

Air Quality Assessment
The Rock, Bury

Reference: 10883r1

Client: Hallmark Developments NW Ltd

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Report Issue

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Executive Summary

Redmore Environmental Ltd was commissioned by Hallmark Developments NW Ltd to undertake an Air Quality Assessment in support of a retrospective planning application for a pay and display car park at 181-183 The Rock, Bury.

An Air Quality Assessment was undertaken to:

- Assess potential impacts associated with road transport emissions during the operational phase of the proposed development; and,
- Identify any requirement for relevant mitigation measures.

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 site, road traffic exhaust emission impacts were not predicted to be significant.

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 - Curriculum Vitae

1.0 INTRODUCTION

1.1 Instruction

- 1.1.1 Redmore Environmental Ltd was commissioned by Hallmark Developments NW Ltd to undertake an Air Quality Assessment in support of a retrospective planning application for a pay and display car park at 181 - 183 The Rock, Bury.

1.2 Site Location and Context

- 1.2.1 The site is located at 181 - 183 The Rock, Bury, at approximate National Grid Reference (NGR): 380820, 411100. The relevant Local Authority (LA) is Bury Council (BC). Reference should be made to Figure 1 for a map of the site and surrounding area.
- 1.2.2 The proposals comprise a pay and display car park to provide 33 parking spaces.

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 road transport emissions during the operational phase of the development; 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 National Planning Policy

- 2.3.1 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.

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

2.3.2 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."

2.3.3 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 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 [...]"

2.3.4 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."

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

2.4 National Planning Practice Guidance

2.4.1 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?
7. How detailed does an air quality assessment need to be?
8. How can an impact on air quality be mitigated?

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

2.5 Regional Planning Policy

2.5.1 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 BC on 21st March 2024.

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

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

⁶ PfEP, GMCA, 2024.

"Policy JP:S5: Clean Air

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

1. Locating and designing development, and focusing transport investment, so as to reduce reliance on forms of transport that generate air pollution;
2. Determining planning applications having regard to the most recent development and planning control guidance published jointly by the Institute of Air Quality Management (IAQM) and Environmental Protection UK (EPUK), and the most recent IAQM Guidance on the Assessment of Dust from Demolition and Construction, or relevant successor guidance, including the requirement for developers to submit construction management plans as appropriate;
3. Requiring applications for developments that could have an adverse impact on air quality to submit relevant air pollution data so that adverse impacts on air quality can be fully assessed and development only permitted where they are acceptable and/or suitable mitigation can be provided;
4. Restricting developments that would generate significant point source pollution such as some types of industrial activity and energy generation;
5. Significantly expanding the existing commercial network of electric vehicle charging points, both for public and private use, including as part of new developments;
6. Implementing the Clean Air Plan and associated measures;
7. Facilitating the more sustainable distribution of goods within the urban area, including through accommodating urban consolidation centres and urban distribution centres that use ultra-low-emission vehicles, and local delivery facilities to reduce repeat delivery attempts;
8. Designing streets to avoid trapping air pollution at ground level, including through the appropriate location and scale of buildings and trees;
9. Controlling traffic and parking within and around schools, early years sites and other locations that are particularly sensitive to air quality;
10. Promoting actions that help remove pollutants from the air, such as enhancing the green infrastructure network and using innovative building materials that capture air pollutants; and,

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

"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,

[...]."

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

2.6 Local Planning Policy

2.6.1 The Bury Unitary Development Plan (UDP)⁷ was adopted by BC on 29th August 1997. A review of the document indicated that the policies of relevance to the assessment have been replaced by JP-P1 and JP-S5 in the PfEP⁸, as outlined above.

2.6.2 The Draft Bury Local Plan⁹ is currently undergoing consultation and will form part of the overall BC Development Plan once formally adopted. Review of the document indicated the following policies of relevance to this assessment:

"Policy LP-CM2: New development and health

⁷ Bury UDP, BC, 1997.

⁸ PfEP, GMCA, 2024.

⁹ Draft Bury Local Plan, BC, 2025.

The Council will ensure that new development makes a positive contribution towards the health and wellbeing of the Borough's communities by:

[...]

e. Helping to improve air quality and other pollution that may impact on human health;

[...]"

"Policy LP-API: Air quality and pollution control

The Council will prevent both new and existing development from contributing to, or being adversely affected by, unacceptable levels of pollution and poor air quality.

In assessing the potential impact of pollution, the Council will have regard to:

- a) Potential impacts on human health and amenity;
- b) The proximity and sensitivity of uses that could be affected by the pollution;
- c) Existing levels of pollution, including Air Quality Management Areas within the Borough;
- d) The sensitivity of natural resources and heritage assets that may be affected; and
- e) Any relevant strategies and targets for pollution control and reduction.

Where new development gives rise to the potential for unacceptable adverse impacts from pollution, the Council will require applicants to submit an assessment of the pollution impacts which includes proposed measures to avoid, minimise or mitigate pollution impacts.

Where necessary, the Council will impose planning conditions and/or obligations to ensure that the impacts of pollution are being effectively monitored and that the proposed measures to avoid, minimise or mitigate pollution impacts are being effectively implemented.

The Council will not permit development where an applicant is unable to satisfactorily demonstrate that measures are capable of being put in place to avoid, minimise or mitigate pollution impacts."

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

2.7 Greater Manchester Clean Air Plan

- 2.7.1 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 Greater Manchester Combined Authority (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 proposals¹⁰ 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.

¹⁰ Case for a New GM Clean Air Plan, GMCA and TfGM, 2022.

3.0 **METHODOLOGY**

3.1.1 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 Institute of Air Quality Management (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.

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

- 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 Heavy Duty Vehicle (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.

3.1.3 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.

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

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

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), BC 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 Bury 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 Bury Council area."

- 4.2.2 The site is located approximately 30m south of 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 BC has concluded that concentrations of all other pollutants considered within the AQMA are currently below the relevant AQOs. As such, no further AQMAs have been designated.

4.3 **Air Quality Monitoring**

- 4.3.1 Monitoring of pollutant levels is undertaken by BC throughout its area of jurisdiction. Recent NO₂ concentrations recorded in the vicinity of the development, as provided in the Greater Manchester LAQM and CAP NO₂ diffusion tube monitoring results 2011-2024¹³, are shown in Table 3. Exceedences of the AQO are shown in **bold**.

¹³ 2024 Greater Manchester LAQM and CAP NO₂ Diffusion Tube Results 2011-2024, GMCA, 2025.

Table 3 Monitoring Results

Monitoring Site		Monitored NO ₂ Concentration (µg/m ³)		
		2022	2023	2024
BU11NO	Moorgate	34.7	31.4	27.7
BU12NO	Rochdale Road	38.7	38.7	36.4
CAP_BURY_032	A58	38.3	– (a)	– (a)
CAP_BURY_033	A58	40.8	40.0	38.2
CAP_BURY_034	A58	39.3	33.7	36.8
CAP_BURY_035	B6222	34.0	– (a)	– (a)

Note: (a) Monitor decommissioned in 2023.

4.3.2 As shown in Table 3, annual mean NO₂ concentrations were above the AQO of 40µg/m³ at CAP_BURY_033 in 2022. As the monitor is at a roadside position within an AQMA, elevated results would be expected. Concentrations were below the AQO at all remaining locations in recent years. Reference should be made to Figure 2 for a map of the survey positions.

4.3.3 BC do not undertake monitoring of PM₁₀ or PM_{2.5} concentrations within 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: 380500, 411500. Data for this location was downloaded from the DEFRA website¹⁴ for the purpose of the assessment and is summarised in Table 4.

Table 4 Background Pollutant Concentration Predictions

Pollutant	Predicted 2026 Background Annual Mean Pollutant Concentration (µg/m ³)
NO ₂	14.98

¹⁴ <http://uk-air.defra.gov.uk/data/laqm-background-maps?year=2021>.

Pollutant	Predicted 2026 Background Annual Mean Pollutant Concentration ($\mu\text{g}/\text{m}^3$)
PM ₁₀	11.94
PM _{2.5}	6.96

- 4.4.2 As shown in Table 4, predicted background NO₂, PM₁₀ and PM_{2.5} concentrations are below the relevant AQOs and Concentration Target at the development site.

5.0 **ASSESSMENT**

5.1 **Introduction**

- 5.1.1 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.

5.2 **Potential Development Impacts**

- 5.2.1 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 the operational phase. Information provided by SCP Transport Planning, the Transport Consultants for the project, indicated the development is predicted to generate 80 LDV trips and 0 HDV trips per day.
- 5.2.2 Based on the above, the development is not predicted to result in an increase of LDV flows of more than 100 AADT within an AQMA or 500 AADT elsewhere. Additionally, the proposals do not include significant highway realignment or the introduction of a junction and there will not be a requirement for more than 25 HDV movements within an AQMA per day. 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 guidance¹⁵.

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

- 5.3.1 Interim Planning Guidance¹⁶ 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 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 5, along with the development response.

¹⁵ Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

¹⁶ <https://uk-air.defra.gov.uk/pm25targets/planning>.

Table 5 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 proposals are located in a residential and commercial setting in the centre of Bury. There are no vulnerable groups within the vicinity of the site. As outlined in Section 5.2, impacts associated with emissions from the site are predicted to be not significant The scheme comprises a car park, which is not considered to be sensitive to long-term pollutant exposure
What actions and/or mitigations have been considered to reduce PM_{2.5} exposure for development users and nearby receptors (houses, hospitals, schools etc.) and to reduce emissions of PM_{2.5} and its precursors? 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	The scheme comprises commercial land use, which is not considered to be sensitive to PM_{2.5} exposure The site is proposed to be operational for 3-years. Therefore any emissions are considered to be short-term and temporary in nature

5.3.2 Based on the responses provided in Table 5 and the assessment results, as outlined in Section 5.0, it is considered that the development has identified key sources of air pollution and taken appropriate action to minimise emissions of PM_{2.5}.

6.0 CONCLUSION

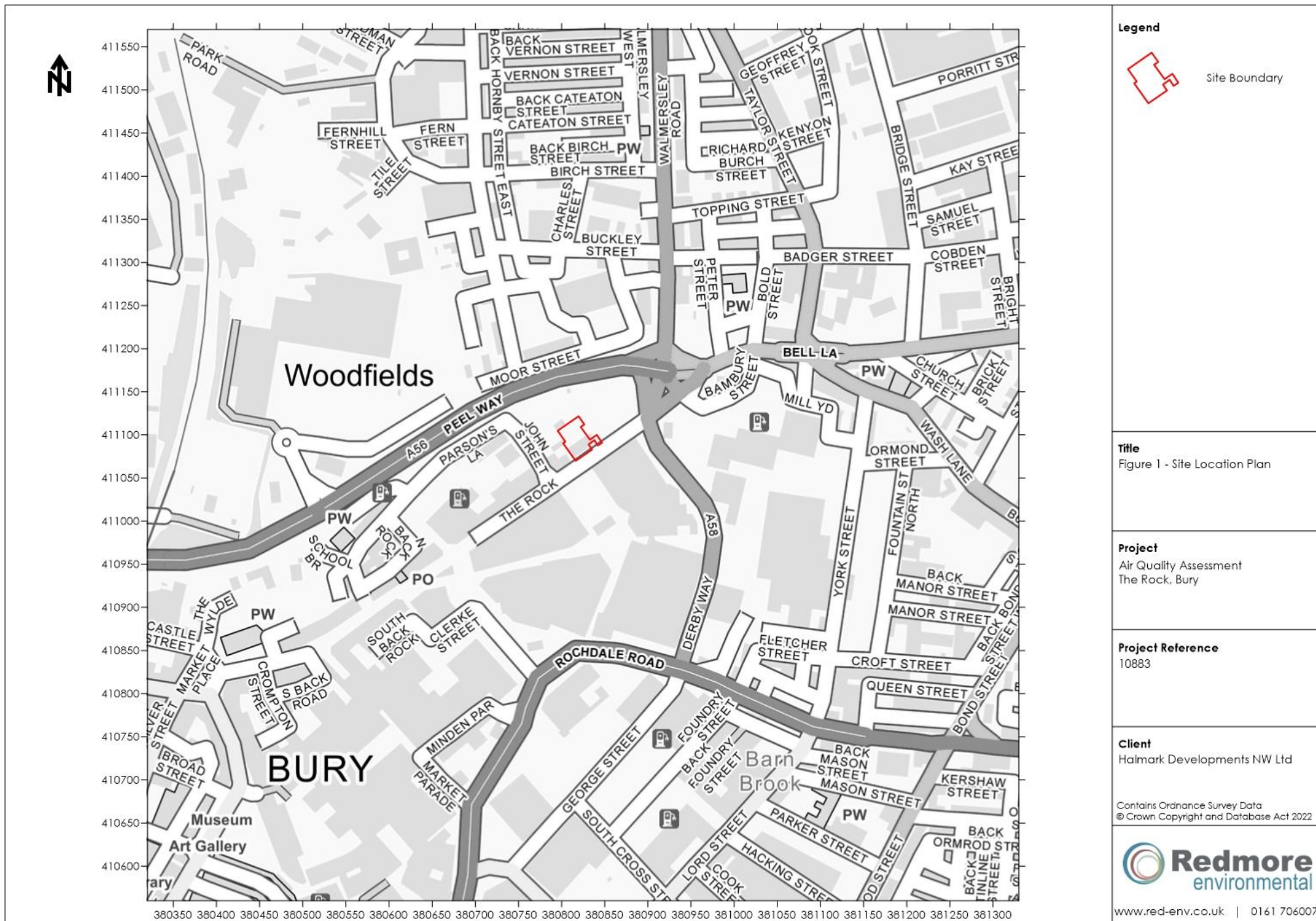
- 6.1.1 Redmore Environmental Ltd was commissioned by Hallmark Developments NW Ltd to undertake an Air Quality Assessment in support of a retrospective planning application for a pay and display car park 181 - 183 The Rock, Bury.
- 6.1.2 The development has the potential to cause air quality impacts at sensitive locations during the operational phase. As such, an Air Quality Assessment was undertaken in order to determine baseline conditions and consider potential effects as a result of the proposals.
- 6.1.3 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 guidance¹⁷. Due to the low number of vehicle movements generated by the site, road traffic exhaust impacts were predicted to be **not significant**.
- 6.1.4 Based on the assessment results, air quality factors are not considered a constraint to planning consent for the development.

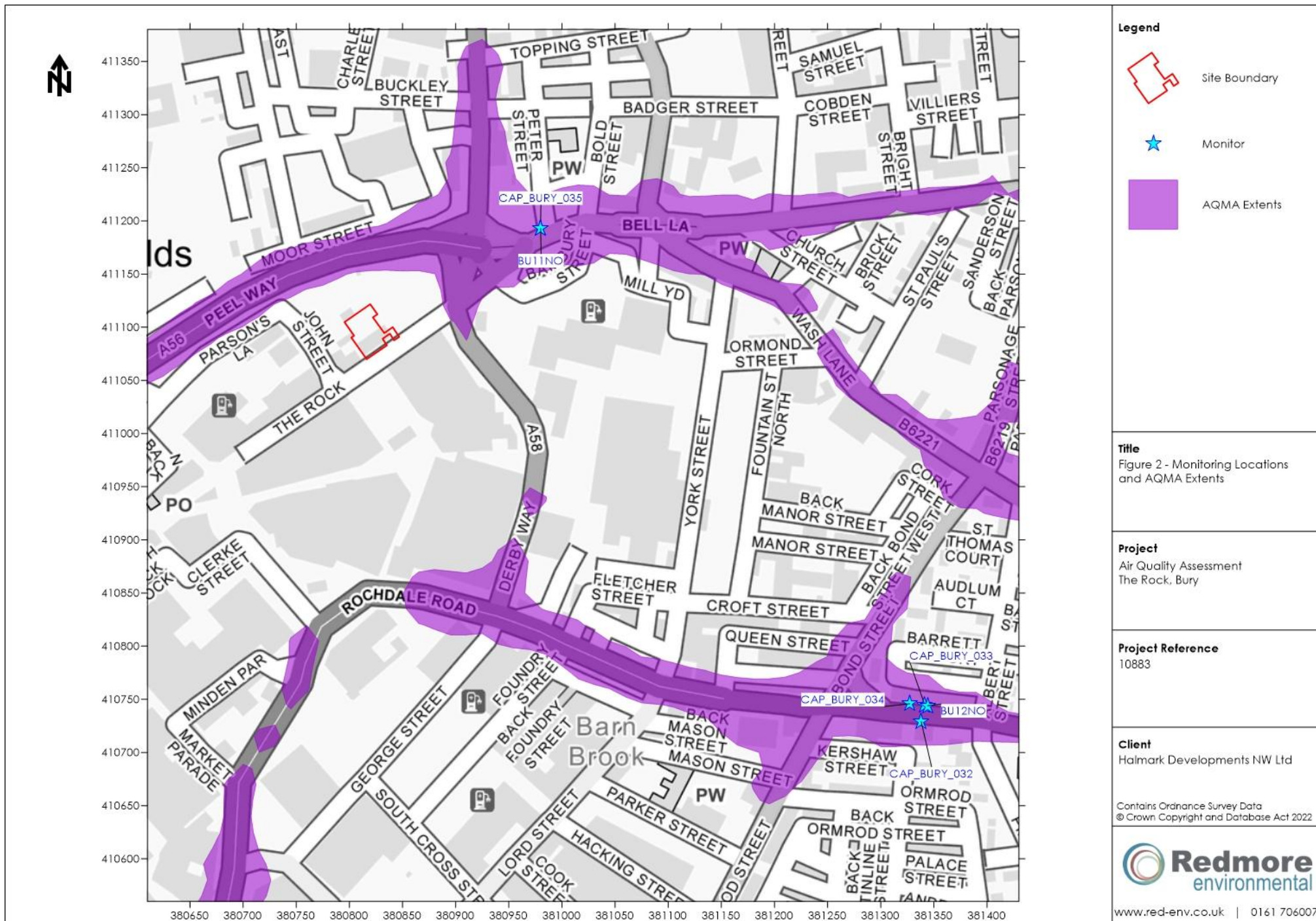
¹⁷ Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

7.0 **ABBREVIATIONS**

AADT	Annual Average Daily Traffic
AQLV	Air Quality Limit Value
AQMA	Air Quality Management Area
AQO	Air Quality Objective
AQS	Air Quality Strategy
BC	Bury Council
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 Practice 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
TfGM	Transport for Greater Manchester
UDP	Unitary Development Plan

Figures





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-6, 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:

Charlotte is a Graduate 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:

Stretford Memorial Hospital, Stretford

Air Quality Assessment in support of the demolition of the former Stretford Memorial Hospital and construction of 29 residential dwellings 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 occupants to poor air quality due to traffic emissions. Results indicated that potential impacts were predicted to be not significant and the site was considered suitable for the proposed end use.

River Road, Barking

Air Quality Assessment and Air Quality Neutral Assessment in support of an industrial development to provide a temporary contractors yard. A Fugitive Dust Emissions Assessment was required to determine potential impacts of operational phase fugitive dust emissions. Dispersion modelling of road vehicle exhaust emissions was also undertaken in support of the scheme. The site was concluded to be Air Quality Neutral in accordance with the relevant guidance and the overall impacts of fugitive dust emissions and road vehicle exhaust emissions associated with the site were concluded to be not significant.

Crewe Road, Shavington

An Odour Assessment in support of a residential development with associated access, infrastructure and landscaping works. The development was located in the vicinity of a meat processing

facility which may form a source of odour emissions and cause loss of amenity to future residents. A two stage Odour 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.

Land North of Parklands, Waltham Abbey

Air Quality Assessment in support of a residential development comprising 400 dwellings, a local centre and public open space. 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.

Masshouse Lane, Birmingham

Air Quality Assessment in support of a mixed-use development to provide a new part-three, part-six storey building including ground and first floor retail space with a mix of residential dwellings from first to sixth floor, to provide 10 residential units. The site was located within an AQMA therefore there was concern that future occupants could be exposed to existing air quality conditions due to traffic emissions as well as potential impacts to sensitive receptors due to vehicle movements as a result of the proposals. Results revealed negligible impacts at all locations and that pollution levels were below the air quality objectives across the development.

KEY EXPERIENCE:

Francine is a 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 predicted air quality conditions across the site. Results indicated concentrations did not represent a constraint to planning consent.