Air Quality Exposure Assessment

York Street, Manchester

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Executive Summary

Redmore Environmental Ltd was commissioned by Mitchells & Butlers to undertake an Air Quality Exposure Assessment in support of the conversion of the upper floors of 1 -3 York Street, Manchester, from office use to a hotel.

In order to address a planning condition, an Air Quality Exposure Assessment was undertaken to:

- Assess potential impacts associated with road transport emissions during the operational phase of the proposed development;
- Assess risk of future users exposure to any existing air quality issues; 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 nature of the development, road traffic exhaust emission impacts were not predicted to be significant.

The potential for exposure of future users to elevated pollution levels was assessed based on the findings 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, it is suggested that the planning condition is discharged.

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1.0 INTRODUCTION

1.1 Instruction

1.1.1 Redmore Environmental Ltd was commissioned by Mitchells & Butlers to undertake an Air Quality Exposure Assessment in support of the conversion of the upper floors of 1-3 York Street, Manchester, from office use to a hotel.

1.2 Site Location and Context

1.2.1 The site is located at 1-3 York Street, Manchester, at approximate National Grid Reference (NGR): 384065, 398295. The relevant Local Authority (LA) is Manchester City Council (MCC). Reference should be made to Figure 1 for a map of the site and surrounding area.

1.2.2 Planning consent has been granted by MCC (reference: 134736/FO/2022) for the change of use of mezzanine first, second and third floors from offices to hotel (Use Class C1) with associated internal alterations to front entrance, and new lift shaft to rear, subject to a number of conditions. These include the following in relation to air quality:

> "8. Prior to commencement of the development, an air quality exposure assessment shall be submitted to and approved in writing by the City Council as local planning authority to include the following:
>
> Prior to commencement of the development, mitigation measures to safeguard local air quality shall be submitted to and approved in writing by the City Council as local planning authority.
> Prior to occupation of the development any agreed mitigation measures shall be implemented and verified as such in writing by the City Council as local planning authority.
>
> Reason: To secure a reduction in air pollution from traffic or other sources in order to protect existing and future residents from air pollution, pursuant to policies EN16, SP1 and DM1 of the Core Strategy."

1.2.3 Based on the requirements of the above condition, an Air Quality Exposure Assessment was undertaken to:

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

1.2.4 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 (NO_2);
- Sulphur dioxide;
- Lead;
- Particulate matter with an aerodynamic diameter of less than 10µm (PM_{10});
- 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 2023[1]. 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 2025[2] 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] The 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 (µg/m³)	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 guidance[3] 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 Framework[4] (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 achievement 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, 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 Guidance[5] (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 considerations be relevant to the 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 Greater Manchester Combined Authority (GMCA) 'Places for Everyone Joint Development Plan Document'[6] was adopted by MCC and became part of the development plan on 21st March 2024. Review of the document indicated the following policy of relevance to this assessment:

"Policy JP-S5: Clean Air

[5] https://www.gov.uk/guidance/air-quality--3.

[6] Places for Everyone Joint Development Plan Document, GMCA, 2024.

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
B. Addressing microclimate issues such as sunlight, indoor air quality, overheating, shade, wind and shelter

[…]"

2.5.2 The above policies have been considered as necessary throughout the undertaking of this assessment.

2.6 Local Planning Policy

2.6.1 The Manchester Local Plan consists of a series of planning documents of which the Core Strategy Development Plan Document (DPD)[7] is central. This was adopted by MCC on 11th July 2012.

2.6.2 Review of the Core Strategy DPD indicated the following policies of relevance to the assessment:

"Policy EN 16 Air Quality

[7] Core Strategy DPD, MCC, 2012.

The Council will seek to improve the air quality within Manchester, and particularly within Air Quality Management Areas, located along Manchester's principal traffic routes and at Manchester Airport. Developers will be expected to take measures to minimise and mitigate the local effect of emissions from traffic generated by the development, as well as emissions created by the use of the development itself, including from Combined Heat and Power and biomass plant.

When assessing the appropriateness of locations for new development the Council will consider the effects on air quality, alongside other plan objectives. This includes cumulative effects, particularly in Air Quality Management Areas."

"Policy DM 1 Development Management

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

[…]

Effects on amenity, including privacy, light, noise, vibration, air quality, odours, litter, vermin, birds, road safety and traffic generation. This could also include proposals which would be sensitive to existing environmental conditions, such as noise."

2.6.3 MCC has also produced the 'Air Quality & Planning Technical Guidance' Document'[8] which provides guidance on assessing the impact of proposed development on air quality.

2.6.4 The above policies and guidance were taken into consideration throughout the undertaking of the assessment.

8 Air Quality & Planning Technical Guidance, MCC, 2022.

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 NO_2 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 NO_2 by 2026 at the latest. The initial CAP proposal included implementation of a Class C charging Clean Air Zone. The GMCA has subsequently updated the CAP proposals[9] 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.

[9] 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 operational phase. These have therefore been assessed in accordance with the following methodology.

3.2 Potential Development Impacts

3.2.1 The development has the potential to increase concentrations of NO_2, PM_{10} 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'[10] guidance to determine the potential for trips generated by the development to affect local air quality.

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

A. If any of the following apply:

- 10 or more residential units or a site area of more than 0.5ha; or,
- More than 1,000m^2 of floor space for all other uses or a site area greater than 1ha.

B. Coupled with any of the following:

- The development has more than 10 parking spaces; or,
- The development will have a centralised energy facility or other centralised combustion process.

3.2.3 Should these criteria not be met, then the IAQM guidance[11] considers air quality impacts associated with a scheme to be **not significant** and no further assessment is required.

[10] Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

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

3.3 Potential Future Exposure

3.3.1 The proposed development comprises a hotel. This is considered a potential location of relevant exposure for short term AQOs in accordance with DEFRA guidance[12], as shown in Table 2. In addition, consideration was given to long term AQOs to provide a conservative assessment. Existing air quality conditions at the site were therefore assessed through consideration of local monitoring results and background concentrations. The findings were subsequently used to determine the potential for exceedences of the relevant AQOs and Concentration Target at the development and determine location suitability for the proposed land use.

[12] Local Air Quality Management Technical Guidance (TG22), DEFRA, 2022.

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), MCC has undertaken Review and Assessment of air quality within its area of jurisdiction. This process has indicated that annual mean concentrations of NO_2 are above the AQO within the city. As such, a number of roads within Manchester 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 Manchester City Council area."

4.2.2 The development is located within the GMCA AQMA. As such, there is the potential for vehicles travelling to and from the site to increase pollution levels in this sensitive area, as well as the exposure of future users to elevated pollution concentrations. This has been considered throughout the assessment.

4.2.3 MCC has concluded that concentrations of all other pollutants considered within the AQS 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 MCC throughout its area of jurisdiction. Data has also been collected by the GMCA to inform the CAP. Recent NO_2 concentrations recorded in the vicinity of the development, as provided in GMCA's '2024

Air Quality Annual Status Report (ASR)'[13] and 'CAP NO_2 Diffusion Tube Results 2011-2024'[14] are shown in Table 3.

Table 3 Monitoring Results

Monitoring Site		Monitored Annual Mean NO_2 Concentration (µg/m³)		
		2022	2023	2024
CAP_MANC_086	Fountain Street	36.0	32.7	31.3
CAP_MANC_087	Arlington Way	35.8	32.5	30.8
CAP_MANC_096	Spring Gardens	33.2	29.9	29.1
CAP_MANC_108	New York Street	31.5	- (a)	28.9
CAP_MANC_109	New York Street	30.2	- (a)	28.1
CAP_MANC_130	Charlotte Street	35.2	- (a)	- (a)
CAP_MANC_138	York Street	33.1	- (a)	29.5
CAP_MANC_139	York Street	35.9	34.0	33.0
CAP_MANC_140	King Street	32.1	- (a)	27.1
CAP_MANC_179	King Street	33.0	- (a)	29.1
CAP_MANC_180	King Street	34.0	- (a)	30.8
CAP_MANC_181	Parker Street	**44.9**	**46.6**	**45.4**

Note: (a) Data not available.

4.3.2 As shown in Table 3, annual mean NO_2 concentrations were above the AQO of 40µg/m³ at CAP_MANC_181 in recent years. This monitor is situated at roadside location within the GMCA AQMA and therefore elevated concentrations are therefore to be expected. Levels were below the AQO at all other monitors in recent years. Reference should be made to Figure 2 for a map of the survey positions.

4.3.3 MCC does not undertake monitoring of PM_{10} or $PM_{2.5}$ concentrations within the vicinity of the site.

[13] 2024 Air Quality ASR, GMCA, 2025.

[14] Greater Manchester LAQM and CAP NO_2 Diffusion Tube Results 2011-2024, GMCA, 2024.

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: 384500, 398500. Data for this location was downloaded from the DEFRA website[15] for the purpose of the assessment and is summarised in Table 4.

Table 4 Background Pollutant Concentration Predictions

Pollutant	Predicted 2026 Background Pollutant Concentration (µg/m³)
NO_2	20.74
PM_{10}	14.24
$PM_{2.5}$	7.90

4.4.2 As shown in Table 4, predicted annual mean NO_2, PM_{10} and $PM_{2.5}$ concentrations are below the relevant AQOs and Concentration Target at the development site.

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

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 Any vehicle movements associated with the development will generate exhaust emissions on the local and regional road networks. The proposals have therefore been assessed against the IAQM Stage 1[16] screening criteria detailed in Section 3.3. The development does not include any car parking spaces. As such, potential air quality impacts associated with the operational phase road vehicle exhaust emissions are predicted to be **not significant**.

5.3 Potential Future Exposure

5.3.1 The proposed development includes land use potentially sensitive to short and long-term pollutant concentrations. As such, there is the potential for new receptors to be introduced into an area of poor air quality. Existing conditions at the site have therefore been considered below.

5.3.2 The site is located within the GMCA AQMA which has been declared due to exceedences of the annual mean AQO for NO_2. However, there may be locations where elevated concentrations are not experienced within the designation. This can be seen through review of GMCA's 'Greater Manchester LAQM and CAP NO_2 Diffusion Tube Results 2011-2024'[17] which indicates compliance with the relevant AQO at 62 out of 102 monitoring locations within MCC's area of jurisdiction in 2024. The GMCA AQMA is not designated for exceedances of the 1-hour mean NO_2 AQO and therefore exceedences of this AQO are considered unlikely.

[16] Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

[17] Greater Manchester LAQM and CAP NO_2 Diffusion Tube Results 2011-2024, GMCA, 2025.

5.3.3 Monitoring was undertaken at twelve locations in the vicinity of the site during recent years. CAP_MANC_138, CAP_MANC_139 and CAP_MANC_140 are closest to the site, along York Street, with CAP_MANC_139 and CAP_MANC_140 adjacent to the development boundary. As shown in Table 3, annual mean concentrations were below the AQO of 40µg/m^3 at all three locations in 2024. It is considered that concentrations at the site would be similar to those monitors. As such, exceedences of the AQO are considered unlikely at the development location.

5.3.4 As shown in Table 4, predicted background NO_2, PM_{10} and $PM_{2.5}$ concentrations for the grid square containing the site were well below the AQOs and Concentration Target during 2026. Based on the predicted background concentrations, exceedences of the relevant criteria are considered unlikely at the development location.

5.3.5 Based on the assessment results, future users are not predicted to be exposed to exceedences of the AQOs and Concentration Target. The site is therefore considered suitable for the proposed end use from an air quality perspective.

5.4 Interim Planning Guidance for $PM_{2.5}$

5.4.1 Interim Planning Guidance[18] 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.

[18] 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? • 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 Manchester city centre and the surrounding area is densely populated. However, as outlined in Section 6.2, the proposals do not include any car parking spaces and impacts as a result of the development were predicted to be **not significant**
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? • 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	In order to reduce emissions of $PM_{2.5}$ and associated impacts at nearby receptors, the development does not include car parking. In addition, the development is located in a sustainable city centre location in close proximity to various sustainable public transport options

5.4.2 Based on the responses provided in Table 5 and the assessment results, as outlined in Sections 6.2 and 6.3, 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 MITIGATION

6.1.1 A number of mitigation measures have been included within the development to encourage the use of sustainable transport modes, manage vehicle flow and reduce pollution around the site. These are in accordance with MCC's 'Air Quality and Planning Technical Guidance'[19], which is based upon the Good Practice Design Principles outlined in the IAQM document 'Land-Use Planning & Development Control: Planning for Air Quality'[20]. Table 6 describes the good practice principles along with how each has been addressed with regards to the proposals.

Table 6 Good Practice Design Principles for Operational Phase Air Quality Impacts

Phase	Principle	Action
Design Phase	New developments should not contravene the Council's Air Quality Action Plan (AQAP)[21], or render any of the measures unworkable	It is confirmed that the proposals will not contravene MCC's AQAP, or render any of the measures unworkable
	Wherever possible, new developments should not create a new "street canyon", or a building configuration that inhibits effective pollution dispersion	The development will not create a new street canyon or a building configuration that inhibits effective dispersion
	Delivering sustainable development should be the key theme of any application	The development is located in a sustainable city centre location in close proximity to various sustainable public transport options
Operational Phase	The provision of at least 1 Electric Vehicle (EV) "rapid charge" point per 10 residential dwellings and/or 1,000m^2 of commercial floor space. Where on-site parking is provided for residential dwellings, EV charging points for each parking space should be made	There is no car parking proposed as part of the scheme

19 Air Quality & Planning Technical Guidance, MCC, 2022.

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

21 Greater Manchester AQAP 2016-2021, GMCA, 2016.

Phase	Principle	Action
	Where development generates significant additional traffic, provision of a detailed Travel Plan (with provision to measure its implementation and effect) which sets out measures to encourage sustainable means of transport (public, cycling and walking) via subsidised or free-ticketing, improved links to bus stops, improved infrastructure and layouts to improve accessibility and safety	There is no car parking proposed as part of the scheme The development is located in a sustainable city centre location in close proximity to various sustainable public transport options
	All gas-fired boilers to meet a minimum standard of <40mgNO_x/kWh. All gas-fired CHP plant to meet a minimum emissions standard of: • Spark ignition engine: 250mgNO_x/Nm^3; • Compression ignition engine: 400mgNO_x/Nm^3; • Gas turbine: 50mgNO_x/Nm^3. A presumption should be to use natural gas-fired installations. Where biomass is proposed within an urban area it is to meet minimum emissions standards of: • Solid biomass boiler: 275mgNO_x/Nm^3 and 25mgPM/Nm^3	The proposals do not include provision of gas-fired boilers or generators

6.1.2 It is considered the above methods would further reduce potential impacts associated with the scheme. Specific mitigation suited to the proposals may be stipulated as a planning condition if deemed necessary by the LA.

7.0 CONCLUSION

7.1.1 Redmore Environmental Ltd was commissioned by Mitchells & Butlers to undertake an Air Quality Exposure Assessment in support of the conversion of the upper floors of 1-3 York Street, Manchester, from office use to a hotel.

7.1.2 The proposals have the potential to cause air quality impacts at sensitive locations during operational phase. As such, an Air Quality Exposure Assessment was undertaken in order to determine baseline conditions, consider location suitability for the proposed end-use and assess potential effects as a result of the scheme.

7.1.3 During the operational phase of the proposed development there is the potential for road traffic exhaust emission impacts associated with vehicles travelling to and from the site. These were assessed using the IAQM screening criteria. Due to the nature of the development road traffic exhaust impacts were predicted to be **not significant**.

7.1.4 The potential for exposure of future users of the site to exceedences of the AQOs was assessed based on local monitoring data and background pollutant concentrations. This indicated that concentrations of NO_2, PM_{10} and $PM_{2.5}$ are likely to be below the relevant AQOs and Concentration Target at the development location. As such, the site is considered suitable for the proposed use from an air quality perspective.

7.1.5 Based on the assessment results, it is suggested that the planning condition is discharged.

8.0 ABBREVIATIONS

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
DPD	Development Plan Document
EV	Electric Vehicle
GMCA	Greater Manchester Combined Authority
IAQM	Institute of Air Quality Management
LA	Local Authority
LAQM	Local Air Quality Management
MCC	Manchester City Council
NGR	National Grid Reference
NO_2	Nitrogen dioxide
NO_x	Oxides of nitrogen
NPPF	National Planning Policy Framework
NPPG	National Planning Practice Guidance
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

Figures



Legend

Site Boundary

Title
Figure 1 - Site Location

Project
Air Quality Assessment
York Street, Manchester

Project Reference
11020

Client
Mitchells & Butlers

Contains Ordnance Survey Data
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Legend

Site Boundary

Monitor

Title
Figure 2 - Monitoring Locations

Project
Air Quality Assessment
York Street, Manchester

Project Reference
11020

Client
Mitchells & Butlers

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Appendix 1 - Curricula Vitae

LAUREN MASSINGHAM

Associate Air Quality Consultant

BSc (Hons), CEnv, MIAQM, MIEnvSc

Tel: 0161 706 0075 | Email: lauren.massingham@red-env.co.uk

KEY EXPERIENCE:

Lauren is an Associate with specialist experience in the air quality sector. Her key capabilities include:

- Undertaking and managing a variety of air quality projects in a range of sectors including residential, student accommodation, educational, commercial and industrial projects
- Detailed dispersion modelling of road vehicle and industrial emissions using ADMS-Roads and ADMS-6. 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.
- Co-ordination and management of multi-disciplinary projects and submissions.
- Assessment of fugitive dust impacts from a range of mineral extraction developments.
- Production of air quality mitigation strategies specifically tailored to address issues at individual sites.
- Active STEM Ambassador role, working with local schools to educate about air quality.

SELECT PROJECTS SUMMARY:

Norton Lodge, Malton

An ES Chapter and technical appendix were supplied to support this EIA development. The development comprised a new link road and therefore required multiple assessment scenarios. The Chapter also looked at impacts at ecological designations, impacts with an AQMA, odour from neighbouring facilities and impacts on proposed receptors. The AQMA in Malton was a particular concern for the council. The overall impact was considered to be not significant.

Yorkshire Post Phase 2, Leeds

An Air Quality Assessments to support each of the three proposed towers which form part of the Yorkshire Post Phase 2. These high-rise buildings were proposed for student accommodation and commercial uses. In addition to following LAQM.TG(22) and EPUK&IAQM guidance, the West Yorkshire Low Emissions Strategy (WYLES) Air Quality & Emissions Technical Planning Guidance was followed. Due to the 'Major' development classification in line with the WYLES guidance, damage costs for each tower were calculated. Mitigation measures were suggested. The energy strategy for the development was for a connection to the Leeds PIPES local heating district network.. The scheme was approved.

Old Hall Street, Liverpool

An Air Quality Assessment to support a student accommodation development. The scheme is 'car free' and trips generated dispersed to below the threshold once off Old Hall Street. The Site was considered suitable for residential use.

Viadux Phase 2, Manchester

Environmental Impact Assessment to support a high-rise residential led scheme in the city centre. The assessment included both operational and construction phase impacts. Impacts with both phases were considered to be 'not significant'. Additionally, in line with Manchester City Council Air Quality Guidance a Damage Cost calculation was included to ensure that sufficient mitigation was included to reduce air quality impacts as much as possible.

Plot 9b, First Street, Manchester

An ES Chapter to support the EIA development on land off First Street. The assessment included operational and construction phase impacts, in addition to modelling to ensure site suitability. Additionally, in line with Manchester City Council Air Quality Guidance a Damage Cost calculation was included to ensure that sufficient mitigation was included to reduce air quality impacts as much as possible. This included improving footpaths so that the site linked to other Plots within the wider First Street development. The Chapter concluded that impacts were considered not significant.

Winwick Road, Warrington

Air Quality Assessment for the proposed B2/B8 development in Warrington. Changes in pollution levels were considered at sensitive receptors as a result of trips generated and their distribution across the local area. Results of the dispersion modelling study indicated air quality impacts as a result of the scheme were not significant.

JETHRO REDMORE

Director

BEng (Hons), MSc, MIAQM, MIEnvSc, PISEP, CEnv

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.