the site indicated compliance with the annual AQO for NO₂; and,
- Analysis of the findings of the previous Air Quality Assessment in the context of the site indicated compliance with the annual mean AQO for NO₂.

6.3.5 Based on the assessment results, future residents are not predicted to be exposed to exceedences of the AQO at the development location. The site is therefore considered suitable for the proposed end use from an air quality perspective.

6.4 **Interim Planning Guidance for PM_{2.5}**

6.4.1 Interim Planning Guidance²³ on the consideration of the PM_{2.5} targets identified in the Environment Act (2021) in planning decisions has been produced by DEFRA. This requires evidence that the key sources of air pollution within a development have been identified and appropriate action to minimise emissions of PM_{2.5} and its precursors as far as is reasonably practicable be provided in support of planning applications. To assist the process, two questions and associated considerations are provided. These are summarised in Table 15, along with the development response.

Table 15 Interim Planning Guidance Questions

Question	Response
How has exposure to PM_{2.5} been considered when selecting the development site? Factors to consider include: • Site proximity to people (particularly large populations and/or vulnerable groups, e.g. schools, hospitals, care homes, areas of deprivation) and the impact of the development on these • Site proximity to pollution sources and the impact of these on users of the development • Exposure and emissions during both construction and in-use	The site is located in a residential and industrial area within Rochdale. There are no vulnerable receptors such as hospitals, care homes or schools within the vicinity of the site. As summarised in Section 6.2, air quality impacts associated with the development are not predicted to be significant at any receptor location The site is adjacent to the A664 Edinburgh Way and associated road vehicle exhaust emissions. However, the proposed apartment building is set back from the A664 by approximately 55m. As such, future residents are unlikely to be exposed to elevated pollutant concentrations As outlined in Table 14, a number of mitigation measures will be used throughout the construction phase in order to reduce fugitive dust emissions as far as practicable. This will control potential exposure at off-site locations

²³ <https://uk-air.defra.gov.uk/pm25targets/planning>.

Question	Response
What actions and/or mitigations have been considered to reduce PM_{2.5} exposure for development users and nearby receptors and to reduce emissions of PM_{2.5} and its precursors? Factors to consider include: • Site layout • The development's design • Technology used in the construction or installed for use in the development • Construction and future use of the development	A number of mitigation measures have been incorporated into the design of the scheme in order to reduce PM_{2.5} emissions. These include the following: • Existing trees will be partly retained on site. This will aid in dispersion of pollution and reduce PM_{2.5} exposure for future residents • The scheme has been designed to ensure future residents will be set back from the A664 and associated road vehicle exhaust emissions In order to reduce emissions of PM_{2.5} with associated impacts at nearby receptors and on site, the following measures have been included within the scheme: • Provision of Electric Vehicle charging points to reduce reliance on diesel and petrol vehicles • Provision of secure cycle storage to encourage the use of sustainable transport modes Further to the above, in order to reduce emissions during the construction phase, a number of mitigation measures will be used to minimise dust generation from associated activities. These are outlined in Table 14

6.4.2 Based on the responses provided in Table 15 and the results of the assessment, it is considered that the development has identified key sources of air pollution and taken appropriate action to minimise emissions of PM_{2.5}.

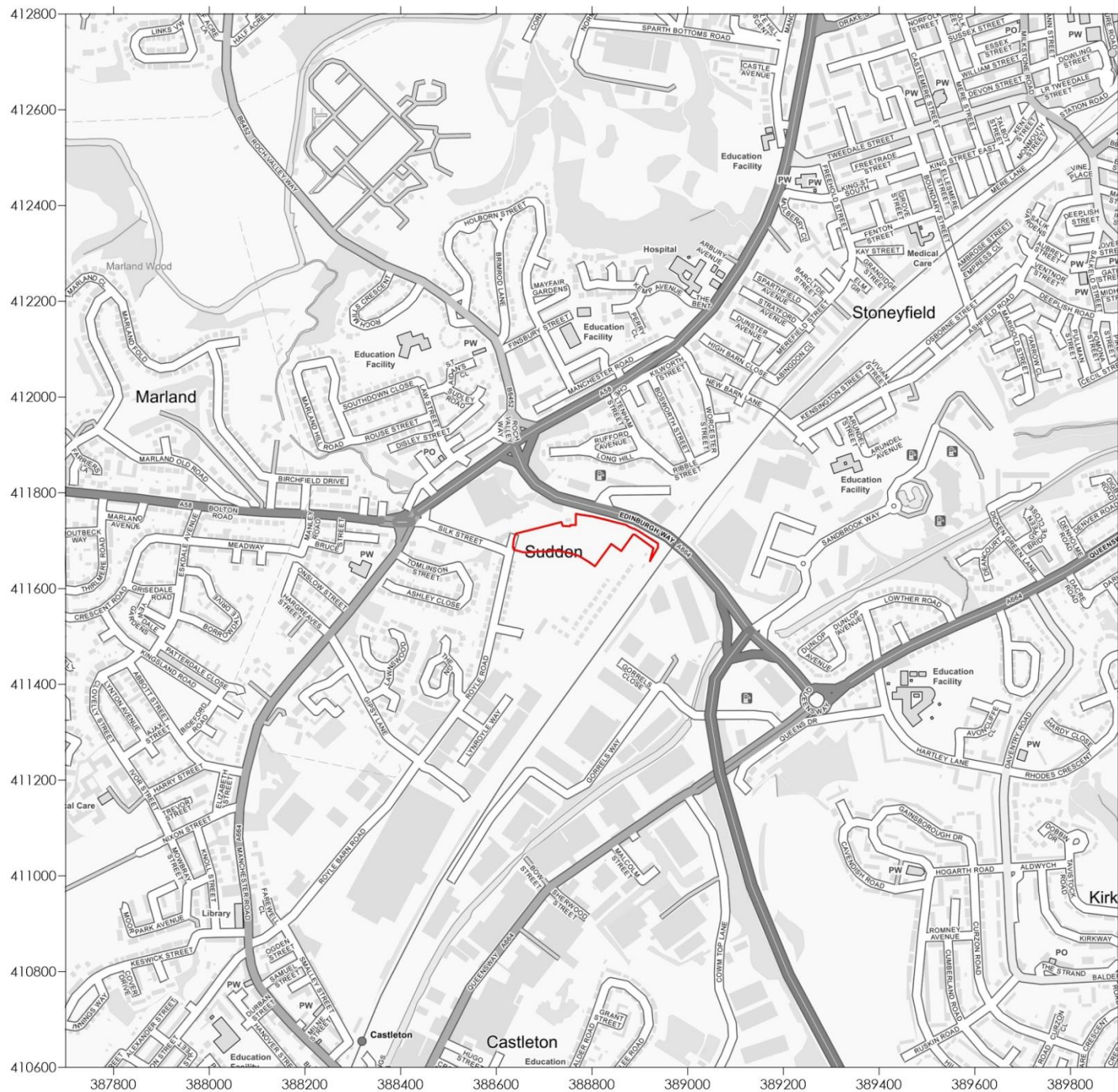
7.0 CONCLUSION

- 7.1.1 Redmore Environmental Ltd was commissioned by BMC Rochdale Limited to undertake an Air Quality Assessment in support of a residential development on land off Royle Road, Rochdale.
- 7.1.2 The proposals have the potential to cause air quality impacts as a result of fugitive dust emissions during construction and road traffic exhaust emissions associated with vehicles travelling to and from the site during operation, as well as the exposure of future residents to any existing air quality issues at the site. As such, an Air Quality Assessment was undertaken to determine baseline conditions, consider site suitability for the proposed end-use and assess potential effects as a result of the scheme.
- 7.1.3 During the construction phase of the development there is the potential for air quality impacts from fugitive dust emissions from the site. These were assessed in accordance with the IAQM methodology and site specific dust control measures identified based on the results. Potential residual impacts from dust generated by earthworks, construction and trackout activities following implementation of the relevant mitigation was predicted to be **not significant**.
- 7.1.4 Potential impacts during the operational phase of the proposed development may occur due to road traffic exhaust emissions associated with vehicles travelling to and from the site. These were assessed against the screening criteria provided within the IAQM guidance. Due to the low number of vehicle movements generated by the site, road traffic exhaust impacts were predicted to be **not significant**.
- 7.1.5 The potential for exposure of future residents to exceedences of the relevant AQO was assessed based on local monitoring results and an existing Air Quality Assessment for an adjacent site. This indicated that concentrations of NO₂ are likely to be below the relevant AQO at the development location. As such, the site is considered suitable for the proposed end use from an air quality perspective.
- 7.1.6 Based on the assessment results, air quality factors are not considered a constraint to planning consent for the development.

8.0 **ABBREVIATIONS**

AADT	Annual Average Daily Traffic
AQLV	Air Quality Limit Value
AQMA	Air Quality Management Area
AQO	Air Quality Objective
AQS	Air Quality Strategy
ASR	Annual Status Report
CAP	Clean Air Plan
DEFRA	Department for Environment, Food and Rural Affairs
GMCA	Greater Manchester Combined Authority
HDV	Heavy Duty Vehicle
IAQM	Institute of Air Quality Management
LA	Local Authority
LAQM	Local Air Quality Management
LDV	Light Duty Vehicle
NGR	National Grid Reference
NO ₂	Nitrogen dioxide
NPPF	National Planning Policy Framework
NPPG	National Planning Policy Guidance
PfEP	Places for Everyone Plan
PM ₁₀	Particulate matter with an aerodynamic diameter of less than 10µm
PM _{2.5}	Particulate matter with an aerodynamic diameter of less than 2.5µm
RBC	Rochdale Borough Council
TfGM	Transport for Greater Manchester

Figures



Legend



Site Boundary

Title

Figure 1 - Site Location

Project

Air Quality Assessment
Royle Road, Rochdale

Project Reference

9259

Client

BMC Rochdale Limited

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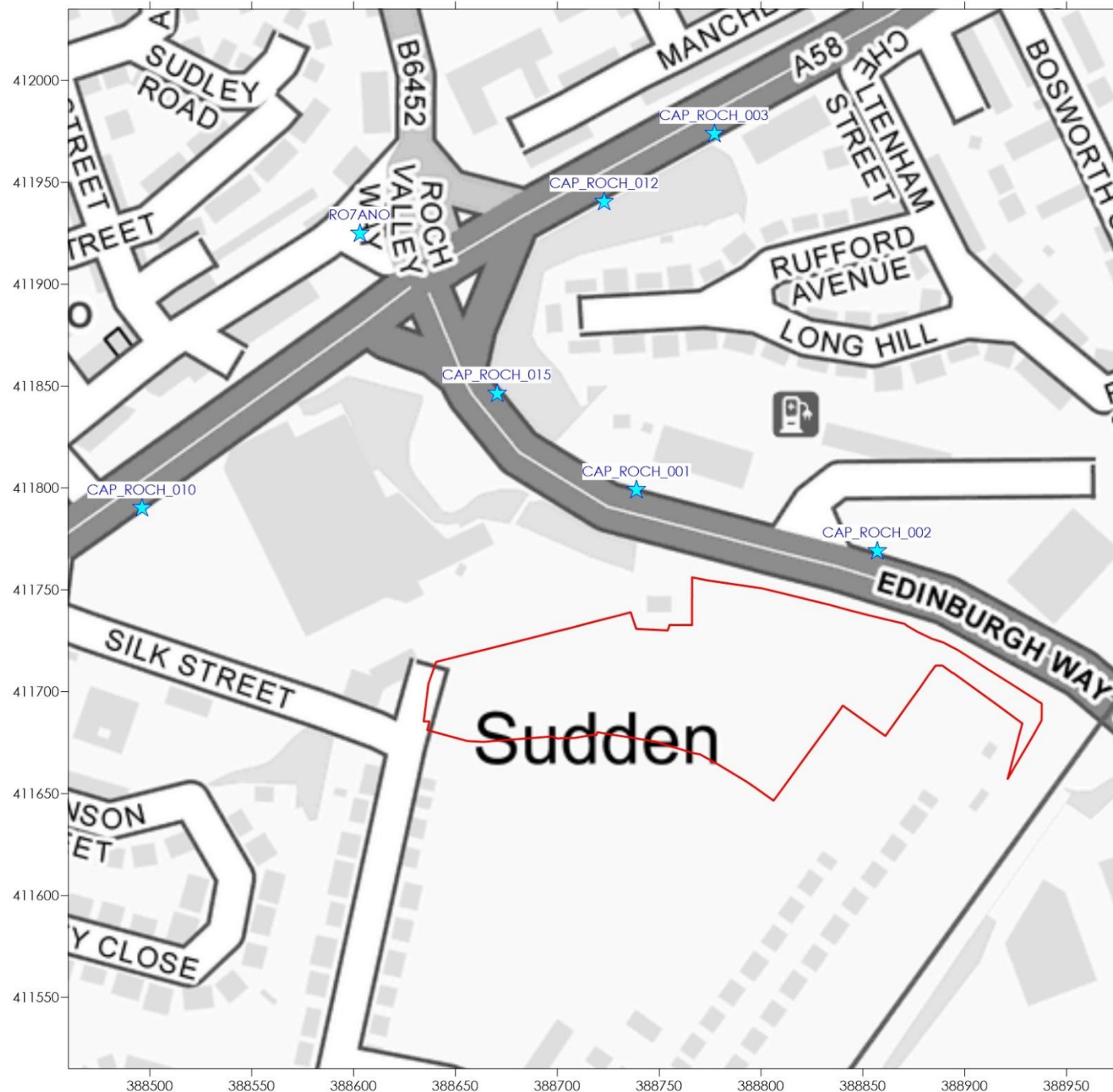
Title
Figure 2 - Site Layout Plan

Air Quality Assessment
Royle Road, Rochdale

9259

BMC Rochdale Limited





Legend



Site Boundary



Monitor

Title

Figure 3 - Monitoring Locations

Project

Air Quality Assessment
Royle Road, Rochdale

Project Reference

9259

Client

BMC Rochdale Limited

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Appendix 1 - Curricula Vitae

KEY EXPERIENCE:

Jethro is a Chartered Environmentalist and Director of Redmore Environmental with specialist experience in the air quality and odour sectors. His key capabilities include:

- Production and management of Air Quality, Dust and Odour Assessments for a wide-range of clients from the retail, residential, infrastructure, commercial and industrial sectors.
- Production and co-ordination of Environmental Permit applications for a variety of industrial sectors.
- Detailed dispersion modelling of road vehicle and industrial emissions using ADMS-Roads, ADMS-5, AERMOD-PRIME and BREEZE-ROADS. Studies have included impact assessment of ground level pollutant and odour concentrations and assessment of suitability of development sites for proposed end-use.
- Project management and co-ordination of Environmental Impact Assessments and scoping reports for developments throughout the UK.
- Provision of expert witness services at Planning Inquiries.
- Design and project management of pollutant monitoring campaigns.
- Co-ordination and management of large-scale multi-disciplinary projects and submissions.
- Provision of expert advice to local government and international environmental bodies, as well as involvement in production of industry guidance.

SELECT PROJECTS SUMMARY:

Industrial

Shanks Waste Management - Odour Assessments of two waste management facilities to support Environmental Permit Applications.

Tatweer Petroleum - dispersion modelling of Bahrain oil field.

Doha South Sewage Treatment Works - AQA for works extension in Qatar.

IRIS Environmental Appraisal Report Reviews, Isle of Man Government - odour assessment reviews.

Lankem, Greater Manchester - Environmental Permit Application for chemical manufacturing plant.

Newport Docks Bulk Drying, Pelleting and CHP Facility - air quality EIA for gas CHP.

Springshades, Leicester - Environmental Permit Variation Application for textile manufacturing plant.

Valspar, Chester - Odour Assessment and production of Odour Management Plan for a paint manufacturing plant in response to neighbour complaints.

Agrivert - dispersion modelling of odour and CHP emissions from numerous AD plants.

James Cropper Paper Mill, Cumbria - air quality EIA, Environmental Permit Variation and Human Health Risk Assessment for new biomass boiler adjacent to SSSI.

Rigg Approach, Leyton - Air Quality Assessment in support of waste transfer site.

Lynchford Lane Waste Transfer Station - biomass facility energy recovery plant.

Barnes Wallis Heat and Power, Cobham - biomass facility adjacent to AQMA.

Residential

Wood St Mill, Bury - residential development adjacent to scrap metal yard.

Hyams Lane, Holbrook - Odour Assessment to support residential development adjacent to sewage works.

North Wharf Gardens, London - peer review of EIA undertaken for large residential development.

Loxford Road, Alford - Air Quality EIA for residential development, included consideration of impacts from associated package sewage works

Elephant and Castle Leisure Centre - baseline AQA for redevelopment.

Carr Lodge, Doncaster - EIA for large residential development.

Queensland Road, Highbury - residential scheme including CHP.

Bicester Ecotown - dispersion modelling of energy centre.

Castleford Growth Delivery Plan - baseline air quality constraints assessment for town redevelopment.

York St, Bury - residential development adjacent to AQMA.

Temple Point Leeds - residential development adjacent to M1.

Commercial and Retail

Etihad Stadium - Air Quality EIA for the extension to the capacity of the Etihad Stadium, Manchester.

Wakefield College - redevelopment of city centre campus in AQMA.

Manchester Airport Cargo Shed - commercial development.

Manchester Airport Apron Extension - EIA including aircraft emission modelling.

National Youth Theatre, Islington - redevelopment to provide new arts space and accommodation.

KEY EXPERIENCE:

Megan is an Environmental Consultant with specialist experience in the air quality sector. Her key capabilities include:

- Production of Air Quality Assessments in accordance with Department for Environment, Food and Rural Affairs (DEFRA) methodologies for a range of residential, commercial and industrial sectors.
- Detailed dispersion modelling of road vehicle exhaust emissions using ADMS-Roads. Studies have included impact assessments on sensitive receptors and exposure of new residents to poor air quality.
- Advanced Canyon Modelling to evaluate the impact of altered urban topography on air quality in built up areas.
- Assessment of construction dust impacts from a range of development sites.
- Production of Air Quality Neutral Assessments in accordance with The London Plan.
- Installation and management of diffusion tube monitoring campaigns in order to determine the potential for exposure of sensitive receptors to poor air quality.

SELECT PROJECTS SUMMARY:

Whitebirk, Blackburn

Air Quality Assessment in support of a residential development comprising demolition of existing buildings and construction of 152 dwellings on land at the Whitebirk Estate, Blackburn. The development had the potential to expose future occupants to any existing air quality issues and cause impacts at sensitive locations. Dispersion modelling was undertaken using ADMS-Roads. A construction dust assessment was also performed to provide mitigation for proposed dust generating activities. Results of the study indicated that air quality impacts and fugitive dust emissions were not significant.

Willow Lane, Mitcham

Air Quality Assessment in support of an industrial development off Willow Lane, Mitcham. Due to the size of the development, it was possible that traffic generated from the scheme may cause negative impacts on sensitive receptors nearby. NO₂ and PM₁₀ concentrations were quantified at specific receptor points to ensure there would be no significant increases in pollution levels. Results revealed negligible impacts at all locations. An Air Quality Neutral Assessment was also undertaken in accordance with the London Plan. Following implementation of relevant mitigation measures, the development was considered Air Quality Neutral.

Harrow Road, London

Air Quality Assessment in support of a nursery. Detailed dispersion modelling, including advanced canyon inputs, was undertaken to evaluate the potential for exposure of future occupants to any existing issues at the site. The results indicated air quality conditions did not present an issue to planning consent.

The Green, Cheadle

Air Quality Assessment in support of a new Aldi store off the Green, Cheadle. Following concerns from the Local Authority regarding the potential for traffic generated by the proposals to cause air quality impacts, dispersion modelling was undertaken in order to quantify changes in pollutant concentrations at sensitive locations in the vicinity of the site. Results revealed negligible impacts at all locations.

Holloway Road, London

Kitchen Odour Assessment undertaken in line with the EMAQ+ and DEFRA guidance in support of a new restaurant on Holloway Road, London. Site-specific odour abatement options were identified in order to conform with best practice guidance. Based on the inclusion of the specified mitigation, odour effects associated with the development were not considered a constraint to planning consent.

Wyebridge Motors, Hereford

Ambient Air Quality Monitoring in support of a residential development. The Local Authority raised concerns regarding the exposure of future residents to poor air quality as a result of pollution from the adjacent A49. Due to the irregular topography of the area, a scheme of diffusion tube monitoring was undertaken to determine baseline NO₂ concentrations at the site. Results indicated that concentrations were below the Air Quality Objective at the building façade and as such, the risk for exposure of future residents to poor air quality was not considered significant.

KEY EXPERIENCE:

Francine is an Environmental Consultant with specialist experience in the air quality sector. Her key capabilities include:

- Production of Air Quality Assessments in accordance with Department for Environment, Food and Rural Affairs (DEFRA) methodologies for a range of residential, commercial and industrial sectors.
- Detailed dispersion modelling of road vehicle exhaust emissions using ADMS-Roads. Studies have included assessment of road traffic exhaust emissions on sensitive receptors and exposure of new residents to poor air quality.
- Advanced canyon modelling to evaluate the impact of altered urban topography on air quality in built up areas.
- Assessment of construction dust impacts from a range of development sizes.
- Definition of baseline air quality and identification of sensitive areas across the UK.
- Production of Air Quality Neutral Assessments in accordance with The London Plan.
- Odour surveys and risk assessments to assess amenity and suitability of sites for potential future development for residential use.

SELECT PROJECTS SUMMARY:

Moseley Road, Fallowfield

Air Quality Assessment in support of the construction of a healthcare clinic alongside car parking and associated infrastructure. The site was located adjacent to an Air Quality Management Area (AQMA) therefore there was concern that there could be potential impacts due to vehicle movements as a result of the site within this sensitive area as well as exposure of future users to poor air quality due to traffic emissions. Dispersion modelling of road vehicle exhaust emissions was undertaken in support of the scheme. Results indicated that potential impacts were predicted to be not significant and the site was considered suitable for the proposed end use.

Snape Lane, Harworth

Air Quality Assessment in support of an industrial development to construct a brickwork. A Fugitive Dust Emissions Assessment was required to determine potential impacts of operational phase fugitive dust emissions. Result indicated the overall impacts of fugitive dust emissions and road vehicle exhaust emissions associated with the site were predicted to be not significant and the site was considered suitable for the proposed end use.

High Street, Beckenham

Air Quality Assessment and Air Quality Neutral Assessment in support of a residential development. The development had the potential to expose future occupants to existing air quality issues and cause impacts at sensitive locations. The site was concluded to be Air Quality Neutral in accordance with the London Plan and the results indicated air quality conditions did not present an issue to planning consent.

Sawtry Way, Wayton

An Odour Assessment in support of a residential development with associated access and landscaping works. The development was located in the vicinity of a Water Recycling Centre, which may form a source of odour emissions and cause loss of amenity to future residents. An Odour Risk Assessment was undertaken to assess baseline conditions across the site and consider the risk of reduced amenity. Results of the assessment indicated odour effects at the site did not represent a constraint to planning consent.

Old Station Road, Hampton-in-Arden

Air Quality Assessment in support of a residential development comprising 130 dwellings and associated infrastructure. Detailed dispersion modelling was undertaken to predict pollutant concentrations at sensitive locations as a result of emissions from the highway network both with and without the development in place. Review of the dispersion modelling results indicated that residual impacts due to the operation of the development were considered to be not significant.

Cefn Road, Wrexham

Air Quality Assessment in support of Morgan Llwyd School. Following concerns from the Local Authority regarding the potential exposure of future staff and students to poor air quality, dispersion modelling was undertaken in order to predict air quality conditions across the site. Results indicated concentrations did not represent a constraint to planning consent.