



Hopwood Hall College, Rochdale

Air Quality Assessment

March 2025

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This document has been prepared and checked in accordance with
Waterman Group’s IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS EN ISO 45001:2018)

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Comments

Comments

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Executive Summary

This Air Quality Assessment has been prepared by Waterman Infrastructure and Environment Ltd on behalf of Willmott Dixon Construction Ltd to accompany the planning application for the redevelopment of Hopwood Hall College, Rochdale.

The main likely effects on local air quality will occur during construction and are related to the generation of dust and particulate matter (PM). A range of measures to minimise or prevent dust and PM would be implemented throughout the construction works. Therefore, it is considered that the likely residual effects due to dust emissions would be not significant. The effect of construction plant emissions is also considered to be not significant.

There is not anticipated to be a significant change in traffic during the operation of the Development and there will not be any centralised combustion plant, and therefore there will not be any significant adverse air quality operational impacts.

Local air quality in the area around the Development is good and future users of the Development would not be exposed to poor air quality. Therefore no further mitigation measures are required and the effect of local air quality on future users of the Development would therefore be not significant.

Executive Summary

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1. Introduction

Overview

- 1.1. Waterman Infrastructure & Environment Limited has been instructed by Willmott Dixon Construction Ltd (hereafter referred to as the 'Applicant') to undertake an air quality assessment in relation to the proposed redevelopment of Hopwood Hall College, Rochdale, OL12 6RY, hereafter referred to as the 'Site'.
- 1.2. The Applicant intends to submit a planning application for the redevelopment of the Site to include: *"Demolition of teaching Block B, garage Block C and link bridge between Block A and Block B along with remedial works to retained elevation known as the 'Gulwing'; and Erection of replacement teaching Block B with associated infrastructure, servicing, ancillary works and landscaping a new 4-storey block in the north of the Site"*. All proposals are hereafter referred to as the 'Development'.

Context

- 1.3. The Site is located within the administrative boundary of Rochdale Metropolitan Borough Council (RMBC) which forms part of the Greater Manchester Combined Authority (GMCA). RMBC had an AQMA covering an area based on a number of both major and minor roads in the borough, including the M60, M62, A58, A664, A6033 and B6225. The RMBC AQMA now forms part of the GMCA AQMA. The GMCA AQMA covers the 10 districts of Greater Manchester, including arterial routes, district centres, and the airport and is declared for exceedances of the annual mean nitrogen dioxide (NO₂) objective. The northern and eastern parts of the Site are located within the GMCA AQMA.
- 1.4. The most significant pollutant during construction relates to the creation of nuisance dust and emissions from construction vehicles and construction plant. A qualitative assessment has been undertaken based on relevant air quality guidance.
- 1.5. With regards to the operational phase, the Environmental Protection UK (EPUK) and Institute of Air Quality Management (IAQM) planning and development guidance¹ (EPUK / IAQM guidance), summarised in **Appendix A**, sets out criteria for when an air quality assessment is required to accompany a planning application. The guidance states an air quality assessment is required if there is:
 - a change of more than 100 Light Duty Vehicles (LDV) flows in Annual Average Daily Traffic (AADT) within or adjacent to an AQMA or more than 500 AADT elsewhere; or
 - a change of more than 25 Heavy Duty Vehicles (HDV) flows AADT within or adjacent to an AQMA or more than 100 AADT elsewhere.
- 1.6. The transport consultants, Flinders Chase, have confirmed the Development would not result in a change of more than 100 LDVs or 25 HDVs AADT and would therefore be below the EPUK / IAQM

¹ Environmental Protection UK & Institute of Air Quality Management (2017), 'Land-Use Planning & Development Control: Planning for Air Quality', EPUK & IAQM, London

guidance criteria for when an air quality assessment is required. The Development would not include any centralised combustion plant and would therefore not give rise to any significant adverse air quality impacts.

- 1.7. Based on the low trip generation and the absence of any centralised combustion plant, according to the EPUK / IAQM guidance, the Development is not expected to give rise to air quality impacts. As such the likely effect of the operational Development on the local air quality would be not significant.
- 1.8. Given the above, the purpose of the air quality assessment is to assess the potential effect of the Development on local air quality during construction and to qualitatively consider the potential air quality concentrations future users of the Development would be exposed to.
- 1.9. Section 2 of this report gives a summary of legislation, planning policy, and guidance relevant to air quality. Section 3 provides a summary of the baseline conditions. Section 4 provides details of the construction assessment methodology, the qualitative construction assessment and relevant mitigation measures. Section 5 discusses the measures to reduce impacts to air quality from the operational Development. A summary of the main findings and conclusions of the assessment is given in section 6. The air quality assessment is supported by:
 - Appendix A: Summary of Relevant Legislation, Planning Policy and Guidance; and
 - Appendix B: Assessor Experience.

2. Air Quality Legislation and Planning Policy

- 2.1. The following legislation, planning policy and guidance are considered relevant to this air quality assessment. A summary of these documents is provided in **Appendix A**:

Legislation

- EU Directive 2008/50/EC, 2008²;
- Air Quality Standards Regulations, 2010³;
- Air Quality (England) Regulations 2000 (as amended⁴);
- The UK Air Quality Strategy, 2023⁵;
- The Environment Act 1995⁶; and
- The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023⁷.

Planning Policy

- National Planning Policy Framework, December 2024⁸; and
- Rochdale Borough Council Core Strategy, adopted October 2016⁹.

Air Quality Policy

- Department for Environment, Food and Rural Affairs, Clean Air Strategy, 2019¹⁰;
- UK plan for tackling roadside nitrogen dioxide concentrations, July 2017¹¹;
- Environmental Improvement Plan 2023, January 2023¹²
- Greater Manchester Clean Air Plan, 2025¹³.

Guidance

- Department for Environment, Food and Rural Affairs, PM_{2.5} Targets: Interim Planning Guidance¹⁴
- Environmental Protection UK & Institute of Air Quality Management Guidance; Land-Use Planning & Development Control: Planning for Air Quality, 2017¹⁵;
- Planning Practice Guidance: Air Quality¹⁶;
- World Health Organization, Global Air Quality Guidelines. September 2021¹⁷

² Council Directive 2008/50/EC of 21 May 2008 on ambient air quality and cleaner air for Europe.

³ Defra, (2010) The Air Quality Standards (England) Regulations.

⁴ Environmental Protection, England. The Air Quality (England) Regulations 2000. Available from: <https://www.legislation.gov.uk/ukksi/2000/928/contents/made>.

⁵ Defra (2023). Air Quality Strategy, Framework for local authority delivery.

⁶ Office of the Deputy Prime Minister (ODPM), 1995, 'The Environment Act' 1995.

⁷ The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023

⁸ Ministry of Housing Communities and Local Government, National Planning Policy Framework. December 2024 (last updated February 2025). Available from: [National Planning Policy Framework - GOV.UK](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/123456/National_Planning_Policy_Framework_-_GOV.UK.pdf).

⁹ Rochdale Borough Council Core Strategy, adopted October 2016

¹⁰ Defra (2019) Clean Air Strategy, 2019

¹¹ Defra. UK plan for tackling roadside nitrogen dioxide concentrations. Detailed Plan. July 2017

¹² Defra, Environmental Improvement Plan 2023, published 31st January 2023

¹³ Clean Air Greater Manchester, Greater Manchester Clean Air Plan, last updated February 2025

¹⁴ Defra, PM_{2.5} Targets: Interim Planning Guidance. October 2024

¹⁵ Environmental Protection UK & Institute of Air Quality Management (2017), 'Land-Use Planning & Development Control: Planning for Air Quality', EPUK & IAQM, London.

¹⁶ DCLG (2019), 'Planning Practice Guidance: Air Quality (01 November 2019).

¹⁷ World Health Organization, Global Air Quality Guidelines. September 2021

- Local Air Quality Management Technical Guidance, 2022¹⁸; and
- Institute of Air Quality Management: Guidance on the Assessment of Dust from Demolition and Construction, Version 2.2 January 2024¹⁹.

¹⁸ Defra (2022) 'Local Air Quality Management (LAQM) Technical Guidance (TG22)', August 2022

¹⁹ Institute of Air Quality Management, 2023, 'Guidance on the Assessment of dust from demolition and construction. August 2023 (Version 2.1)

3. Baseline Conditions

Rochdale Metropolitan Borough Council Review and Assessment Process

- 3.1. In 2005, RMBC declared an AQMA covering a number of both major and minor roads in the borough, including the M60, M62, A58, A664, A6033 and B6225 for exceedances of the annual mean NO₂ AQS objective.
- 3.2. The RMBC AQMA was amended in 2016 to form part of the GMCA AQMA. The GMCA AQMA covers the 10 districts of Greater Manchester, including arterial routes, district centres, and the airport and is declared for exceedances of the annual mean NO₂ AQS objective.
- 3.3. The northern and eastern parts of the Site are located within the GMCA AQMA.
- 3.4. A review of local air quality was undertaken using the GMCA 2023 Air Quality Annual Status Report (ASR)²⁰.

Rochdale Metropolitan Borough Council Local Monitoring

- 3.5. Due to Covid-19 restrictions, 2020 and 2021 monitoring data are not considered representative of air quality concentrations at and surrounding the Site. 2020 and 2021 monitoring data has therefore not been considered further.
- 3.6. In 2023, RMBC undertook monitoring of NO₂, PM₁₀²¹ and PM_{2.5}²² at the Rochdale Queensway (RDL001) roadside automatic monitor. The monitor was installed in August 2021 and is located approximately 2km south of the Site.
- 3.7. Monitored concentrations from the Rochdale Queensway (RDL001) automatic monitor are presented in **Table 1**.

Table 1: Measured Concentrations at the Rochdale Queensway (RDL001) automatic monitor

ID	Pollutant	Averaging Period	AQS Objective	2022	2023
Rochdale Queensway (RDL001)	NO ₂	Annual Mean (µg/m ³)	40µg/m ³	27µg/m ³	26µg/m ³
		1-Hour Mean (No. of Hours)	200µg/m ³ not to be exceeded more than 18 times a year	0 hours	0 hours
	PM ₁₀	Annual Mean (µg/m ³)	40µg/m ³	18µg/m ³	16µg/m ³
		1-Hour Mean (No. of Hours)	50µg/m ³ not to be exceeded more than 35 times a year	6 hours	1 hours
	PM _{2.5}	Annual Mean (µg/m ³)	25µg/m ³	10µg/m ³	9µg/m ³

Source: Data obtained from the GMCA 2023 Air Quality Annual Status Report, June 2024

- 3.8. The monitoring results in **Table 1** show that both the NO₂ AQS objectives were met at the Rochdale Queensway (RDL001) roadside automatic monitor, as well as the WHO interim Target 2

²⁰ GMCA 2023 Air Quality Annual Status Report, June 2024

²¹ Particulate matter with a mean aerodynamic diameter less than 10 microns (µm)

²² Particulate matter with a mean aerodynamic diameter less than 2.5 microns (µm)

of 30µg/m³ in 2022 and 2023.

- 3.9. In 2023, RMBC also measured NO₂ at 28 locations using diffusion tubes. The results for the 11 NO₂ diffusion tubes within 2km of the Site are presented in **Table 2**.

Table 2: Annual Mean NO₂ Concentrations at RMBC Diffusion Tubes within 2km of the Site

ID	Site Name	Classification	Distance to Site (km)	Annual Mean NO ₂ Concentration (µg/m ³)		
				2019	2022	2023
RO10ANO	10	Urban Background	0.6	17.7	15.0	13.4
RO18ANO	18	Urban Background	0.6	26.8	22.7	18.1
RO26ANO	26	Roadside	1.0	41.6	34.2	27.6
RO9ANO	9	Kerbside	1.2	39.6	36.4	26.6
RO8ANO	8	Roadside	1.3	44.7	36.3	32.1
RO7ANO	7	Urban Background	1.6	32.1	26.4	26.1
RO23ANO	23	Roadside	1.7	37.8	31.7	29.8
RO22ANO	22	Roadside	1.8	43.4	32.2	30.2
RO27ANO	27	Roadside	1.8	46.1	31.3	32.6
RO29ANO, RO30ANO, RO31ANO (triplicate site)	31	Roadside	2.0	-	30.6	23.1
RO17ANO	17	Urban Background	2.0	23.5	24.5	17.3

Notes: Data obtained from the GMCA 2023 Air Quality Annual Status Report, June 2024
Exceedances of the AQS objective shown in **Bold**

- 3.10. The results in **Table 2** show the annual mean NO₂ AQS objective of 40µg/m³ was exceeded in 2019 at the following diffusion tubes:
- RO26ANO
 - RO8ANO
 - RO22ANO
 - RO27ANO
- 3.11. NO₂ concentrations have declined significantly since 2019, and there were no exceedances of the annual objective in either 2022 or 2023.
- 3.12. The WHO interim Target 2 of 30µg/m³ was met at 8 of the 11 RMBC diffusion tubes within 2km of the Site and the WHO interim Target 3 of 20µg/m³ was met at 3 of the 11 diffusion tubes within 2km

of the Site in 2023.

- 3.13. In addition to the monitoring undertaken by RMBC and the GMCA, background concentrations of NO_x, NO₂, PM₁₀ and PM_{2.5} are available from the Defra Air Quality Archive for 1x1km grid squares for assessment years between 2018 and 2040. **Table 3** presents the Defra background concentrations for the grid square the Site is located within (389500, 413500).

Table 3: Defra Background Maps for the Grid Square of the Site

Pollutant	AQS Objective	WHO Target	Annual Mean Concentration (µg/m ³)		
			2018	2023	2040
NO _x	-	-	31.7	18.3	10.6
NO ₂	40µg/m ³	Interim Target 2 - 30µg/m ³	21.6	13.6	8.2
		Interim Target 3 - 20µg/m ³			
PM ₁₀	40µg/m ³	Interim Target 4 - 20µg/m ³	12.0	11.7	10.9
		AQGL - 15µg/m ³			
PM _{2.5}	25µg/m ³	Interim Target 4 - 10µg/m ³	8.2	7.0	6.1
		AQGL - 5µg/m ³			

Data Source: <http://uk-air.defra.gov.uk>

- 3.14. The data in **Table 3** shows that all pollutants are below the respective AQS objectives.
- 3.15. The annual mean NO₂ concentration meets the WHO interim Target 3 of 20µg/m³. The annual mean PM₁₀ concentration meets the Air Quality Guideline Level (AQGL) of 15µg/m³ and the annual mean PM_{2.5} concentration meets the WHO interim Target 4 of 10µg/m³.
- 3.16. The annual mean PM_{2.5} concentration would be equal to or less than 10 µg/m³ by the end of 31st December 2040 - meeting the Environmental Targets (Fine Particulate Matter) (England) Regulations 2023.

4. Construction Phase Qualitative Assessment

Assessment Methodology

Dust Emissions

- 4.1. The assessment of the impacts of dust emissions from the construction works has been based on the latest version of the IAQM's Guidance on the Assessment of Dust from Demolition and Construction, published in January 2024 (IAQM Construction guidance) and the following:
 - Consideration of planned construction activities and their phasing; and
 - A review of the location (and distance) of sensitive uses surrounding the Site.
- 4.2. Following the IAQM Construction guidance, construction works were divided into the following four distinct activities:
 - Demolition – any activity involved in the removal of an existing structure (or structures). This may also be referred to as de-construction, specifically when a building is to be removed a small part at a time;
 - Earthworks – soil-stripping, ground-levelling, excavation and landscaping;
 - Construction – any activity involved with the provision of a new structure (or structures), its modification or refurbishment. A structure will include a residential dwelling, office building, retail outlet, road, etc; and
 - Trackout – the transport of dust and dirt from the construction/demolition site onto the public road network, where it may be deposited and then re-suspended by vehicles using the network. This arises when HDVs leave the construction/demolition site with dusty materials, which may then spill onto the road, and/or when HDVs transfer dust and dirt onto the road having travelled over muddy ground on site.
- 4.3. IAQM Construction guidance considers the effects of dust, as follows:
 - Annoyance due to dust soiling;
 - Potential effects on human health due to significant increase in exposure to PM₁₀; and
 - Harm to ecological receptors with account being taken of the sensitivity of the area that may experience these effects.
- 4.4. A summary of the four-step process, which was undertaken for the dust of construction activities as set out in the IAQM Construction guidance, is presented in **Table 4**.

Table 4: Summary of the IAQM Construction guidance for Undertaking a Construction Dust Assessment

Step	Description
1 Screen the Need for a Detailed Assessment	Simple distance-based criteria are used to determine the requirement for a detailed dust assessment. An assessment will normally be required where there is: • A 'human receptor' within: – 250m of the boundary of the site; or – 50 m of the route(s) used by construction vehicles on the public highway, up to 250 m from the site entrance(s). • An 'ecological receptor' within: – 50 m of the boundary of the site; or – 50 m of the route(s) used by construction vehicles on the public highway, up to 250 m from the site entrance(s)
2 Assess the Risk of Dust Impacts	The risk of dust arising in sufficient quantities to cause annoyance and/or health and/or ecological impacts should be determined using four risk categories: negligible, low, medium and high risk. A site is allocated to a risk category based on two factors: • the scale and nature of the works, which determines the potential dust emission magnitude as small, medium or large (STEP 2A); and • the sensitivity of the area to dust impacts (STEP 2B), which is defined as low, medium or high sensitivity. To determine the risk of impacts with no mitigation applied (STEP 2C), the dust emission magnitude (STEP 2A) is combined with the sensitivity of the area determined (STEP 2B)
3 Site Specific Mitigation	The dust risk categories for each of the four activities determined in STEP 2C is used to define the appropriate, site-specific, mitigation measures to be adopted. Local authorities may have a Code for Construction Practice, or equivalent document, that should be taken into account during the development of the mitigation measures. For the cases where the risk is 'negligible' no mitigation measures beyond those required by legislation are required.
4 Determine Significant Effects	Once the risk of dust impacts has been determined in STEP 2C and the appropriate dust mitigation measures identified in STEP 3 the final step is to determine whether there are significant effects arising from the construction phase of a proposed development. For almost all construction activity, the aim should be to prevent significant effects on receptors through the use of effective mitigation. Experience shows that this is normally possible. Hence the residual effect will normally be 'not significant'.

Construction Vehicle and Construction Plant Emissions

4.5. The IAQM Construction guidance states:

"Experience of assessing the exhaust emissions from on-site plant (NRMM) and site traffic suggests that they are unlikely to make a significant impact on local air quality, and in the vast

majority of cases they will not need to be quantitatively assessed. For site plant and on-site traffic, consideration should be given to the number of plant/vehicles and their operating hours and locations to assess whether a significant effect is likely to occur. For site traffic on the public highway, if it cannot be scoped out (for example by using the EPUK's criteria), then it should be assessed using the same methodology and significance criteria as operational traffic impacts”.

- 4.6. In accordance with the IAQM Construction guidance, it is considered that quantitative assessments of the exhaust emissions from construction traffic and construction plant are not required.

Determining Significance of Impacts

Dust Emissions

- 4.7. The potential impacts of construction activities on local air quality were based on professional judgement and with reference to the criteria set out in the IAQM Construction guidance. Appropriate mitigation that would be implemented to minimise any adverse impacts on air quality have also been considered. Details of the assessors' experience and competence to undertake the dust assessment is provided in **Appendix B**.
- 4.8. The assessment of the risk of dust impacts arising from the likely construction activities, as identified by the IAQM Construction guidance, is based on dust emission magnitude (STEP 2A) and the sensitivity of the area (STEP 2B). The matrices presented in **Tables 5 - 8** provide a method of assigning the level of risk for each activity.

Table 5: Risk of Dust Impacts - Demolition

Sensitivity of Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Medium Risk
Medium	High Risk	Medium Risk	Low Risk
Low	Medium Risk	Low Risk	Negligible

Source: IAQM Guidance on the assessment of dust from demolition and construction, Table 6. January 2024 (Version 2.2).

Table 6: Risk of Dust Impacts - Earthworks

Sensitivity of Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible

Source: IAQM Guidance on the assessment of dust from demolition and construction, Table 7. January 2024 (Version 2.2).

Table 7: Risk of Dust Impacts - Construction

Sensitivity of Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible

Source: IAQM Guidance on the assessment of dust from demolition and construction, Table 8. January 2024 (Version 2.2).

Table 8: Risk of Dust Impacts - Trackout

Sensitivity of Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Low Risk	Negligible
Low	Low Risk	Low Risk	Negligible

Source: IAQM Guidance on the assessment of dust from demolition and construction, Table 9. January 2024 (Version 2.2).

- 4.9. The risk of dust impact determined for each construction activity type is used to define the appropriate mitigation measures that must applied.

Construction Vehicle and Construction Plant Emissions

- 4.10. The significance of the effects from construction vehicle and construction plant emissions on local air quality was based on professional judgement.

Construction Phase Effects

Dust Emissions

- 4.11. Construction activities of the Development have the potential to affect local air quality through Demolition, Earthworks, Construction and Trackout activities, as described above.
- 4.12. The Site is in a predominantly commercial and residential area - the nearest sensitive receptors are residential properties approximately 50m north of the Site, along College Bank Way. Rochdale Sixth Form Centre is located approximately 70m south of the Site. In accordance with **Table 4**, the assessment will proceed to detailed assessment.
- 4.13. There are no designated ecological sites within 50m of the boundary of the Site or 50m of the route(s) to be used by construction vehicles on the public highway, up to 250m from the site entrance(s). Harm to ecological receptors has therefore not been considered further.

Potential Dust Emission Magnitude

Demolition

- 4.14. The total volume of buildings to be demolished is estimated to be between 12,000m³ and 75,000m³. Based on this and considering the criteria in step 2A of the IAQM Construction guidance, the potential dust emissions during demolition activities would be of **medium** magnitude.

Earthworks

- 4.15. The Site area is approximately 12,000m². Based on this and considering the criteria in step 2A of the IAQM Construction guidance, the potential dust emissions during earthworks activities would be of **small** magnitude.

Construction

- 4.16. The total volume of buildings to be constructed is estimated to be between 12,000m³ and 75,000m³. Based on the criteria in step 2A of the IAQM Construction guidance, the potential dust emissions during construction activities would be of **medium** magnitude.

Trackout

- 4.17. It is estimated the number of HDV trips leaving the Site would be less than 20 outward movements in any one day. Based on this and considering the criteria in step 2A of the IAQM Construction guidance, the potential for dust emissions due to trackout activities would be of **small** magnitude.

Sensitivity of the Area

- 4.18. The sensitivity of the area to each main activity has been assessed based on the number and distance of the nearest sensitive receptors to the activity, and the sensitivity of these receptors to dust soiling and human health.

Sensitivity of the Area to Dust Soiling Effects on People and Property

- 4.19. There are no sensitive receptors within 20m of the Site boundary. However, there are estimated to be more than 100 residential properties, classified as high sensitivity receptors, within 50m of the Site boundary. On this basis, as set out in Table 2 of the IAQM Construction guidance, the sensitivity of the area to dust soiling is **high**.

Sensitivity of the Area to Human Health Impacts

- 4.20. As shown in **Table 1**, the annual mean PM₁₀ concentration at the Rochdale Queensway (RDL001) automatic monitor was 16µg/m³. There are also no sensitive receptors within 20m of the Site boundary. On this basis, as set out in Table 3 of the IAQM Construction guidance, and that there are estimated to be more than 100 residential properties within 50m of the Site, the sensitivity of the area to human health impacts is **low**.

Dust Risk Summary

- 4.21. The dust risk categories, based on the potential magnitude of dust emissions and the sensitivity of the area to dust, are presented in **Table 9**.

Table 9: Summary of Dust Risk

Receptor Sensitivity	Sensitivity of the Surrounding Area			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	Medium Risk	Low Risk	Medium Risk	Low Risk
Human Health	Low Risk	Negligible	Low Risk	Negligible

- 4.22. The Site is considered **medium risk** during the demolition and construction phases regarding dust soiling. Therefore, a range of mitigation measures, appropriate to medium risk sites, would be developed. The mitigation measures would be included within a Construction Environmental Management Plan and implemented to prevent the release of dust entering the atmosphere and / or being deposited on nearby receptors. The Site is low or negligible risk regarding human health effects.
- 4.23. The mitigation measures are an inherent part of the Development and would be secured by planning conditions. The mitigation measures would ensure the effect of dust emissions would be **not significant**.

Construction Vehicle Flows and Construction Plant Emissions

- 4.24. Given the Development proposals it is estimated that the number of HDVs would be less than 20 movements in any one day during the construction phase. On the A58, east of the Site, there were 27,248 daily vehicles including 2.1% HDVs estimated for 2023²³. Considering the existing vehicle movements on the A58, it is considered the potential impact of construction vehicles on air quality would be **not significant**.
- 4.25. Any emissions from plant operating on the Site would be very small in comparison to the emissions from traffic movements on the roads adjacent to the Site. It is therefore considered that even in the absence of mitigation, their likely effect on local air quality would be **not significant**.

Construction Mitigation Measures and Residual Effects

Dust Emissions

- 4.26. The implementation of the inherent mitigation measures to prevent the release of dust entering the atmosphere and / or being deposited on nearby receptors, would ensure the likely residual effect of dust emissions would be **not significant**.

²³ Road traffic statistics - Manual count point: 56600 (dft.gov.uk)

Construction Vehicle and Construction Plant Emissions

- 4.27. All construction traffic logistics would be agreed with RMBC and the GMCA. Consideration would also be given to the avoidance, or limited use, of traffic routes in proximity to sensitive uses (i.e. residential roads etc.) and the avoidance, or limited use, of roads during peak hours, where practicable. The likely residual effect of construction vehicles entering and egressing the Site on air quality would remain **not significant**.
- 4.28. Even in the absence of mitigation, the likely effect of any emissions from plant operation on the Site is considered to be **not significant**. This would therefore remain the likely residual effect.

5. Operational Development

Effects of the Development's on Local Air Quality

- 5.1. The transport consultants, Flinders Chase, have confirmed the Development would not result in a change of more than 100 LDVs or 25 HDVs AADT and would therefore be below the EPUK / IAQM guidance criteria for developments within an AQMA.
- 5.2. Additionally, the Development would not include any centralised combustion plant or other sources that would generate significant pollutant emissions. Considering the low trip generation rate and the absence of combustion plant, according to the EPUK / IAQM guidance, the Development would not be expected to give rise to significant air quality impacts.
- 5.3. The effect of the Development on local air quality was therefore considered to be **not significant**.

Predicted Future Exposure

NO₂

- 5.4. The RO9ANO kerbside diffusion tube located approximately 1km south of the Site is considered to be a conservative representation of annual mean NO₂ concentrations at the Site due to its proximity to the A58. The monitored 2023 annual mean NO₂ concentration was 26.6µg/m³ below both the AQS annual mean NO₂ objective and the WHO Interim Target 2 of 30µg/m³.

PM₁₀ and PM_{2.5}

- 5.5. The Rochdale Queensway (RDL001) roadside automatic monitor located approximately 2km south of the Site is considered to be representative of annual mean PM₁₀ and PM_{2.5} concentrations at the Site.
- 5.6. As shown in **Table 1**, the monitored 2023 annual mean PM₁₀ concentration at the Rochdale Queensway (RDL001) roadside automatic monitor was 16µg/m³, below both the AQS annual mean PM₁₀ objective of 40µg/m³ and the WHO Interim Target 4 of 20µg/m³.
- 5.7. The monitored 2023 annual mean PM_{2.5} concentration at the Rochdale Queensway (RDL001) roadside automatic monitor was 9µg/m³, below both the AQS annual mean PM_{2.5} objective of 25µg/m³ and the WHO Interim Target 4 of 10µg/m³.
- 5.8. Additionally, the Government set out within the 2023 Environmental Improvement Plan two new PM_{2.5} targets together with interim targets. These targets are as follows:
 - Annual Mean Concentration Target (ACMT) - 10 µg/m³ or less by 2040 and an interim target of 12 µg/m³ or less by 2028; and
 - Population Exposure Reduction Target (PERT) - 35% reduction by 2040 compared to a baseline of 2018 and an interim target of 22% reduction by 2028 compared to 2018.
- 5.9. Table 1 highlights that the annual mean PM_{2.5} concentration in 2023 was below the interim ACMT target of 12µg/m³ to be achieved by 2028. Additionally, the annual mean PM_{2.5} concentration is also predicted to meet the 2040 annual mean PM_{2.5} concentration target of 10µg/m³.

Summary

- 5.10. Based on the pollutant concentrations shown in **Tables 1 - 3**, it is considered that the local air quality on the Site is acceptable. The effect of the Development on air quality for future users would therefore be **not significant**.

6. Summary and Conclusions

- 6.1. A qualitative assessment of dust effects during the construction phase has been carried out using the IAQM Construction guidance. The implementation of a range of appropriate site management practices to control dust emissions would significantly reduce the potential for adverse nuisance dust effects associated with the various stages of the works. Following implementation, it is considered that likely residual effects due to fugitive emissions would be **not significant**.
- 6.2. The effect of construction vehicles entering and egressing the Site during the construction phase would be **not significant**.
- 6.3. Any emissions from plant operating on the Site would be very small in comparison to the emissions from traffic movements on the roads adjacent to the Site. It is therefore considered the effect on local air quality would be **not significant**.
- 6.4. The transport consultants, Flinders Chase, have confirmed the trips generated by the Development would not result in a change of more than 100 LDVs or 25 HDVs AADT. The vehicle flows generated by the Development would therefore be below the EPUK / IAQM guidance for when an air quality assessment is required. Additionally, the Development would not include any centralised combustion plant. The Development would therefore not give rise to any significant adverse air quality impacts.
- 6.5. Based on the low trip generation and the absence of a centralised combustion plant, according to the EPUK / IAQM guidance, the Development is not expected to give rise to significant air quality impacts. As such the likely effect of the operational Development on local air quality would be **not significant**.
- 6.6. A review of RMBC monitoring data and Defra Background maps indicate that NO₂, PM₁₀ and PM_{2.5} concentrations would be suitable for future users of the Development. The effect of local air quality on future users of the Development would be **not significant** with respect to compliance with the objectives and limit values.

APPENDICES

A. Summary of Relevant Legislation, Planning Policy and Guidance

Appendices

Hopwood Hall College, Rochdale

Project Number: WIE20781-101

Document Reference: 20781101-WAT-XX-XX-RP-N-720001_P01.01_S3

Appendix A: Summary of Relevant Legislation, Planning Policy and Guidance

Legislation

The Environment Act, 1995 (as amended)

Part IV of the Environment Act 1995 provides a system of LAQM under which Local Authorities (LAs) are required to review and assess the future quality of the air in their area by way of a staged process. Should this process suggest that any of the AQS objectives will not be met by the target dates, the LPA must consider the declaration of an Air Quality Management Area (AQMA) and the subsequent preparation of an Air Quality Action Plan (AQAP) to improve the air quality in that area in pursuit of the AQS objectives.

The Environment Act 1995 also requires the preparation of a national air quality strategy setting air quality objectives for specified pollutants and outlining measures to be taken by LPAs in relation to meeting these objectives (the LAQM system).

Air Quality (England) Regulations 2000 (as amended)

These regulations put into legislation the air quality objectives that are detailed in the National Air Quality Strategy (AQS).

The AQS objectives of air pollutants relevant to this assessment are summarised in **Table A1**.

Table A1: Summary of Relevant UK AQS Objectives

Pollutant	Objective		Date by which Objective to be Met
	Concentration	Measured as	
Nitrogen Dioxide (NO ₂)	200µg/m ³	1 hour mean not to be exceeded more than 18 times per year	31/12/2005
	40µg/m ³	Annual Mean	31/12/2005
Particulate Matter (PM ₁₀) ^(a)	50µg/m ³	24 hour mean not to be exceeded more than 35 times per year	31/12/2004
	40µg/m ³	Annual Mean	31/12/2004
Particulate Matter (PM _{2.5}) ^(b)	25µg/m ³	Annual Mean	01/01/2020

Note: (a) Particulate matter with a mean aerodynamic diameter less than 10 microns (or micrometres – µm)
(b) Particulate matter with a mean aerodynamic diameter less than 2.5 microns

EU Directive 2008/50/EC, 2008 and Air Quality Standards Regulations, 2010

Further to **Table A1**, the European Union (EU) also sets Limit Values for NO₂, PM₁₀ and PM_{2.5}, which were adopted by the UK before Brexit. The Limit Values for NO₂ are the same numerical levels as the AQS objective but the target date and where compliance is assessed differs.

EU Directive 2008/50/EC on ambient air quality assessment and management came into force in May 2008 and was transposed into UK legislation in March 2010 by the Air Quality Standards Regulations (which apply to the whole of the UK). The Directive aims to protect human health and the environment by avoiding, reducing or preventing harmful concentrations of air pollutants.

The Limit Values are legally binding and the Secretary of State for Environment, Food and Rural Affairs, on behalf of the UK Government, is responsible for their implementation. As achievement of these values

is a national obligation rather than a local obligation the Limit Values have not been considered further in the Air Quality Assessment.

The Air Quality Strategy, 2023

The current Air Quality Strategy (AQS) published in April 2023 sets out a framework to enable local authorities to achieve long-term air quality targets. It fulfils the statutory requirement of the Environment Act 1995 as amended by the Environment Act 2021 to publish an Air Quality Strategy setting out air quality standards, objectives, and measures for improving ambient air quality every 5 years.

The Environment Act, 2021

The 2021 Environment Act requires the Secretary of State for Environment Food and Rural Affairs to set a long-term target to reduce the populations exposure to PM_{2.5} in England. These targets are as follows:

- Annual Mean Concentration Target (ACMT) - 10 µg/m³ or less by 2040; and
- Population Exposure Reduction Target (PERT) - 35% reduction by 2040 compared to a baseline of 2018.

The Act also requires the Secretary of State to prepare an Environmental Improvement Plan (EIP), a statutory plan for improving the natural environment in England and annual reports to Parliament on the implementation of EIP.

The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023

The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 sets the PM_{2.5} targets detailed within the 2021 Environment Act into legislation.

Planning Policy

National Planning Policy Framework, 2024

The National Planning Policy Framework (NPPF), published in December 2024 sets out the Government's planning policies for England and how these should be applied. Paragraph 109 sets out a series of transport related objectives.

Paragraph 109 states *"The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making."*

Paragraph 187 states *"Planning policies and decisions should contribute to and enhance the natural and local environment by: ... 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, taking into account relevant information such as river basin management plans;..."*

Paragraph 198 states *"Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development."*

Paragraph 199 states *"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.”.

Paragraph 200 states “Planning policies and decisions should ensure that new development can be integrated effectively with existing businesses and community facilities (such as places of worship, pubs, music venues and sports clubs). Existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established. Where the operation of an existing business or community facility could have a significant adverse effect on new development (including changes of use) in its vicinity, the applicant (or ‘agent of change’) should be required to provide suitable mitigation before the development has been completed.”

Local Planning Policy

Rochdale Borough Council Core Strategy, adopted October 2016

The Rochdale Borough Council Core Strategy sets out the Council’s long-term vision and objectives up to 2028, including strategic policies for steering and shaping development.

Policy G9 ‘Reducing the impact of pollution, contamination and land instability’ states that:

“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...”*

Policy T2 ‘Improving accessibility’ states that:

“...We will require Transport Assessments (TA) and Travel Plans (TP) for:

- i. Residential developments of 80 units or more;*
- ii. All schools and Further Education Institutions (including extensions);*
- iii. Developments located in, or having an impact on, Air Quality Management Areas (AQMA);*
- iv. Areas where the Council has defined initiatives or targets to reduce traffic, restrict development growth, promote public transport, walking and cycling or measures to promote low emissions and tackle poor air quality...”*

Policy DM1 ‘General development requirements’ states that:

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

...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...”

Air Quality Policy

Department for Environment, Food and Rural Affairs, Clean Air Strategy, 2019

Published in January 2019 the Clean Air Strategy sets out a framework and national action to improve air quality throughout England.

The Strategy is underpinned by new national powers to control major sources of air pollution, in line with the risk they pose to public health and the environment, plus new local powers to act in areas with an air pollution problem. The Strategy also supports the creation of Clean Air Zones to lower emissions from all sources of air pollution, backed up with clear enforcement mechanisms.

UK Plan for Tackling Roadside Nitrogen Dioxide Concentrations, 2017

Following a legal challenge the UK Government was required by the High Court to produce a new Air Quality Plan to meet the NO₂ Limit Value in the shortest timescale possible. This document was issued on 26th July 2017.

The plan focuses on reducing concentrations of NO₂ with the principal aims to:

- a. reduce emissions of NO_x from the current road vehicle fleet in problem locations now; and*
- b. accelerate road vehicle fleet turnover to cleaner vehicles to ensure that the problem remains addressed and does not move to other locations.*

A further High Court ruling on 21st February 2018, stated the UK Governments air quality improvement plan adopted on 31st July 2017 was unlawful as *'it does not contain measures sufficient to ensure substantive compliance with the 2008 Directive and the English Regulations'*. The UK Government *'must ensure steps are taken to achieve compliance as soon as possible, by the quickest route possible and by a means that makes that outcome likely'*.

The judgement stated that the UK Government must produce a supplementary plan, setting out requirements for feasibility studies to be undertaken in the 33 Local Authority Areas. Rochdale was not included in the list of local authorities.

Environmental Improvement Plan 2023

The Secretary of State for Environment, Food & Rural Affairs is responsible for preparing the Environmental Improvement Plan (EIP), a statutory plan for improving the natural environment in England, every 15 years. The Secretary of State must also prepare an annual report reviewing the implementation of the EIP and the progress that has been made towards achieving the targets set out in the EIP.

The current EIP was published in 2023 and current includes two interim targets for PM_{2.5}:

- Annual Mean Concentration Target (ACMT) - 12 µg/m³ or less by 2028; and
- Population Exposure Reduction Target (PERT) - 22% reduction by 2028 compared to a baseline of 2018.

Greater Manchester Clean Air Plan, 2025

Greater Manchester is under direction from the government to meet legal limits for nitrogen dioxide on local roads in the shortest possible time and by 2026 at the latest.

The government has approved the investment-led Greater Manchester Clean Air Plan as the best route to cutting this pollution, with:

- 117 new lower and zero-emission buses and EV infrastructure.
- Funding to support moving Greater Manchester's taxi fleet to cleaner vehicles.
- Local measures to manage traffic flows in Manchester and Salford.

The approved Clean Air Plan will allow the city-region to meet legal limits for NO₂ on local roads in the shortest possible time without the need for a Clean Air Zone.

Guidance

Department for Environment, Food and Rural Affairs, PM_{2.5} Targets: Interim Planning Guidance

This guidance highlights the importance of implementing mitigation measures to minimise PM_{2.5} emissions during the design stage of new developments. These mitigation measures should be documented within the planning application documents submitted. This applies to all developments which would normally require an air quality assessment. More detailed assessments are expected for developments which are closer to populations, and those which are likely to have higher emissions.

Defra have provided the following questions to assist applicants to support with this interim process:

1. How has exposure to PM_{2.5} been considered when selecting the development site?

Applicants are advised to consider the following in their application:

- *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.*

2. 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?

Applicants are advised to explain (with evidence where possible) why each measure was implemented. Or, if no mitigation measures have been implemented, why this was not proposed. Actions can refer to, but are not limited to, the following:

- *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.*

Environmental Protection UK & Institute of Air Quality Management Guidance; Land-Use Planning & Development Control: Planning for Air Quality, 2017

Environmental Protection UK (EPUK) and the Institute of Air Quality Management (IAQM) provide guidance for air quality considerations within the local development control processes, promoting a consistent approach to the treatment of air quality issues.

It explains how development proposals can adopt good design principles to reduce emissions and contribute to better air quality. The guidance also provides a method for screening the need for an air quality assessment and a consistent approach for describing the impacts at individual receptors. The EPUK and IAQM Guidance, advises that:

"In arriving at a decision about a specific proposed development the local planning authority is required to achieve a balance between economic, social and environmental considerations. For this reason, appropriate consideration of issues such as air quality, noise and visual amenity is necessary. In terms of air quality, particular attention should be paid to:

- *Compliance with national air quality objectives and of EU Limit Values;*
- *Whether the development will materially affect any air quality action plan or strategy;*
- *The overall degradation (or improvement) in local air quality; or*

- *Whether the development will introduce new public exposure into an area of existing poor air quality".*

Planning Practice Guidance: Air Quality, 2019

The Government's Planning Practice Guidance (PPG)¹ states that air quality concerns are more likely to arise where development is proposed within an area of existing poor air quality, or where it would adversely impact upon the implementation of air quality strategies and / or action plans. The PPG notes that when deciding whether air quality is relevant to a planning application, considerations would include whether the development would lead to (Paragraph: 006 Reference ID: 32-006-20191101):

- Significant effects on traffic, such as volume, congestion, vehicle speed, or composition;
- The introduction of new point sources of air pollution, such as furnaces, centralised boilers and Combined Heat and Power (CHP) plant; and
- Exposing occupants of any new developments to existing sources of air pollutants and areas with poor air quality.
- Have a potential adverse effect on biodiversity, especially where it would affect sites designated for their biodiversity value.

World Health Organization (WHO), Global Air Quality Guidelines, 2021

The overall objective of the updated global guidelines is to offer quantitative health-based recommendations for air quality management, expressed as long-term or short-term concentrations for a number of key air pollutants. Exceedance of the air quality guideline (AQG) levels is associated with risks to public health. These guidelines are not legally binding standards; however, they do provide WHO Member States with an evidence-informed tool that they can use to inform legislation and policy.

The WHO recommended AQG levels and interim targets are summarised in **Table A2**.

Table A2: Recommended AQG levels and interim targets

Pollutant	Averaging Time	Interim Target				AQG Level
		1	2	3	4	
PM _{2.5} µg/m ³	Annual	35	25	15	10	5
	24-hour	75	50	37.5	25	15
PM ₁₀ µg/m ³	Annual	70	50	30	20	15
	24-hour	150	100	75	50	45
NO ₂ µg/m ³	Annual	40	30	20	-	10
	24-hour	120	50	-	-	25

The WHO guidelines have been considered within this Air Quality assessment.

Local Air Quality Management Technical Guidance, 2022

The Local Air Quality Management Technical Guidance LAQM.TG(22) is designed to support local authorities in carrying out their duties under the Environment Act 1995 as amended by the Environment Act 2021 to improve air quality.

¹ Ministry of Housing Communities and Local Government: 'Planning Practice Guidance: Air Quality (ID 32)'. November 2019

Institute of Air Quality Management: Guidance on the Assessment of Dust from Demolition and Construction, 2024

The IAQM Construction Dust Guidance provides a risk based methodology to assess air quality impacts from construction related activities. It is based on the potential dust emission magnitude of the site (small, medium or large) and the sensitivity of the area to dust impacts. The importance of professional judgement is noted throughout the guidance. The guidance recommends that once the risk class of the site has been identified, the appropriate level of mitigation measures is implemented to ensure that the construction activities have no significant impacts.

B. Assessor Experience

Appendices

Hopwood Hall College, Rochdale

Project Number: WIE20781-101

Document Reference: 20781101-WAT-XX-XX-RP-N-720001_P01.01_S3

Appendix B: Assessor Experience

Name: Stephanie Jones

Years of Experience: 2

Qualifications:

- BSc (Hons) Geography
- MSc Environmental Consultancy

Steph is a consultant working within the Air Quality and EIA teams. Steph has two years of experience undertaking air quality assessments and nearly three years' experience with the co-ordination of EIAs and preparing Environmental Statements for a range of projects for a variety of clients in both the public and private sector.

Name: Claire Holman

Years of Experience: 40+

Qualifications:

- BSc (Hons) Molecular Sciences
- PhD research into air pollution
- Chartered Scientist
- Chartered Environmentalist
- Fellow of the Institute of Air Quality Management (FIAQM)
- Fellow of the Institution of Environmental Sciences (FIEnvSci)

Claire, a director of Kalaco Group Ltd., is a very experienced and knowledgeable air quality consultant, and currently is the honorary president of the Institute of Air Quality Management. She has served on several government expert groups and led the development of important IAQM guidance documents, including on demolition and construction dust impacts. She has undertaken a very large number of air quality assessments for planning applications including authoring EIA chapters.

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