

Air Quality Assessment

Sussex House, Perrymount Road, Haywards Heath

Client: Aldi Stores Limited

Reference: 8461r3

Date: 27th November 2024



Report Issue

Report Title: Air Quality Assessment - Sussex House, Perrymount Road, Haywards Heath

Report Reference: 8461

Field	Report Version			
	1	2	3	4
Prepared by	Emily Macey	Emily Macey	Emily Macey	
Position	Senior Air Quality Consultant	Senior Air Quality Consultant	Senior Air Quality Consultant	
Reviewed by	Claire Meddings	Claire Meddings	Claire Meddings	
Position	Associate Director	Associate Director	Associate Director	
Authorised by	Emily Pears-Ryding	Emily Pears-Ryding	Emily Pears-Ryding	
Position	Associate Director	Associate Director	Associate Director	
Date of Issue	15 th November 2024	18 th November 2024	27 th November 2024	
Comments	Draft for comment	Text amendments	Text amendments	

5th Floor, 167 - 169 Great Portland Street, London, W1W 5PF

info@red-env.co.uk | 020 3488 5002 | www.red-env.co.uk

This report has been prepared by Redmore Environmental Ltd in accordance with the agreed terms and conditions of appointment. Redmore Environmental Ltd cannot accept any responsibility for any use of or reliance on the contents of this report by any third party.

Executive Summary

Redmore Environmental Ltd was commissioned by Aldi Stores Limited to undertake an Air Quality Assessment in support of an Aldi foodstore at Sussex House, Perrymount Road, Haywards Heath.

An Air Quality Assessment was undertaken to:

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

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

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

Potential emissions from the proposals were assessed in line with the requirements of the Air Quality and Emissions Mitigation Guidance for Sussex. This included completion of an Emissions Mitigation Assessment in order to determine the appropriate level of mitigation required for the scheme.

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

Table of Contents

1.0	INTRODUCTION	1
1.1	Instruction	1
1.2	Site Location and Context	1
1.3	Assessment Scope	1
2.0	LEGISLATION AND POLICY	2
2.1	Legislation	2
2.2	Local Air Quality Management	4
2.3	Dust	4
2.4	National Planning Policy	5
2.5	National Planning Practice Guidance	6
2.6	Local Planning Policy	7
3.0	METHODOLOGY	11
3.1	Introduction	11
3.2	Construction Phase Assessment	11
	Step 1 - Screen the Need for an Assessment	12
	Step 2 - Assess the Risk of Dust Impacts	12
	Step 3 - Site-specific Mitigation	17
	Step 4 - Determine Significant Effects	17
3.3	Operational Phase Assessment	18
4.0	BASELINE	20
4.1	Introduction	20
4.2	Local Air Quality Management	20
4.3	Air Quality Monitoring	20
4.4	Background Pollutant Concentrations	21
4.5	Sensitive Receptors	22
5.0	CONSTRUCTION PHASE ASSESSMENT	24
5.1	Introduction	24
5.2	Step 1 - Screen the Need for an Assessment	24
5.3	Step 2a - Define the Potential Dust Emission Magnitude	24
	Demolition	24
	Earthworks	24
	Construction	25
	Trackout	25
5.4	Step 2b - Define the Sensitivity of the Area	25

Dust Soiling	25
Human Health	25
5.5 Step 2c - Define the Risk of Dust Impacts	26
5.6 Step 3 - Site-specific Mitigation	26
5.7 Step 4 - Determine Significant Effects	28
6.0 OPERATIONAL PHASE ASSESSMENT	29
6.1 Introduction	29
6.2 Stage 1 Screening Criteria	29
6.3 Stage 2 Screening Criteria	29
6.4 Air Quality and Emissions Mitigation Guidance for Sussex	30
Development Classification	30
Emissions Mitigation Assessment	30
Mitigation	32
7.0 CONCLUSION	34
8.0 ABBREVIATIONS	35

Appendix

Appendix 1 - Curricula Vitae

1.0 INTRODUCTION

1.1 Instruction

- 1.1.1 Redmore Environmental Ltd was commissioned by Aldi Stores Limited to undertake an Air Quality Assessment in support of an Aldi foodstore at Sussex House, Perrymount Road, Haywards Heath.

1.2 Site Location and Context

- 1.2.1 The site is located at Sussex House, Perrymount Road, Haywards Heath, RH16 1DN, at approximate National Grid Reference (NGR): 533240, 124599. The relevant Local Authority (LA) is Mid Sussex District Council (MSDC). Reference should be made to Figure 1 for a map of the site and surrounding area.
- 1.2.2 The proposals comprise demolition of the existing Sussex House, Commercial House and 54-56 Perrymount Road and subsequent construction of a 1,940m² Aldi foodstore alongside 97 car parking spaces and associated infrastructure.

1.3 Assessment Scope

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

2.0 LEGISLATION AND POLICY

2.1 Legislation

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

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

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

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

2.1.4 The Environmental Improvement Plan 2023² was published in January 2023, providing long term and Interim Targets in order to reduce population exposure to PM_{2.5}. The concentration target for 2040 was subsequently adopted in the Environmental Targets (Fine Particulate Matter) (England) Regulations (2023).

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

² Environmental Improvement Plan 2023, DEFRA, 2023.

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

Table 1 Air Quality Objectives/Interim Target

Pollutant	Air Quality Objective/Interim Target	
	Concentration ($\mu\text{g}/\text{m}^3$)	Averaging Period
NO ₂	40	Annual mean
	200	1-hour mean, not to be exceeded on more than 18 occasions per annum
PM ₁₀	40	Annual mean
	50	24-hour mean, not to be exceeded on more than 35 occasions per annum
PM _{2.5}	12 ^(a)	Annual mean

Note: (a) Interim Target to be achieved by end of January 2028.

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

Table 2 Examples of Where the Air Quality Objectives Apply

Averaging Period	Objective Should Apply At	Objective Should Not Apply At
Annual mean	All locations where members of the public might be regularly exposed Building façades of residential properties, schools, hospitals, care homes etc.	Building façades of offices or other places of work where members of the public do not have regular access Hotels, unless people live there as their permanent residence Gardens of residential properties Kerbside sites (as opposed to locations at the building façade), or any other location where public exposure is expected to be short term
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

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

Averaging Period	Objective Should Apply At	Objective Should Not Apply At
1-hour mean	All locations where the annual mean and 24 and 8-hour mean objectives apply. Kerbside sites (for example, pavements of busy shopping streets) Those parts of car parks, bus stations and railway stations etc which are not fully enclosed, where members of the public might reasonably be expected to spend one hour or more Any outdoor locations where members of the public might reasonably be expected to spend one hour or longer	Kerbside sites where the public would not be expected to have regular access

2.2 **Local Air Quality Management**

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

2.3 **Dust**

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

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

2.3.2 Enforcement of the Act, in regard to nuisance, is currently under the jurisdiction of the local Environmental Health Department, whose officers are deemed to provide an independent evaluation of nuisance. If the LA is satisfied that a statutory nuisance exists, or is likely to occur or happen again, it must serve an Abatement Notice under Part III of

the Environmental Protection Act (1990). The only defence is to show that the process to which the nuisance has been attributed and its operation are being controlled according to best practicable means.

2.4 National Planning Policy

2.4.1 The revised National Planning Policy Framework⁴ (NPPF) was published in December 2023 and sets out the Government's planning policies for England and how these are expected to be applied.

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

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

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

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

[...]

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

⁴ NPPF, Ministry of Housing, Communities and Local Government, 2023.

- 2.4.4 The NPPF specifically recognises air quality as part of delivering sustainable development and states that:

"Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications. Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan."

- 2.4.5 It should be noted that the NPPF: Draft Text for Consultation⁵ has recently been published though is not currently operational. The implications of the NPPF and the NPPF: draft text for consultation have been considered throughout this assessment.

2.5 National Planning Practice Guidance

- 2.5.1 The National Planning Practice Guidance⁶ (NPPG) web-based resource was launched by the Department for Communities and Local Government to support the NPPF and make it more accessible. The air quality pages are summarised under the following headings:

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

⁵ NPPF: Draft Text for Consultation, Ministry of Housing, Communities and Local Government, 2024.

⁶ <https://www.gov.uk/guidance/air-quality--3>.

8. How can an impact on air quality be mitigated?

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

2.6 Local Planning Policy

2.6.1 The Mid Sussex District Plan 2014 - 2031⁷ was adopted by MSDC on 28th March 2018. A review of the document indicated the following policies in relation to air quality of relevance to this assessment:

"DP29: Noise, Air and Light Pollution

The environment, including nationally designated environmental sites, nationally protected landscapes, areas of nature conservation or geological interest, wildlife habitats, and the quality of people's life will be protected from unacceptable levels of noise, light and air pollution by only permitting development where:

[...]

Air Pollution:

- It does not cause unacceptable levels of air pollution;
- Development on land adjacent to an existing use which generates air pollution or odour would not cause any adverse effects on the proposed development or can be mitigated to reduce exposure to poor air quality to recognised and acceptable levels;
- Development proposals (where appropriate) are consistent with Air Quality Management Plans.

[...]"

"DP26 Character and Design

⁷ Mid Sussex District Plan 2014 - 2031, MSDC, 2018.

All development and surrounding spaces, including alterations and extensions to existing buildings and replacement dwellings, will be well designed and reflect the distinctive character of the towns and villages while being sensitive to the countryside. All applicants will be required to demonstrate that development:

[...]

does not cause significant harm to the amenities of existing nearby residents and future occupants of new dwellings, including taking account of the impact on privacy, outlook, daylight and sunlight, and noise, air and light pollution (see Policy DP29);

[...]"

2.6.2 MSDC are in the process of reviewing and updating the District Plan⁸. The Mid Sussex District Plan 2021 - 2031⁹ is currently under examination. Review of the draft document indicated the following policies of relevance to this assessment:

"DPS6: Health and Wellbeing

To enable and support healthy lifestyles and address health and wellbeing needs in Mid Sussex, all new development must be designed to achieve healthy, inclusive and safe places by embedding the principles of the 20-minute neighbourhood and 'local living'.

In order to maximise opportunities to enable healthy lifestyles, all new development must address all of the following (where applicable for the type of development proposed):

[...]

9. Take opportunities to improve the factors that can contribute to poor health and social inequalities such as noise, air quality, crime, access to education and employment, local amenity, and access to open space and the countryside.

⁸ Mid Sussex District Plan 2014 - 2031, MSDC, 2018.

⁹ Mid Sussex District Plan 2021 - 2039 Submission Draft (Regulation 19), MSDC, 2023.

[...]"

"DPN6: Pollution

Development must not cause or be adversely affected by pollution or hazards, including air, noise, vibration, light, water, soil, odour, dust or other pollutants, which significantly adversely impact on people, including health and quality of life, and the natural environment, including nature conservation sites. Mitigation measures may need to be implemented for development that is likely to increase levels of pollution or hazards, taking into account any cumulative impacts.

[...]

Development proposals will need to take into account the Council's published guidance."

"DPN9: Air Quality

People's health and quality of life and the natural environment will be protected from unacceptable levels of poor air quality.

The use of active and sustainable travel measures and green infrastructure to reduce pollution concentrations and exposure is encouraged.

Development proposals will need to take into account the Council's air quality guidance.

The Council will require applicants to demonstrate that there is not an unacceptable impact on air quality.

The development must minimise any air quality impacts, including cumulative impacts from committed developments, both during the construction process and lifetime of the completed development, either through a redesign of the development proposal or, where this is not possible or sufficient, through appropriate mitigation.

Where sensitive development is proposed in areas of existing poor air quality and/or where major development is proposed, including the development types set out in the Council's current guidance (Air Quality and Emissions Mitigation

Guidance for Sussex (2021 or as updated)) an air quality assessment will be required.

Development proposals that are likely to have an impact on local air quality, including those in or within relevant proximity to existing or candidate Air Quality Management Areas (AQMAs) or designated nature conservation areas sensitive to changes in air quality, will need to demonstrate that measures and/or mitigation are incorporated into the design to minimise any impacts associated with air quality.

Mitigation measures will need to demonstrate how the proposal would make a positive contribution towards the aims of the Council's Air Quality Action Plan where it is relevant and be consistent with the Council's current guidance as stated above.

Mitigation measures will be secured either through a negotiation on a scheme, or via the use of planning condition and/or planning obligation depending on the scale and nature of the development and its associated impacts on air quality. [...]"

2.6.3 The Sussex Air Quality Partnership have developed Air Quality and Emissions Mitigation Guidance for Sussex¹⁰ to improve air quality throughout the county and encourage emissions reductions to improve the environment and health of the population. The guidance includes direction on when an air quality assessment will be required, the recommended scope of works and proposed mitigation measures.

2.6.4 The above policies and technical guidance have been considered throughout the undertaking of the assessment.

¹⁰ Air Quality and Emissions Mitigation Guidance for Sussex, Sussex Air Quality Partnership, 2021.

3.0 METHODOLOGY

3.1 Introduction

3.1.1 The proposed development has the potential to cause air quality impacts during the construction and operational phases. These have therefore been assessed in accordance with the following methodology, which was agreed with Adam Dracott, Team Leader - Environmental Protection at MSDC, on 23rd August 2024.

3.2 Construction Phase Assessment

3.2.1 There is the potential for fugitive dust emissions to occur as a result of construction phase activities. These have been assessed in accordance with the methodology outlined within the Institute of Air Quality Management (IAQM) document 'Guidance on the Assessment of Dust from Demolition and Construction V2.2'¹¹.

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

- Demolition;
- Earthworks;
- Construction; and,
- Trackout.

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

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

3.2.4 The assessment steps are detailed below.

¹¹ Guidance on the Assessment of Dust from Demolition and Construction V2.2, IAQM, 2024.

Step 1 - Screen the Need for an Assessment

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

Step 2 - Assess the Risk of Dust Impacts

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

Table 3 Construction Dust - Magnitude of Emission

Magnitude	Activity	Criteria
Large	Demolition	• Total building volume greater than 75,000m³ • Potentially dusty construction material (e.g. concrete) • On site crushing and screening • Demolition activities greater than 12m above ground level

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

Magnitude	Activity	Criteria
	Construction	- Total building volume less than 12,000m³ - Construction material with low potential for dust release (e.g. metal cladding or timber)
	Trackout	- Less than 20 HDV trips per day - Surface material with low potential for dust release - Unpaved road length less than 50m

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

Table 4 Construction Dust - Sensitivities of People and Ecological Receptors

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

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

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

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

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

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

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

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

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

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

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

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

3.2.15 Table 8 outlines the risk category from demolition activities.

Table 8 Construction Dust - Dust Risk Category from Demolition Activities

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

3.2.16 Table 9 outlines the risk category from earthworks, construction and trackout activities.

Table 9 Construction Dust - Dust Risk Category from Earthworks, Construction and Trackout Activities

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

Step 3 - Site-specific Mitigation

3.2.17 Step 3 requires the identification of site-specific mitigation measures within the IAQM guidance¹² to reduce potential dust impacts based upon the relevant risk categories identified in Step 2. For sites with **negligible** risk, mitigation measures beyond those required by legislation are not required. However, additional controls may be applied as part of good practice.

Step 4 - Determine Significant Effects

3.2.18 Once the risk of dust impacts has been determined and the appropriate mitigation measures identified, the final step is to determine the significance of any residual impacts. For almost all construction activity, the aim should be to control effects through the use of

¹² Guidance on the Assessment of Dust from Demolition and Construction V2.2, IAQM, 2024.

effective mitigation. Experience shows that this is normally possible. Hence the residual effect will normally be **not significant**.

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

3.3 Operational Phase Assessment

3.3.1 The development has the potential to increase concentrations of NO₂, PM₁₀ and PM_{2.5} as a result of road traffic exhaust emissions associated with vehicles travelling to and from the site during the operational phase. An assessment was therefore undertaken using the criteria contained within the IAQM 'Land-Use Planning & Development Control: Planning for Air Quality'¹³ guidance to determine the potential for trips generated by the development to affect local air quality.

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

A. If any of the following apply:

- 10 or more residential units or a site area of more than 0.5ha; or,
- More than 1,000m² 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.

3.3.3 Should these criteria not be met, then the IAQM guidance¹⁴ considers air quality impacts associated with a scheme to be **not significant** and no further assessment is required.

¹³ Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

¹⁴ Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

3.3.4 Where the above criteria are met, then the assessor should proceed to assess the development proposals against the following Stage 2 screening criteria:

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

3.3.5 Should these criteria not be met, then the IAQM guidance¹⁵ considers air quality impacts associated with a scheme to be **not significant** and no further assessment is required. Where the screening criteria is met, further assessment including atmospheric dispersion modelling of impacts may be required.

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

4.0 BASELINE

4.1 Introduction

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

4.2 Local Air Quality Management

- 4.2.1 As required by the Environment Act (1995), as amended by the Environment Act (2021), MSDC has undertaken Review and Assessment of air quality within their area of jurisdiction. This process has indicated that annual mean concentrations of NO₂ are above the AQO within the district. As such, one AQMA has been declared. This is described as follows:

"An area encompassing 3 residential properties at the junction of Stonepound Crossroads."

- 4.2.2 The AQMA is located approximately 9.6km south-west of the development. It is considered unlikely the proposals would cause air quality impacts over a distance of this magnitude. As such, the designation has not been considered further in the context of the assessment.
- 4.2.3 MSDC has concluded that concentrations of all other pollutants considered within the AQS are currently below the relevant AQOs. As such, no further AQMA have been designated.

4.3 Air Quality Monitoring

- 4.3.1 Monitoring of pollutant levels is undertaken by MSDC throughout their area of jurisdiction. Recent NO₂ concentrations recorded in the vicinity of the site, as reported in the '2024 Air Quality Annual Status Report (ASR)'¹⁶, are shown in Table 10.

¹⁶ 2024 Air Quality ASR, MSDC, 2024.

Table 10 Monitoring Results

Monitor		Annual Mean NO ₂ Concentration (µg/m ³)			
		2020	2021	2022	2023
MSAQ1	South Road Haywards Heath	12.7	14.8	14.4	12.9

4.3.2 As shown in Table 10, annual mean NO₂ concentrations were below the AQO of 40µg/m³ at the MSAQ1 - South Road, Haywards Heath, monitor in recent years. Reference should be made to Figure 2 for a map of the survey position.

4.3.3 It is noted that pollutant concentrations recorded during 2020 and 2021 were affected by changes to travel patterns associated with the COVID-19 pandemic. The results should therefore be viewed with caution. However, data for 2022 and beyond is now considered representative of post-pandemic conditions. This is supported by the IAQM¹⁷, who have adopted the following position:

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

4.3.4 Monitoring of PM₁₀ and PM_{2.5} is not undertaken within the vicinity of the site.

4.4 Background Pollutant Concentrations

4.4.1 Predictions of background pollutant concentrations on a 1km by 1km grid basis have been produced by DEFRA for the entire of the UK to assist LAs in their Review and Assessment of air quality. The proposed development site is located in grid square NGR: 533500, 124500. Data for this location was downloaded from the DEFRA website¹⁸ for the purpose of the assessment and is summarised in Table 11.

Table 11 Background Pollutant Concentration Predictions

Pollutant	Predicted 2024 Background Annual Mean Pollutant Concentration (µg/m ³)
NO ₂	9.26

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

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

Pollutant	Predicted 2024 Background Annual Mean Pollutant Concentration ($\mu\text{g}/\text{m}^3$)
PM ₁₀	10.40
PM _{2.5}	6.68

4.4.2 As shown in Table 11, predicted background NO₂, PM₁₀ and PM_{2.5} concentrations are below the relevant AQOs and Interim Target at the development site.

4.5 Sensitive Receptors

4.5.1 A sensitive receptor is defined as any location which may be affected by changes in air quality as a result of a development. Receptors sensitive to potential dust impacts during demolition, earthworks and construction were identified from a desk-top study of the area up to 250m from the development boundary. These are summarised in Table 12.

Table 12 Demolition, Earthworks and Construction Dust Sensitive Receptors

Distance from Site Boundary (m)	Approximate Number of Human Receptors	Approximate Number of Ecological Receptors
Up to 20	More than 100	0
Up to 50	More than 100	0
Up to 100	More than 100	-
Up to 250	More than 100	-

4.5.2 Receptors sensitive to potential dust impacts from trackout were identified from a desk-top study of the area up to 50m from the road network within 250m of the site access. These are summarised in Table 13.

Table 13 Trackout Dust Sensitive Receptors

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

4.5.3 There are no ecological receptors within 50m of the development boundary or the access route within 250m of the site entrance. As such, ecological impacts have not been assessed further within this report.

4.5.4 Based on the criteria shown in Table 4, the sensitivity of the receiving environment to potential dust impacts was determined as **high**. This was because the identified receptors included residential properties.

5.0 CONSTRUCTION PHASE ASSESSMENT

5.1 Introduction

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

5.2 Step 1 - Screen the Need for an Assessment

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

5.3 Step 2a - Define the Potential Dust Emission Magnitude

Demolition

- 5.3.1 Demolition will be undertaken at the start of the construction phase and will involve clearance of the existing buildings on site. It is estimated that the total building volume to be demolished is between 12,000m³ and 75,000m³. In accordance with the criteria outlined in Table 3, the magnitude of potential dust emissions from demolition is therefore **medium**.

Earthworks

- 5.3.2 Earthworks will primarily involve excavating material, haulage, tipping and stockpiling, as well as site levelling and landscaping. The area of the proposed development site is less

than 18,000m². In accordance with the criteria outlined in Table 3, the magnitude of potential dust emissions from earthworks is therefore **small**.

Construction

- 5.3.3 Due to the size of the development, the total building volume will be less than 12,000m³. In accordance with the criteria outlined in Table 3, the magnitude of potential dust emissions from construction is therefore **small**.

Trackout

- 5.3.4 Based on the site area and existing hardstanding, it is anticipated that the unpaved road length will be less than 50m. In accordance with the criteria outlined in Table 3, the magnitude of potential dust emissions from trackout is therefore **small**.

5.4 Step 2b - Define the Sensitivity of the Area

Dust Soiling

- 5.4.1 Table 12 shows that there are more than 100 **high** sensitivity receptors within 20m of the site boundary. The sensitivity of the area with respect to dust soiling from demolition, earthworks and construction, as defined using the criteria summarised in Table 5, is therefore considered to be **high**.
- 5.4.2 Table 13 shows that there are more than 100 **high** sensitivity receptors within 20m of the road network within 250m of the site access. The sensitivity of the area with respect to dust soiling from trackout, as defined using the criteria summarised in Table 5, is therefore considered to be **high**.

Human Health

- 5.4.3 Table 11 shows the annual mean PM₁₀ background concentration at the site is 10.40µg/m³. As shown in Table 6, where the background annual mean PM₁₀ concentration is below 24µg/m³ and there are more than 100 **high** sensitivity receptors within 20m of the site boundary, the sensitivity of the area with respect to human health from demolition, earthworks and construction is considered to be **medium**.

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

5.5 **Step 2c - Define the Risk of Dust Impacts**

- 5.5.1 The derived dust emission magnitude for each activity has been combined with the sensitivity of the area to determine the risk of unmitigated impacts in line with the methodology set out in Table 8 and Table 9. A summary of the risk from each dust generating activity is provided in Table 14.

Table 14 Summary of Potential Unmitigated Dust Risks

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

- 5.5.2 As indicated in Table 14, the potential risk of dust soiling and human health impacts is **medium** from demolition and **low** from earthworks, construction and trackout.
- 5.5.3 It should be noted that the potential for impacts depends significantly on the distance between the dust generating activity and receptor location. Risk was predicted based on a worst-case scenario of works being undertaken at the site boundary closest to each sensitive area. Therefore, actual risk is likely to be lower than that predicted during the majority of the construction phase.

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

- 5.6.1 The IAQM guidance¹⁹ provides potential mitigation measures to reduce impacts as a result of fugitive dust emissions during the construction phase. These have been adapted for the development site as summarised in Table 15. These may be reviewed prior to the commencement of construction works and incorporated into a Construction Environmental Management Plan (CEMP) or similar if required by the LA.

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

Table 15 Fugitive Dust Emission Mitigation Measures

Issue	Control Measure
Communications	• Develop and implement a stakeholder communications plan that includes community engagement before work commences on site • Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environment manager/engineer or the site manager • Display the head or regional office contact information • Develop and implement a Dust Management Plan, which may include measures to control other emissions, approved by the LA
Site management	• Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken • Make the complaints log available to the LA upon request • Record any exceptional incidents that cause dust and/or air emissions, either on- or off- site, and the action taken to resolve the situation in the log book
Monitoring	• Carry out regular site inspections, record inspection results, and make an inspection log available to the LA upon request • Increase the frequency of site inspections when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions
Site preparation	• Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible • Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site • Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period • Avoid site runoff of water or mud • Keep site fencing, barriers and scaffolding clean using wet methods • Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used • Cover, seed or fence stockpiles to prevent wind whipping
Operating vehicle/machinery and sustainable travel	• Ensure all vehicles switch off engines when stationary - no idling vehicles • Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable • Impose and signpost a maximum speed limit of 15mph on surfaced and 10mph on unsurfaced roads and work areas • Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials

Issue	Control Measure
Operations	• Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques • Ensure an adequate water supply on the site for effective dust suppression, using non-potable water where possible and appropriate • Use enclosed chutes and conveyors and covered skips • Minimise drop heights and use fine water sprays wherever appropriate • Ensure equipment is available to clean any dry spillages, and clean up spillages as soon as reasonably practicable using wet cleaning methods
Waste management	• Avoid bonfires and burning of waste materials
Demolition	• Ensure effective water suppression is used during demolition operations • Avoid explosive blasting, using appropriate manual or mechanical alternatives • Bag and remove any biological debris or damp down such material before demolition
Construction	• Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out
Trackout	• Use water-assisted dust sweeper on access and local roads, if required • Avoid dry sweeping of large areas • Ensure vehicles entering and leaving site are covered to prevent escape of materials • Implement a wheel washing system, if required

5.7 Step 4 - Determine Significant Effects

5.7.1 Assuming the relevant mitigation measures outlined in Table 15 are implemented, the residual impact from all dust generating activities is predicted to be **not significant**, in accordance with the IAQM guidance²⁰.

²⁰

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

6.0 **OPERATIONAL PHASE ASSESSMENT**

6.1 **Introduction**

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

6.2 **Stage 1 Screening Criteria**

6.2.1 Any vehicle movements associated with the development will generate exhaust emissions on the local road networks. The proposals have therefore been assessed against the IAQM²¹ Stage 1 screening criteria detailed in Section 3.3. The development includes more than 1,000m² of floorspace, coupled with more than 10 car parking spaces. As such, the Stage 2 Screening Criteria have been considered below.

6.3 **Stage 2 Screening Criteria**

6.3.1 Information provided by Connect Consultants, the Transport Consultants for the project, indicated the development is not predicted to generate more than 500 AADT on any individual road link and there will not be a requirement for more than 100 HDV deliveries per day. Distribution of vehicle trips across the local road network is summarised in Table 16.

Table 16 Predicted Trip Generation on Local Road Network

Road Link	Number of Development Generated Vehicle Trips (per day)	
	LDV	HDV
Perrymount Road, north of Aldi access	349	8
Perrymount Road, south of Aldi access	299	0
Perrymount Road, south of Waitrose access	308	0
Perrymount Road, south of Heath Road	190	0
Mill Green Road, north of roundabout	75	8

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

6.3.2 It should be noted that the values shown in Table 16 include 30% pass-by trips. These are already existing on the local road network and as such, the number of vehicles on each link is expected to be lower than those shown.

6.3.3 Based on the above, potential air quality impacts associated with the operational phase road vehicle exhaust emissions are predicted to be **not significant**, in accordance with the IAQM²² Stage 2 screening criteria shown in Section 3.3.

6.4 Air Quality and Emissions Mitigation Guidance for Sussex

Development Classification

6.4.1 The Sussex Air Quality Partnership have developed Air Quality and Emissions Mitigation guidance for Suffolk²³ to improve air quality throughout the county and encourage emissions reductions to improve the environment and health of the population.

6.4.2 The guidance²⁴ provides a methodology for determining the scale of a development and the air quality mitigation required for the relevant banding. Review of the relevant criteria indicated the proposals were classed as a **major** development as:

- The site area is over 0.5ha.

6.4.3 Based on the development classification, an Emissions Mitigation Assessment is required to determine the appropriate amount of required mitigation. This is summarised in the following Section.

Emissions Mitigation Assessment

6.4.4 The guidance²⁵ sets out an Emissions Mitigation Assessment methodology in order to assess the local emissions from a development and determine the appropriate level of

²² Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

²³ Air Quality and Emissions Mitigation Guidance for Sussex, Sussex Air Quality Partnership, 2021.

²⁴ Air Quality and Emissions Mitigation Guidance for Sussex, Sussex Air Quality Partnership, 2021.

²⁵ Air Quality and Emissions Mitigation Guidance for Sussex, Sussex Air Quality Partnership, 2021.

mitigation required to help reduce the potential effect on health and/or the local environment.

6.4.5 The first step of the Emissions Mitigation Assessment is to undertake a calculation to identify the monetary value of predicted emissions from the proposals and detail the mitigation measures to control air quality impacts associated with the scheme.

6.4.6 The calculation uses the Emissions Factor Toolkit (EFT) to calculate the amount of transport related pollutant emissions the development is likely to produce. The output is then multiplied by the Interdepartmental Group on Costs and Benefits damage costs for the key pollutants nitrogen oxide (NO_x) and PM_{2.5}, and finally multiplied by 5 to provide a five-year exposure cost value. This is the value of mitigation that is expected to be spent on measures to reduce the impact of the proposed development. This has been summarised in the following equation:

$$5 \text{ Year Exposure Cost Value} = \text{EFT Output} \times \text{Damage Costs} \times 5$$

6.4.7 It should be noted that the calculation has been undertaken using the most recent damage costs released by DEFRA in March 2023²⁶.

6.4.8 The input data values used in the assessment are shown in Table 17.

Table 17 Emissions Mitigation Assessment - Inputs

Data	Value
Daily Vehicle Movements Produced by Development	520
Daily HDV Movements Produced by Development	8
Average Speed (km/h)	50
Average Trip Length LDVs (km)	5
Average Trip Length HDVs (km)	10

6.4.9 The projected yearly emissions and damage cost price for each of the five years from opening are shown in Table 18.

²⁶ Air Quality Appraisal: Damage Cost Guidance, DEFRA, 2023.

Table 18 Emissions Mitigation Assessment - Projected Emissions and Damage Cost Prices

Data	Value				
	2029	2030	2031	2032	2033
NO _x Output (tonnes/year) ^(a)	0.11	0.09	0.09	0.09	0.09
PM _{2.5} Output (tonnes/year) ^(a)	0.02	0.02	0.02	0.02	0.02
NO _x Damage Costs (£/tonne) ^(b)	9,054	9,054	9,054	9,054	9,054
PM _{2.5} Damage Costs (£/tonne) ^(b)	63,766	63,766	63,766	63,766	63,766

Note: (a) 2031 and beyond used 2030 emission factors due to accuracy of the EFT.

(b) Road Transport Urban Medium Central Damage Cost.

6.4.10 The calculation is shown in Table 19.

Table 19 Damage Cost Calculation

Data	Value				
	2029	2030	2031	2032	2033
Annual Cost of NO _x Emissions (£)	966	830	830	830	830
Annual Cost of PM _{2.5} Emissions (£)	1,154	1,147	1,147	1,147	1,147
Total Annual Exposure Cost Value (£)	2,120	1,977	1,977	1,977	1,977
Total Five Year Exposure Cost Value (£)	10,028				

6.4.16 As shown in Table 19, the total damage costs were calculated as £10,028.

Mitigation

6.4.17 The guidance²⁷ provides a number of mitigation measures that should be considered for inclusion within **major** developments. These were reviewed and those to be incorporated within the proposals are summarised in Table 20. The costs associated with each has been provided by the Applicant.

²⁷ Air Quality and Emissions Mitigation Guidance for Sussex, Sussex Air Quality Partnership, 2021.

Table 20 Mitigation Measures and Associated Costs

Mitigation Measure	Cost (£)
Travel Plan	10,500
Provision of four active Electric Vehicle (EV) charging points	27,546
Passive EV charging points for 20 spaces	17,105
Provision of 20 cycle spaces, 10 for staff and 10 for customers	11,637
All commercial vehicles will comply with either current or previous European Emission Standards from the development opening	-
Installation of Air Source Heat Pumps	33,000
Installation of 325m ² of solar Photovoltaics (PV)	68,000

Note: (a) Cost not available at time of reporting.

6.4.18 In addition to the above, the development will adhere to Fugitive Dust Emission Mitigation Measures throughout construction. These are outlined in Table 15.

6.4.19 The total value of the mitigation shown in Table 20 is £167,788. This exceeds the calculated damage cost value of £10,028. As such, the initiatives are considered sufficient to minimise air quality impacts associated with the development.

7.0 CONCLUSION

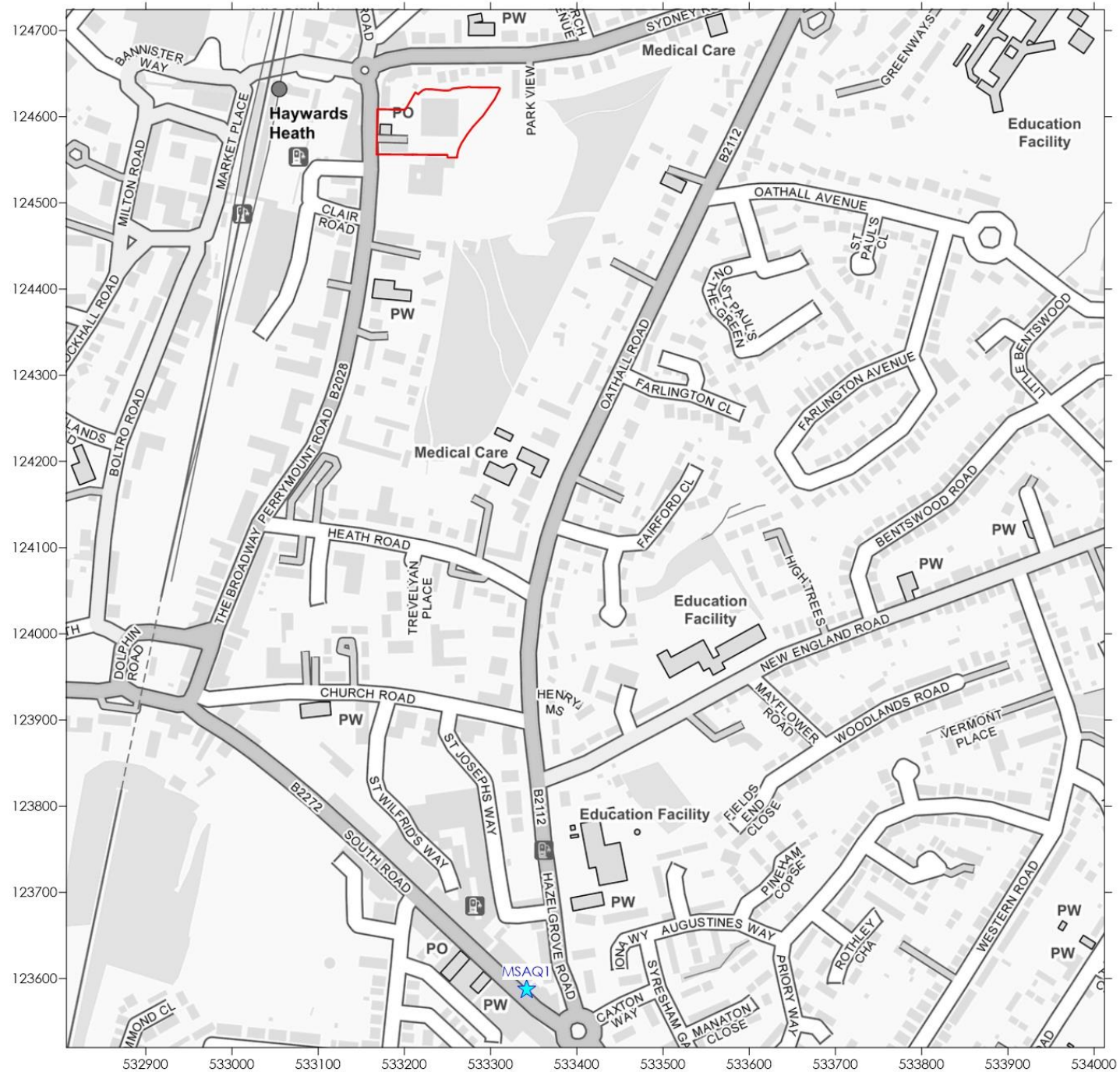
- 7.1.1 Redmore Environmental Ltd was commissioned by Aldi Stores Limited to undertake an Air Quality Assessment in support of an Aldi foodstore at Sussex House, Perrymount Road, Haywards Heath.
- 7.1.2 The development has the potential to cause air quality impacts at sensitive locations during the construction and operational phases. As such, an Air Quality Assessment was undertaken in order to determine baseline conditions and consider potential effects as a result of the proposals.
- 7.1.3 During the construction phase of the development there is the potential for air quality impacts from fugitive dust emissions from the site. These were assessed in accordance with the IAQM methodology. Site-specific dust control measures were subsequently determined based on the identified risk ratings. Subject to implementation, residual air quality impacts from dust generated by demolition, earthworks, construction and trackout activities are predicted to be **not significant**.
- 7.1.4 Potential impacts during the operational phase of the proposed development may occur due to road traffic exhaust emissions associated with vehicles travelling to and from the site. These were assessed against the screening criteria provided within the IAQM guidance²⁸. Due to the low number of vehicle movements generated by the site, road traffic exhaust impacts were predicted to be **not significant**.
- 7.1.5 Potential emissions from the proposals were assessed in line with the requirements of the Air Quality and Emissions Mitigation Guidance for Sussex. This included completion of an Emissions Mitigation Assessment in order to determine the appropriate level of mitigation required for the scheme.
- 7.1.6 Based on the assessment results, air quality factors are not considered a constraint to planning consent for the development.

²⁸ Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

8.0 **ABBREVIATIONS**

AADT	Annual Average Daily Traffic
AQLV	Air Quality Limit Value
AQMA	Air Quality Management Area
AQO	Air Quality Objective
AQS	Air Quality Strategy
ASR	Annual Status Report
CEMP	Construction Environmental Management Plan
DEFRA	Department for Environment, Food and Rural Affairs
EFT	Emission Factor Toolkit
EV	Electric Vehicle
HDV	Heavy Duty Vehicle
IAQM	Institute of Air Quality Management
LA	Local Authority
LAQM	Local Air Quality Management
LDV	Light Duty Vehicle
MSDC	Mid Sussex District Council
NGR	National Grid Reference
NO ₂	Nitrogen dioxide
NO _x	Oxides of nitrogen
NPPF	National Planning Policy Framework
NPPG	National Planning Policy 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
PV	Photovoltaics

Figures



Legend

-  Site Boundary
-  Monitor

Title

Figure 2 - Monitoring Location

Project

Air Quality Assessment
Perrymount Road, Heywards Heath

Project Reference

8461

Client

Aldi Stores Limited

Contains Ordnance Survey Data
© Crown Copyright and Database Act 2023



www.red-env.co.uk | 0161 7060075

Appendix 1 - Curricula Vitae

KEY EXPERIENCE:

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

- Production of Air Quality Assessments in accordance with Department for Environment, Food and Rural Affairs (DEFRA) methodologies for a range of residential, commercial and industrial sectors.
- Detailed dispersion modelling of road vehicle and industrial emissions using ADMS-Roads and ADMS-5. 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.
- Assessment of fugitive dust impacts from a range of mineral extraction developments.
- Assessment of petrol stations to address benzene concentrations and their impact on adjacent developments.
- Production of air quality mitigation strategies specifically tailored to address issues at individual sites.
- Assessment of potential effects associated with network realignment schemes and highway developments.

SELECT PROJECTS SUMMARY:

Broad Street, Birmingham

Air Quality Assessment in support of a residential-led development on land at Broad Street, Birmingham. The proposals were located adjacent to a section of the Midland Metro Westside which runs along Broad Street. Consideration was made to the potential for re-alignment of the local road network as a result of the Metro to effect pollution levels at the development. The assessment indicated NO₂ concentrations exceeded air quality criteria from ground to third floor level as a result of road vehicle exhaust emissions. Mitigation was therefore specified for the affected units.

Home Farm, Forest Road, Warfield

Ecological Air Quality Assessment in support of a residential development. Natural England held concerns regarding potential impacts at sensitive ecological designations as a result of traffic exhaust emissions associated with the development. The predicted change in NO_x and ammonia concentrations and nitrogen and acid deposition was below the relevant criteria at all locations within the ecological designations. Impacts were therefore not considered to be significant.

Saltcoats Road, Stevenston

Air Quality Assessment in support of an educational campus and associated energy centre. Impacts associated with emissions from the proposed gas and biomass boilers were assessed through detailed dispersion modelling. This indicated impacts on annual mean NO₂ and PM₁₀ concentrations were predicted to be not significant.

Blackthorn & Piddington

Environmental Impact Assessment in support of a railway embankment scheme on land at the Network Railway Embankment between Piddington and Blackthorn. Due to the extensive stabilisation works a Fugitive Dust Emissions Assessment was undertaken in addition to consideration of road vehicle exhaust emissions. Due to the location of the site in relation to nearby sensitive receptors, potential impacts associated with construction works were not considered to be significant.

Blackmoorfoot Road, Huddersfield

Air Quality in support of a residential-led development in close proximity to an operational minerals facility. Due to the presence of the Johnsons Wellfield Quarry to the south of the site a Fugitive Dust Emissions Assessment was undertaken to determine potential impacts. Dispersion modelling of road vehicle exhaust emissions was also undertaken in support of the scheme. Results indicated the overall significance of fugitive dust emissions from the quarry and air quality impacts associated with operation of the development itself were not significant.

Lockwood Bar, Huddersfield

Air Quality Assessment for the proposed highway realignment scheme along Lockwood Road, Huddersfield. Changes in pollution levels were considered at sensitive receptors as a result of variations to road geometry and associated redistribution of vehicle trips across the local area. Results of the dispersion modelling study indicated air quality impacts as a result of the scheme were not significant.

KEY EXPERIENCE:

Emily is a Senior Environmental Consultant with specialist experience in the air quality sector. Her key capabilities include:

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

SELECT PROJECTS SUMMARY:

Bowlers Yard, Manchester

Air Quality Assessment in support of an eleven storey residential development to provide circa 65 units on land known as Bowlers Yard, Manchester. The site was located in an Air Quality Management Area (AQMA) and concerns were raised regarding the exposure of future occupants to poor air quality due to road traffic emissions. Detailed dispersion modelling was undertaken using ADMS-roads to assess PM_{2.5}, PM₁₀ and NO₂ concentrations across the site. Results indicated that pollution levels were below the air quality objectives across the development.

Freemasons Arms Hotel, Heywood

Air Quality Assessment to support a residential-led development in an AQMA. Detailed dispersion modelling was undertaken with the inclusion of advanced canyon modelling to evaluate the impact of the urban topography within the locality on the dispersion of traffic related pollutants. Predicted concentrations of NO₂ were found to exceed air quality criteria at the building façade fronting Market Place at first floor level. As such, mitigation was specified for the affected units to ensure future residents would not be exposed to poor air quality.

Griffin Road, London

Air Quality Assessment in support of a residential development located in an AQMA. Detailed dispersion modelling was undertaken using ADMS-roads to assess PM₁₀ and NO₂ concentrations across the site. Results indicated that pollution levels were classified as APEC - A in accordance with the London Councils Air Quality and Planning Guidance.

High Street, Dudley

Odour Impact Assessment in support of a proposed residential-led development. Due to the location of the site, being above an existing hot food takeaway, odour surveys were required to assess the level of odour across the development. A risk assessment was also undertaken in accordance with the relevant odour guidance. An appropriate ventilation system was identified on the basis of the assessment results.

East Common Lane, Selby

Air Quality Assessment in support of an industrial development on land associated with Access 63 Business Park, East Common Lane Selby. Due to the size of the development it was possible that traffic generated from the scheme may cause negative impacts on sensitive receptors nearby. NO₂ and PM₁₀ concentrations were quantified at specific receptor points to ensure there would be no significant increases in pollution levels. Results revealed negligible impacts at all locations.

Wharton Road, Winsford

Air Quality Assessment in support of a residential development of circa 138 units on land off Wharton Road, Winsford. Using sensitive receptors, located in areas where increased road traffic may affect NO₂ concentrations, a comparison was made between overall concentrations with and without the development in place. Results revealed pollutant concentrations were below the relevant standards across the site and impacts associated with the development were not significant.

KEY EXPERIENCE:

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

- Production and management of Air Quality, Dust and Odour Assessments for a wide range of clients from the residential, retail, commercial, leisure and industrial and infrastructure sectors.
- Detailed dispersion modelling of road vehicle and industrial emissions using ADMS-Roads, ADMS-6 and AERMOD. 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.
- Assessment of fugitive dust impacts from a range of waste and industrial developments.
- Co-ordination and management of large-scale multi-disciplinary projects and submissions.
- Overseeing pollutant monitoring campaigns.
- Provision of expert advice and attendance at DCO examination process.

SELECT PROJECTS SUMMARY:

Residential

Victoria Riverside, Manchester -

Air Quality Assessment for the proposed residential development within Manchester City Centre. Construction phase dust emissions were considered and mitigation recommended accordingly. The suitability of the site for the residential use was assessed using air dispersion modelling and mitigation recommended to minimise exposure of future residents to elevated pollutant concentrations.

Air Quality Assessment, Widnes -

Air Quality Assessment was undertaken in support of a residential-led development on land near Widnes. Development included residential, commercial and retail land uses. Construction phase dust emissions and operational phase road traffic emissions were considered in the assessment. The suitability of the site for the proposed uses was considered with regard to the air quality objectives.

Air Quality Assessments,

Birmingham - Air Quality Assessments and overseeing air quality monitoring campaigns for a number of sites within Birmingham. Air dispersion modelling was undertaken and air quality monitoring utilising NO₂ diffusion tubes was carried out for use in verification of the dispersion model. Mitigation was recommended where appropriate to reduced exposure to elevated pollutant concentrations.

Commercial and Retail

Foodstores across the UK -

Air quality assessments for a number of proposed foodstores across the UK. Consideration was given to construction phase dust emissions and vehicle emissions generated by the foodstore operations.

Commercial development,

Workshop - Air quality assessment and input into the EIA for a proposed large scale commercial development near Workshop.

Assessments of construction phase dust and operational phase road traffic emissions were undertaken and consideration was given to both human and ecological receptors.

Industrial and Infrastructure

Greater Manchester Waste PFI

Contract - Air Quality Assessments were undertaken as part of the Planning Applications and Environmental Permit applications for a number of proposed waste facilities in Greater Manchester.

Energy from Waste Development,

Scotland - Air Quality Assessment and coordination of the EIA and Environmental Permit Application for a proposed Energy from Waste development in Scotland. Considered industrial emissions from flue stacks as well as additional road traffic movements generated by the development

Strategic Rail Freight Interchange,

Hinckley - oversaw the Air Quality Assessment for the proposed Rail Freight Interchange and acted as expert witness as part of the Development Consent Order (DCO) examination process.