



PENINSULAR
ACOUSTICS

Spectre (Hayes) Limited

The Record Store, Pressing Lane, Hayes

Air Quality Assessment



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Type of Document (Version) Public

Project No. PA0926

Date: March 2026

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Quality Control

Issue/revision	P01	P02	P03
Remarks	First Issue	Updated with minor text changes	
Date	February 2026	March 2026	
Prepared by	Francine Chan	Francine Chan	
Authorised by	James Healey	James Healey	
Project number	PA0926	PA0926	
Report number	R02	R02	
File reference	PA0926-R02-P01- Pressing Lane Hayes AQA	PA0926-R02-P02- Pressing Lane Hayes AQA	

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1. Introduction

1.1. Instruction

Peninsular Acoustics Limited has been commissioned by Spectre (Hayes) Limited to provide an Air Quality Assessment in support of a residential development at The Record Store, Pressing Lane, Hayes.

The development has the potential to cause air quality impacts as a result of fugitive dust emissions during construction and road traffic exhaust emissions associated with vehicles travelling to and from the site during operation, as well as expose future residents to elevated pollution levels. As such, an Air Quality Assessment has been undertaken in order to consider these factors.

This report is necessarily technical in nature and to assist the reader, an air quality glossary is provided in Appendix A.

1.2. Site Location and Context

The site is located at The Record Store, off Pressing Lane, Hayes, UB3 1DH, at approximate National Grid Reference (NGR): 509230, 179490. Reference should be made to Figure 1 for a map of the site and surrounding area.

The proposals comprise the change of use from 'Office' (Class E(g)(i)) and construction of roof extension to provide 121 'Residential' (Class C3) units, including residential amenities. Construction of an external roof terrace, alterations to elevations and provision of rear external area for private gardens and a shared residents' terrace. Further associated provision of refuse storage, hard and soft landscaping and associated development.

The development has the potential to cause air quality impacts at sensitive locations. These may include fugitive dust emissions associated with construction works and road traffic exhaust emissions from vehicles travelling to and from the development during the operational phase, as well as the exposure of future residents to elevated pollution levels. As such, an Air Quality Assessment was undertaken in order to determine baseline conditions and assess potential impacts as a result of the scheme. This is detailed in the following report.

2. Legislation and Policy

2.1. Legislation

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 2.5 (PM_{2.5});
- Benzene; and,
- Carbon monoxide.

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).

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.

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

Table 2.1 presents the AQOs, Interim Target and Concentration Target for pollutants considered within this assessment.

Table 2.1: Air Quality Objective/ Interim Target/ Concentration Target

Pollutant	Air Quality Objective/ Interim Target/ Concentration Target	
	Concentration (µg/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

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

² Environmental Improvement Plan 2025, DEFRA, 2025.

Pollutant	Air Quality Objective/ Interim Target/ Concentration Target	
	Concentration ($\mu\text{g}/\text{m}^3$)	Averaging Period
PM_{2.5}	10 ^(a)	Annual mean
	10 ^(b)	Annual mean

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

(b) Concentration Target to be achieved by 2040.

Table 2.2 summarises the advice provided in the Greater London Authority (GLA) guidance³ on where the AQOs for pollutants considered within this report apply.

Table 2.2: 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
1-hour mean	All locations where the annual mean and 24 and 8-hour mean objectives apply. Kerbside sides (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. World Health Organisation Guidelines

The World Health Organisation (WHO) provides Air Quality Guideline (AQG) limits for health-harmful concentrations of key air pollutants both outdoors and inside buildings and homes, based on global synthesis of scientific evidence. These are often utilised by national and international governing bodies when determining appropriate air quality standards for inclusion in relevant legislation. For example,

³ London Local Air Quality Management (TG19), Technical Guidance 2019 (LLAQM.TG (2019)), GLA, 2019.

the WHO guidelines were used to inform the AQLVs and Air Quality Target Values (AQTVs) stated within Directive 2008/50/EC, as transposed into UK legislation through the Air Quality Standards Regulations (2010).

The WHO Global AQG⁴ provides recommended limits for NO₂, PM₁₀ and PM_{2.5} which have been considered within the assessment. These are outlined in Table 2.3.

Table 2.3: WHO AQGs

Pollutant	Concentration (µg/m ³)	Averaging Period
NO ₂	10	Annual mean
PM ₁₀	15	Annual mean
PM _{2.5}	5	Annual mean

It should be noted that the WHO values are guidelines only and there is no legislative or planning requirement to consider these criteria within the UK.

2.3. Local Air Quality Management

Local Authorities (LAs) are required to be 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 2.2, 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 (AQAP), the objective of which to reduce pollutant concentrations in pursuit of the AQOs.

2.4. Dust

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."

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.

⁴ WHO Global Air Quality Guidelines, WHO, 2021.

2.5. National Planning Policy

The revised National Planning Policy Framework⁵ was published in December 2024 and updated in February 2025. The document sets out the Government's planning policies for England and how these are expected to be applied.

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

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

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

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

[...]

e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water, noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality [...]."

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."

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

2.6. National Planning Practice Guidance

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:

⁵ NPPF, Ministry of Housing, Communities and Local Government, 2024.

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

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

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

2.7. Regional Planning Policy

The London Plan 2021⁷ is the Spatial Development Strategy for GLA. It sets out a framework for how London will develop over the next 20-25 years and the Mayor's vision for Good Growth. Review of this document indicated the following of relevance to this report:

"Policy SI 1 - Improving Air Quality

A. Development plans, through relevant strategic, site specific and area-based policies should seek opportunities to identify and deliver further improvements to air quality and should not reduce air quality benefits that result from the Mayor's or boroughs' activities to improve air quality.

B. To tackle poor air quality, protect health and meet legal obligations the following criteria should be addressed:

1. Development proposals should not:

a) lead to further deterioration of existing poor air quality

b) create any new areas that exceed air quality limits, or delay the date at which compliance will be achieved in areas that are currently in exceedence of legal limits

c) create unacceptable risk of high levels of exposure to poor air quality.

2. In order to meet the requirements of Part 1, as a minimum:

a) development proposals must be at least Air Quality Neutral

b) development proposals should use design solutions to prevent or minimise increased exposure to existing air pollution and make provision to address local problems of air quality in preference to post-design or retro-fitted mitigation measures

c) major development proposals must be submitted with an Air Quality Assessment. Air quality assessments should show how the development will meet the requirements of B1

⁷ The London Plan March 2021, GLA, 2021.

d) development proposals in Air Quality Focus Areas or that are likely to be used by large numbers of people particularly vulnerable to poor air quality, such as children or older people, should demonstrate that design measures have been used to minimise exposure.

C. Masterplans and development briefs for large-scale development proposals subject to an Environmental Impact Assessment should consider how local air quality can be improved across the area of the proposal as part of an air quality positive approach. To achieve this a statement should be submitted demonstrating:

a) How proposals have considered ways to maximise benefits to local air quality, and

b) What measures or design features will be put in place to reduce exposure to pollution, and how they will achieve this.

D. In order to reduce the impact on air quality during the construction and demolition phase development proposals must demonstrate how they plan to comply with the Non-Road Mobile Machinery Low Emission Zone and reduce emissions from the demolition and construction of buildings following best practice guidance.

E. Development proposals should ensure that where emissions need to be reduced to meet the requirements of Air Quality Neutral or to make the impact of development on local air quality acceptable, this is done on-site. Where it can be demonstrated that emissions cannot be further reduced by on-site measures, off-site measures to improve local air quality may be acceptable, provided that equivalent air quality benefits can be demonstrated within the area affected by the development."

The requirements of this policy have been considered throughout this Air Quality Assessment.

2.8. Local Planning Policy

The Hillingdon Local Plan comprises two documents. 'A Vision for 2026 Local Plan Part 1: Strategic Policies'⁸ was adopted by London Borough of Hillingdon (LBoH) in November 2012. A review of the document indicated the following policies of relevance to this report:

"Policy EM8: Land, Water, Air and Noise

[...]

Air Quality

All development should not cause deterioration in the local air quality levels and should ensure the protection of both existing and new sensitive receptors.

[...]"

The 'Local Plan Part 2: Development Management Policies'⁹ was adopted by LBoH in January 2020. A review of the document indicated the following policies of relevance to this report:

"Policy DME114: Air Quality

⁸ A Vision for 2026 Local Plan Part 1: Strategic Policies, LBoH, 2012.

⁹ Local Plan Part 2: Development Management Policies, LBoH, 2020.

A) Development proposals should demonstrate appropriate reductions in emissions to sustain compliance with and contribute towards meeting EU limit values and national air quality objectives for pollutants

B) Development proposals should, as a minimum:

- i) be at least 'air quality neutral';*
- ii) include sufficient mitigation to ensure there is no unacceptable risk from air pollution to sensitive receptors, both existing and new; and,*
- iii) actively contribute towards the improvement of air quality, especially within the Air Quality Management Area"*

"Policy DMT 1: Managing Transport Impacts

A) Development proposals will be required to meet the transport needs of the development and address its transport impacts in a sustainable manner. In order for the developments to be acceptable they are required to:

[...]

v) have no significant adverse transport or associated air quality and noise impacts on the local and wider environment, particularly on the strategic road network

[...]"

"Policy DMT 2: Highways Impacts

Development proposals must ensure that:

[...]

ii) they do not contribute to the deterioration of air quality, noise or local amenity or safety of all road users and residents;

[...]"

The 'LBoH Supplementary Planning Document (SPD): Planning Obligations'¹⁰ was adopted by LBoH in July 2014 to provide guidance on assessing the impact of proposed development on air quality.

The implications of the above policies and SPD were taken into consideration throughout the undertaking of the assessment.

¹⁰ LBoH SPD: Planning Obligations, LBoH, 2014.

3. Methodology

3.1. Introduction

The proposed development has the potential to cause air quality impacts during the construction and operational phases, as well as expose future residents to elevated pollution levels. These factors have been assessed in accordance with the following methodology, which was discussed with Anabela Grossinho, Air Quality Expert Advisor at LBoH, in February 2026.

3.2. Construction Phase Assessment

There is the potential for fugitive dust emissions to occur as a result of construction phase activities. In accordance with the Practice Note¹¹ produced by the GLA, impacts have been assessed in accordance with the methodology outlined within the Institute of Air Quality Management (IAQM) 'Guidance on the Assessment of Dust from Demolition and Construction V2.2'¹² and the Mayor of London's 'The Control of Dust and Emissions during Construction and Demolition Supplementary Planning Guidance'¹³, as relevant.

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

- Construction; and,
- Trackout.

Due to the nature of the scheme, earthworks will not be required. As such, this has not been considered further as part of this assessment.

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.

The assessment steps are detailed below.

3.2.1. Step 1

Step 1 screens the requirement for a more detailed assessment. Should human receptors be identified within 350m from the boundary or 50m from the construction vehicle route up to 500m 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 500m from the site entrance, then the assessment also proceeds to Step 2.

Should sensitive receptors not be present within the relevant distances then **negligible** impacts would be expected and further assessment is not necessary.

¹¹ Practice Note - The Control of Dust and Emissions from Construction and Demolition, GLA, undated.

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

¹³ The Control of Dust and Emissions During Construction and Demolition Supplementary Planning Guidance, The Mayor of London, 2014.

3.2.2. Step 2

Step 2 assesses the risk of potential dust impacts. A site is allocated 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).

The two factors are combined in Step 2C to determine the risk of dust impacts without mitigation applied.

Step 2A defines the potential magnitude of dust emission throughout the construction phase. The relevant criteria are summarised in Table 3.1.

Table 3.1: Construction Dust - Magnitude of Emission

Magnitude	Activity	Criteria
Large	Construction	Total building volume greater than 75,000m ³ 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	Construction	Total building volume 12,000m ³ to 75,000m ³ 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	Construction	Total building volume less than 12,000m ³ 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

Step 2B defines the sensitivity of the area around the development to potential dust impacts. The sensitivities of specific receptors are shown in Table 3.2.

Table 3.2: Construction Dust - Sensitivities of Human and Ecological Receptors

Receptor Sensitivity	Examples	
	Human Receptors	Ecological Receptors
High	Users expect high level 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 PM ₁₀ . 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

The criteria for determining the sensitivity of the area to dust soiling effects on people and property is summarised in Table 3.3.

Table 3.3: 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 350
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

Table 3.4 outlines the criteria for determining the sensitivity of the area to human health impacts.



Table 3.4: Construction Dust - Sensitivity of the Area to Human Health Impacts

Receptor Sensitivity	Background Annual Mean PM ₁₀ Concentration (µg/m ³)	Number of Receptors	Distance from the Source (m)			
			Less than 20	Less than 50	Less than 100	Less than 350
High	Greater than 32µg/m ³	More than 100	High	High	High	Medium
		10 - 100	High	High	Medium	Low
		1 - 10	High	Medium	Low	Low
	28 - 32µg/m ³	More than 100	High	High	Medium	Low
		10 - 100	High	Medium	Low	Low
		1 - 10	High	Medium	Low	Low
	24 - 28µg/m ³	More than 100	High	Medium	Low	Low
		10 - 100	High	Medium	Low	Low
		1 - 10	Medium	Low	Low	Low
	Less than 24µg/m ³	More than 100	Medium	Low	Low	Low
		10 - 100	Low	Low	Low	Low
		1 - 10	Low	Low	Low	Low
Medium	Greater than 32µg/m ³	More than 10	High	Medium	Low	Low
		1 - 10	Medium	Low	Low	Low
	28 - 32µg/m ³	More than 10	Medium	Low	Low	Low
		1 - 10	Low	Low	Low	Low
	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

Table 3.5 outlines the criteria for determining the sensitivity of the area to ecological impacts.

Table 3.5: 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

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

Table 3.6 outlines the risk category from construction and trackout activities.

Table 3.6: Construction Dust - Dust Risk Category from Construction and Trackout Activities

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

3.2.3. Step 3

Step 3 requires the identification of site-specific mitigation measures within the Mayor of London's guidance¹⁴ 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.

3.2.4. Step 4

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

3.3. Operational Phase Assessment

3.3.1. Potential Development Impacts

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

¹⁴ The Control of Dust and Emissions During Construction and Demolition Supplementary Planning Guidance, The Mayor of London, 2014.

IAQM 'Land-Use Planning & Development Control: Planning for Air Quality'¹⁵ guidance to determine the potential for trips generated by the development to affect local air quality.

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

- The development leads to a change of Light Duty Vehicle (LDV) flows of:
 - More than 100 Annual Average Daily Traffic (AADT) within an AQMA;
 - More than 500 AADT outside of an AQMA;
- The development leads to a change of 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.

Should these criteria not be met, then the IAQM guidance¹⁶ considers air quality impacts associated with a scheme to be **not significant** and no further assessment is required.

3.3.2. Potential Future Exposure

The proposed development comprises residential units. These are considered locations of relevant exposure for long and short term AQOs in accordance with the advice provided within GLA guidance¹⁷, as summarised in Table 2.2. The following factors were therefore considered in order to provide an assessment of potential exposure:

- Local monitoring results;
- The London Atmospheric Emissions Inventory (LAEI) pollutant maps; and,
- Site context.

The findings were subsequently used to determine the potential for AQOs and Concentration Target exceedences at the development location. Should the assessment indicate significant uncertainty over air quality conditions at the site then further quantitative methods, such as detailed dispersion modelling, could be utilised to refine the predictions.

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

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

¹⁷ London Local Air Quality Management (LLAQM), Technical Guidance 2019 (LLAQM.TG (19)), GLA, 2019.

4. Baseline

4.1. Introduction

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

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

"London Borough of Hillingdon AQMA - An area encompassing the area to the south of the railway, covering the southern half of the borough."

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

LBoH has concluded that concentrations of all other pollutants considered within the AQS are currently below the relevant AQOs. As such, no further AQMAs have been designated.

4.3. Air Quality Focus Areas

Air Quality Focus Areas (AQFAs) have been designated throughout London in locations where the annual mean AQO for NO₂ is exceeded and there is a high level of human exposure. They were defined to address concerns raised by boroughs within the LAQM review process and forecasted air pollution trends.

Review of the LAEI¹⁸ indicated that the development is located within an AQFA. This covers the Hayes Area (ID: 82). This has been considered throughout the assessment.

4.4. Air Quality Monitoring

Monitoring of pollutant levels is undertaken by LBoH throughout its area of jurisdiction. Recent NO₂ concentrations recorded in the vicinity of the development, as provided in LBoH's 'Air Quality Annual Status Report 2025'¹⁹ are shown in Table 4.1.

Table 4.1: Monitoring Results

Monitoring Site		Monitored NO ₂ Concentration (µg/m ³)		
		2022	2023	2024
HILL07	Harold Avenue	30.5	28.8	23.7
HILL08	15 Phelps Way Hayes	26.7	25.9	21.7

¹⁸ <https://data.london.gov.uk/dataset/london-atmospheric-emissions-inventory--laei--2019-air-quality-focus-areas>.

¹⁹ Air Quality Annual Status Report 2025, LBoH, 2025.

Monitoring Site		Monitored NO ₂ Concentration (µg/m ³)		
		2022	2023	2024
HILL18	Blyth Road	28.3	25.7	22.9
HILL27	Botwell House RC Primary School	26.8	26.9	24.6
HILL28	Blyth Road 2nd Tube	27.1	21.4	18.8

As shown in Table 4.1, annual mean NO₂ concentrations were below the AQO of 40µg/m³ at all monitoring locations in recent years. Reference should be made to Figure 2 for a map of the survey positions.

LBoH do not undertake PM₁₀ or PM_{2.5} monitoring within the vicinity of the site.

4.5. Background Pollutant Concentrations

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: 509500, 179500. Data for this location was downloaded from the DEFRA website²⁰ for the purpose of the assessment and is summarised in Table 4.2.

Table 4.2: Background Pollutant Concentration Predictions

Pollutant	Predicted 2026 Background Pollutant Concentration (µg/m ³)
NO ₂	17.16
PM ₁₀	13.63
PM _{2.5}	8.01

As shown in Table 4.2, predicted background concentrations are below the relevant AQOs and Concentration Target at the development site.

4.6. London Atmospheric Emissions Inventory

The LAEI²¹ was produced by the GLA and provides estimates of NO₂, PM₁₀ and PM_{2.5} concentrations across Greater London. A review of the inventory was undertaken to determine predicted pollutant levels across the site. This is summarised in Table 4.3.

Table 4.3: LAEI Predicted Pollutant Levels at the Development Site

Pollutant	Averaging Period	Predicted Range	Unit
NO ₂	Annual mean	22.40 - 24.55	µg/m ³
PM ₁₀	Annual mean	13.96 - 14.15	µg/m ³

²⁰ <https://uk-air.defra.gov.uk/data/laqm-background-maps?year=2021>.

²¹ <https://data.london.gov.uk/dataset/london-atmospheric-emissions-inventory--laei--2022>.

Pollutant	Averaging Period	Predicted Range	Unit
	24-hour mean	2 - 3	Days above 50µg/m ³
PM_{2.5}	Annual mean	8.61 - 8.75	µg/m ³

As shown in Table 4.3, predicted NO₂, PM₁₀ and PM_{2.5} concentrations are below the relevant AQOs and Concentration Target across the proposed development. Reference should be made to Figures 3 to 6 for maps of predicted pollutant levels in the vicinity of the site.

4.7. Sensitive Receptors

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 construction were identified from a desk-top study of the area up to 350m from the development boundary. These are summarised in Table 4.4.

Table 4.4: 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 350	More than 100	-

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 350m of the site access. These are summarised in Table 4.5.

Table 4.5: 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

There are no ecological receptors within 50m of the development boundary or the access route within 350m of the site entrance. As such, ecological impacts have not been assessed further within this report.

Based on the criteria shown in Table 3.2, the sensitivity of the receiving environment to potential dust impacts was determined as **high**. This was because the identified receptors included residential properties. The sensitivity of the receiving environment to specific potential dust impacts, based on the criteria shown in Section 3.2, is shown in Table 4.6.

Table 4.6: Sensitivity of the Surrounding Area to Potential Dust Impacts

Potential Impact	Sensitivity of the Surrounding Area	
	Construction	Trackout
Dust Soiling	High	High
Human Health	Medium	Medium

5. Construction Phase Assessment

5.1. Introduction

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

The undertaking of activities such as construction and storage of materials has the potential to result in fugitive dust emissions throughout the construction phase. Vehicle movements both on-site and on the local road network also have the potential to result in the re-suspension of dust from haul roads and highway surfaces.

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.

The desk-top study undertaken to inform the baseline identified a number of sensitive receptors within 350m of the site boundary. As such, a detailed assessment of potential dust impacts was required.

5.3. Step 2

5.3.1. Construction

Due to the scale of the proposed extension, the total building volume will be less than 12,000m³. In accordance with the criteria outlined in Table 3.1, the magnitude of potential dust emissions from construction is therefore **small**.

Table 4.6 indicates the sensitivity of the area to dust soiling effects on people and property is **high**. In accordance with the criteria outlined in Table 3.6, the development is considered to be a **low** risk site for dust soiling as a result of construction.

Table 4.6 indicates the sensitivity of the area to human health impacts is **medium**. In accordance with the criteria outlined in Table 3.6, the development is considered to be a **low** risk site for human health impacts as a result of construction.

5.3.2. Trackout

Based on the site area and access routes comprising tarmacked surfaces, it is anticipated that the unpaved road length will be less than 50m. In accordance with the criteria outlined in Table 3.1, the magnitude of potential dust emissions from construction is therefore **small**.

Table 4.6 indicates the sensitivity of the area to dust soiling effects on people and property is **high**. In accordance with the criteria outlined in Table 3.6, the development is considered to be a **low** risk site for dust soiling as a result of trackout.

Table 4.6 indicates the sensitivity of the area to human health impacts is **medium**. In accordance with the criteria outlined in Table 3.6, the development is considered to be a **low** risk site for human health impacts as a result of trackout.

5.3.3. SUMMARY OF POTENTIAL UNMITIGATED DUST RISKS

A summary of the risk from each dust generating activity is provided in Table 5.1.

Table 5.1: Summary of Potential Unmitigated Dust Risks During Construction

Potential Impact	Unmitigated Dust Risk	
	Construction	Trackout
Dust Soiling	Low	Low
Human Health	Low	Low

As indicated in Table 5.1, the potential risk of dust soiling is **low** from construction and trackout. The potential risk of human health impacts is **low** from construction and trackout.

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.

5.4. Step 3

The GLA guidance²² 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 5.2. These may be reviewed prior to the commencement of construction works and incorporated into a Construction Environmental Management Plan or similar if required by the LA.

Table 5.2: Fugitive Dust Emission Mitigation Measures

Issue	Control Measure
Site Management	- Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary - Display the head or regional office contact information - Record and respond to all dust and air quality pollutant emissions complaints - Make the complaints log available to the LA when asked - 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 by those accountable for dust and air quality pollutant emissions issues when activities with a high potential to produce dust are being carried out, and during prolonged dry or windy conditions - Record any exceptional incidents, either on or off the site, and the action taken to resolve the situation is recorded in the log book
Preparing and maintaining the site	- Plan site layout: machinery and dust causing activities should be located away from receptors - Erect solid screens or barriers around dusty activities or the site - Fully enclose site 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

²² The Control of Dust and Emissions During Construction and Demolition Supplementary Planning Guidance, The Mayor of London, 2014.

Issue	Control Measure
	Remove materials from site as soon as possible
Operating vehicle/machinery and sustainable travel	Ensure all on-road vehicles comply with the requirements of the London Low Emission Zone Ensure all Non-Road Mobile Machinery comply with the relevant standards 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 Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing)
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/particulate matter mitigation (using recycled water where possible) Use enclosed chutes and conveyors and covered skips Minimise drop heights and use fine water sprays wherever appropriate
Waste management	Reuse and recycle waste to reduce dust from waste materials, as set out in the Waste Management Plan Avoid bonfires and burning of waste materials
Construction	Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out Avoid scabbling (roughening of concrete surfaces) if possible
Trackout	Regularly use a water-assisted dust sweeper on the access and local roads, as necessary, to remove any material tracked out of the site Avoid dry sweeping of large areas Ensure vehicles entering and leaving sites are securely covered to prevent escape of materials during transport Implement a wheel washing system, if required

5.5. Step 4

Assuming the relevant mitigation measures outlined in Table 5.2 are implemented, the residual impacts from all dust generating activities is predicted to be **not significant**, in accordance with the Mayor of London's guidance²³.

²³ The Control of Dust and Emissions During Construction and Demolition Supplementary Planning Guidance, The Mayor of London, 2014.

6. Operational Phase Assessment

6.1. Introduction

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. Predicted Development Impacts

The development has the potential to increase concentrations of NO₂, PM₁₀ and PM_{2.5} as a result of road traffic exhaust emissions associated with vehicles travelling to and from the site during operation. Impacts have therefore been assessed using the IAQM screening criteria²⁴ detailed in Section 3.3. Information provided by the Transport Consultants indicates the development is predicted to generate 18 LDV and 2 HDV movements per day. These are associated with blue badge car parking spaces and servicing trips only.

As outlined above, the scheme is not predicted to result in changes in LDV flows of more 100 AADT or HDV flows of more than 25 AADT on any individual road link. Additionally, the proposals do not include significant highway realignment or the introduction of an off-site junction. As such, potential air quality impacts associated with the operational phase road vehicle exhaust emissions are predicted to be **not significant**, in accordance with the IAQM criteria²⁵ shown in Section 3.3.

6.3. Potential Future Exposure

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

As outlined in Table 4.1, LBoH undertook monitoring of NO₂ concentrations at five locations in the vicinity of the site during 2024. Annual mean NO₂ concentrations were below the AQO of 40µg/m³ at all positions. Survey site HILL28 is closest to the scheme and is approximately 130m north-east of the development, adjacent to Blyth Road. The annual mean NO₂ concentration at HILL28 was 18.8µg/m³ during 2024. The proposals are set back approximately 110m from Blyth Road. GLA guidance²⁶ indicates that pollutant levels decrease with distance from emission sources such as roads. As such, pollutant concentrations at the site are anticipated to be lower than those recorded at HILL28 and therefore below the AQO.

Further support to the above conclusion is provided by the latest LAEI pollutant mapping concentrations, as outlined in Table 4.3. These indicate predicted NO₂, PM₁₀ and PM_{2.5} concentrations are below the relevant AQOs and Concentration Target across the site.

Based on the above, exceedences of the relevant long and short-term AQOs or Concentration Target are not considered likely at the proposed development. As such, the site is considered suitable for the proposed end use.

²⁴ Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

²⁵ Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

²⁶ London Local Air Quality Management (LLAQM), Technical Guidance 2019 (LLAQM.TG (19)), GLA, 2019.

6.4. Interim Planning Guidance for PM_{2.5}

Interim Planning Guidance²⁷ on the consideration of the PM_{2.5} targets identified in the Environment Act (2021) in planning decisions has been produced by DEFRA. This requires evidence that the key sources of air pollution within a development have been identified and appropriate action to minimise emissions of PM_{2.5} and its precursors as far as is reasonably practicable be provided in support of planning applications. To assist the process, two questions and associated considerations are provided. These are summarised in Table 6.1.

Table 6.1: Interim Planning Guidance Questions

Question	Response
How has exposure to PM_{2.5} been considered when selecting the development site? Factors to consider include: Site proximity to people (particularly large populations and/or vulnerable groups, e.g. schools, hospitals, care homes, areas of deprivation) and the impact of the development on these Site proximity to pollution sources and the impact of these on users of the development Exposure and emissions during both construction and in-use	The site is located in Hayes, bordered by the Elizabeth Line to the south and residential apartments to the north, east and west. As such, the scheme is in close proximity to a large population. However, as outlined in Section 6.2, air quality impacts from the site are predicted to be not significant The main pollution source of concern to the site is Blyth Road and the A437. However, the site is set back from the roads by approximately 110m, and as outlined in Section 6.3, predicted PM_{2.5} concentrations are below the Concentration Target across the site As outlined in Table 5.2, a number of mitigation measures will be used throughout the construction phase in order to reduce fugitive dust emissions as far as practicable. This will control potential exposure at off-site locations
What actions and/or mitigations have been considered to reduce PM_{2.5} exposure for development users and nearby receptors and to reduce emissions of PM_{2.5} and its precursors? Factors to consider include: Site layout The development's design Technology used in the construction or installed for use in the development Construction and future use of the development	As the site is set back from Blyth Road and A437 by approximately 110m, future residents are unlikely to be exposed to elevated pollutant concentrations In order to reduce emissions of PM_{2.5} with associated impacts at nearby receptors, the following measures have been included within the scheme: ■ No parking spaces have been proposed, with the exception of Blue Badge parking. This will reduce the reliance on private vehicles ■ Secure cycle storage will be provided to encourage the use of alternative transport modes ■ A Travel Plan will be produced to encourage the use of sustainable transport modes Further to the above, in order to reduce emissions during the construction phase, a number of mitigation measures will be used to minimise dust generation from associated activities

Based on the responses provided in Table 6.1 and the results of the assessment, as outlined in Sections 5 and 6, it is considered that the development had identified key sources of air pollution and taken appropriate action to minimise emissions of PM_{2.5}.

²⁷ <https://uk-air.defra.gov.uk/pm25targets/planning>.

6.5. Cumulative Assessment

The consultation response from LBoH requested consideration of potential cumulative air quality impacts associated with the proposals and other committed developments. A review of the LBoH planning mapping system was therefore undertaken to identify any committed or proposed schemes in the vicinity of the site. This process did not identify any committed developments within 500m of the site. As summarised in Section 6.2, the air quality impacts associated with the proposed development are predicted to be **not significant**. In the absence of other committed schemes in the local area, cumulative air quality impacts are therefore also considered to be **not significant**.

7. London Borough of Hillingdon Air Quality Action Plan

7.1. Introduction

LBoH has produced an AQAP²⁸ to improve local air quality. The AQAP sets out a number of measures to achieve this objective, including Action 5, which states the following:

"[...] In AQ focus areas NO_x damage calculation costs are requested to form the basis of planning obligation for costs where the developer mitigation is insufficient."

The proposed development is located within an AQFA. As such, a damage cost assessment is required in accordance with the AQAP.

It is noted that LBoH has not published a specific assessment methodology for the damage cost assessment. As such, DEFRA guidance²⁹ has been utilised in lieu of local requirements.

7.2. Damage Cost Assessment

The purpose of the damage cost assessment is to calculate the quantity of transport emissions associated with a development and to determine the appropriate level of mitigation required to help avoid, minimise and/or off-set the impact on air quality.

The first step of the 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. 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 oxides of nitrogen (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:

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

It should be noted that the calculation has been undertaken using the most recent damage costs released by DEFRA in December 2025³⁰.

The input data values are shown in Table 7.1.

Table 7.1: Damage Cost Assessment - Inputs

Data	Value
Daily Vehicle Movements Produced by Development	20
HDV Proportion (%)	10
Average Speed (km/h)	50
Average Trip Length (km)	10

²⁸ LBoH AQAP, LBoH, 2019.

²⁹ Air Quality Appraisal: Damage Cost Guidance, DEFRA, 2025.

³⁰ Air Quality Appraisal: Damage Cost Guidance, DEFRA, 2025.

Data	Value
NO_x Damage Costs (£/tonne)^(a)	40,048
PM_{2.5} Damage Costs (£/tonne)^(a)	353,225

Note: (a) Road Transport Outer London Damage Cost

The projected yearly emissions for each of the five years from opening are shown in Table 7.2.

Table 7.2: Damage Cost Assessment - Projected Emissions

Data	Value (tonnes/year)				
	2029	2030	2031	2032	2033
NO_x Output	0.005	0.004	0.004	0.003	0.003
PM_{2.5} Output	0.002	0.002	0.001	0.001	0.001

The calculation is shown in Table 7.3.

Table 7.3: Damage Cost Assessment - Cost Calculation

Data	Value				
	2029	2030	2031	2032	2033
Annual Cost of NO_x Emissions (£)	204	180	153	130	104
Annual Cost of PM_{2.5} Emissions (£)	541	536	530	525	520
Total Annual Exposure Cost Value (£)	745	716	684	655	624
Total Five Year Exposure Cost Value (£)	3,423				

As shown in Table 7.3, the total damage costs were calculated as £3,423.

7.3. Mitigation

Several air quality mitigation measures are included in the proposed development in order to minimise air quality impacts associated with road traffic emissions. These are summarised as follows:

- Provision of disabled persons' parking spaces only, with no general car parking proposed;
- Adoption of a permit-free agreement to restrict residents from obtaining on-street parking permits on the highway;
- Provision of secure cycle storage; and,
- Implementation of a Travel Plan.

At the time of reporting, costs were only available for the secure cycle storage elements. These are summarised in Table 7.4.

Table 7.4: Secure Cycle Storage Costs

Element	Cost (£)
14 x Sheffield Stands	1,330
8 x Two Tier Cycle Stands	8,800

The total value of mitigation shown in Table 7.4 is £10,130. This exceeds the calculated damage cost value of £3,423. As such, the initiatives are considered sufficient to minimise air quality impacts associated with the development.

8. Air Quality Neutral Assessment

8.1. Introduction

The London Plan³¹ requires that all developments are 'air quality neutral' to ensure proposals do not lead to further deterioration of existing poor air quality. In order to support the policy, guidance³² has been produced by the GLA. The document provides a methodology for determining potential emissions from a development and benchmark values for comparison purposes.

There are two sets of benchmarks which cover the main sources of air pollution from new developments. These are:

- Building Emissions Benchmark (BEB) - emissions from equipment used to supply heat and energy to the buildings; and,
- Transport Emissions Benchmark (TEB) - emissions from private vehicles travelling to and from the development.

A development must meet both benchmarks separately in order to be Air Quality Neutral. Where one or both benchmarks are exceeded, appropriate action is required, either by on-site mitigation measures or by way of off-setting.

The Air Quality Neutral Assessment for the proposed development is provided in the following Sections.

8.2. Building Emissions

The guidance³³ indicates that where developments include new heating systems, they can be assumed to meet the BEB if they include the following:

- Heat pump or other zero-emission heat source.

Heating and hot water for the development will be provided through Air Source Heat Pumps and electric panel heaters. These do not produce emissions to atmosphere. As such, the proposals are considered to be air quality neutral from a building emissions perspective.

8.3. Transport Emissions

The guidance³⁴ states the following in respect to the TEB:

"Where developments meet the definition of 'car-free'⁷, they can be assumed to meet the TEB.

7: Developments that are defined as 'car-free' may include provision for disabled persons parking. The standards for disabled persons parking are outlined in the London Plan parking policies (T6 and T6.1 to T6.5) and supporting text."

³¹ The London Plan - The Spatial Development Strategy for Greater London, GLA, 2021.

³² London Plan Guidance: Air Quality Neutral, GLA, 2023.

³³ London Plan Guidance: Air Quality Neutral, GLA, 2023.

³⁴ London Plan Guidance: Air Quality Neutral, GLA, 2023.

The proposals do not include car parking, with the exception of blue badge spaces. The development is therefore considered to be 'car-free' in accordance with the definition provided within the London Plan³⁵. As such, the development is air quality neutral from a transport emissions perspective.

8.4. Summary

Potential emissions from the development were assessed in order to determine compliance with the air quality neutral requirements of the London Plan³⁶.

The building energy strategy does not include any new combustion plant. As such, the development is air quality neutral from a building emissions perspective.

The scheme is car-free. As such, the development is air quality neutral from a transport emissions perspective.

³⁵ London Plan Guidance: Air Quality Neutral, GLA, 2023.

³⁶ The London Plan - The Spatial Development Strategy for Greater London, GLA, 2021.

9. Conclusions

Peninsular Acoustics Limited has been commissioned by Socotec UK Ltd to provide an Air Quality Assessment in support of a residential development at The Record Store, Pressing Lane, Hayes.

The proposals have the potential to cause air quality impacts as a result of fugitive dust emissions during construction and road traffic exhaust emissions associated with vehicles travelling to and from the site during operation, as well as expose future residents to elevated pollution levels. As such, an Air Quality Assessment was required in order to determine baseline conditions, consider site suitability for the proposed end-use and assess potential effects as a result of the scheme.

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 guidance from the IAQM³⁷ and Mayor of London³⁸. 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 construction and trackout activities are predicted to be **not significant**.

Potential impacts during the operational phase of the proposed development may occur due to road traffic exhaust emissions associated with vehicles travelling to and from the site. These were assessed against the screening criteria provided within the IAQM guidance document³⁹. Due to the low number of trips associated with the proposals, impacts were predicted to be **not significant**.

The potential for exposure of future residents to exceedences of the AQOs and Concentration Target was assessed based on local monitoring results, predicted concentrations from the LAEI and site context. This indicated that concentrations of NO₂, PM₁₀ and PM_{2.5} are likely to be below the relevant AQOs and Concentration Target at the development location. As such, the site is considered suitable for the proposed use from an air quality perspective.

Potential emissions from the development were assessed in order to determine compliance with the air quality neutral requirements of the London Plan⁴⁰. The proposals do not include any combustion plant and are car-free. As such, in accordance with the GLA guidance⁴¹, the development is considered to be air quality neutral.

A Damage Cost Assessment was completed in line with the requirements of the LBoH AQAP⁴². Suitable standard and further mitigation was identified for inclusion in the development. It is considered that the initiatives are sufficient to minimise air quality impacts associated with the proposals. Specific measures could be conditioned by LBoH if required.

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

Limitations applicable to this report are contained in Appendix C.

³⁷ Guidance on the Assessment of Dust from Demolition and Construction V2.2, IAQM, 2024.

³⁸ The Control of Dust and Emissions During Construction and Demolition Supplementary Planning Guidance, The Mayor of London, 2014.

³⁹ Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

⁴⁰ The London Plan March 2021, GLA, 2021.

⁴¹ London Plan Guidance: Air Quality Neutral, GLA, 2023.

⁴² LBoH AQAP, LBoH, 2019.

Appendix A

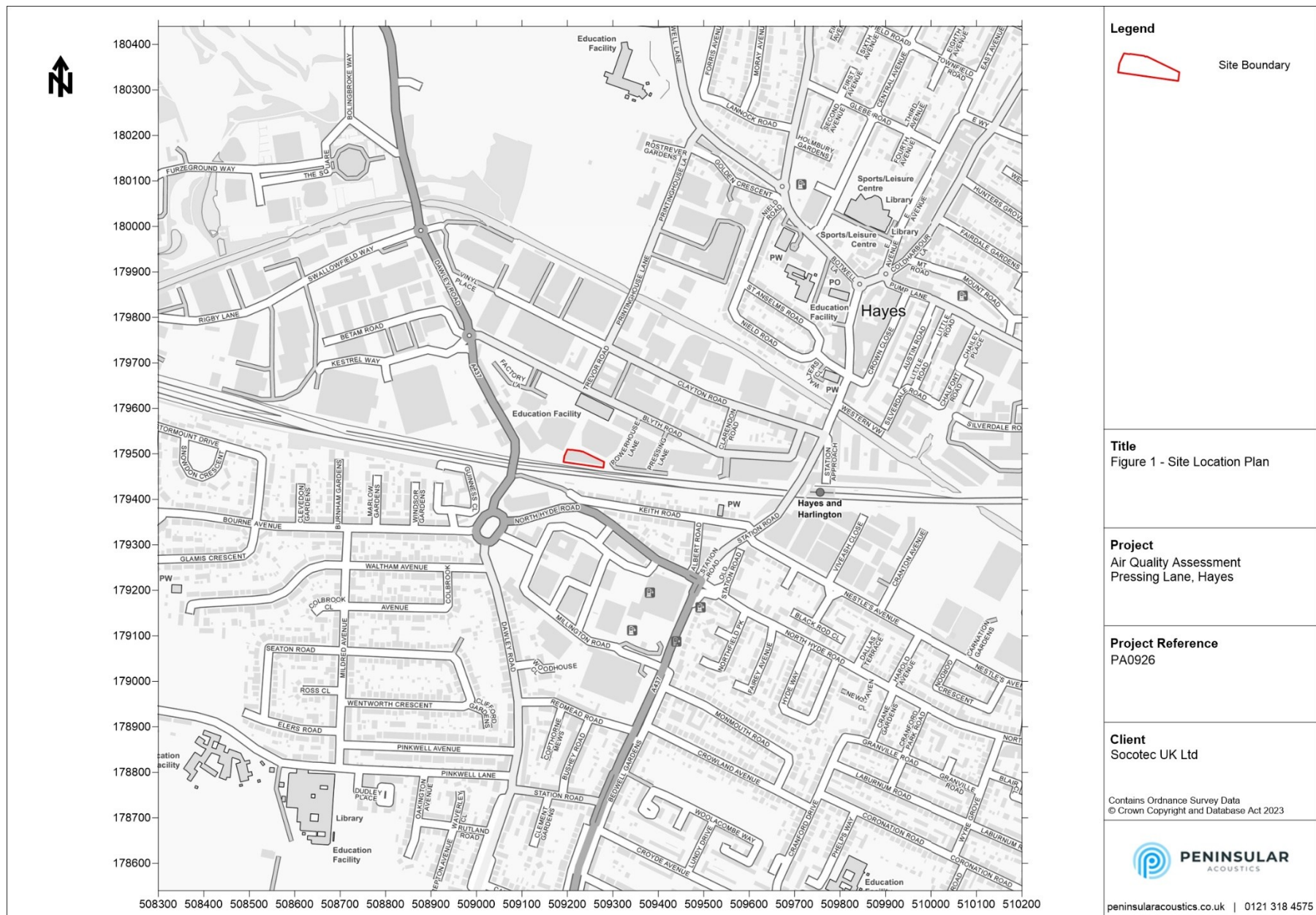
Technical Terminology and Abbreviations

Term	Definition
Annual Average Daily Traffic (AADT)	The number of traffic movements on a given road in a 24-hour period as an average across one year
Air Quality Action Plan (AQAP)	-
Air Quality Limit Value (AQLV)	Legally binding values set for individual pollutants that must not be exceeded. Individual limit values include a concentration value, an averaging time over which it is measured, the number of exceedences allowed per year (if any) and a date by which it must be achieved
Air Quality Focus Area (AQFA)	Locations that not only exceed the EU annual mean limit value for NO ₂ but are also locations with high human exposure
Air Quality Guidelines (AQG)	-
Air Quality Management Area (AQMA)	An area within a local authority where national air quality objectives are not likely to be achieved
Air Quality Objective (AQO)	The name given to the maximum ambient pollutant concentration that is not to be exceeded either without exception or within a permitted number of exceedences over a specified timescale for a pollutant outlined in the national Air Quality Strategy
Air Quality Strategy (AQS)	Strategy setting out actions for local authorities in support of long-term air quality goals
Air Quality Target Values (AQTV)	-
Background Concentration	The general pollutant concentration for an area away from individual emission sources
Building Emissions Benchmark (BEB)	Emissions from equipment used to supply heat and energy to the buildings
Department for Environment, Food and Rural Affairs (DEFRA)	-
Greater London Authority (GLA)	-
Heavy Duty Vehicle (HDV)	-
Institute of Air Quality Management (IAQM)	-
Interim Target	Incremental step in the progressive reduction of air pollution towards the air quality guidance levels
Local Authority (LA)	-
London Atmospheric Emissions Inventory (LAEI)	-
Local Air Quality Management (LAQM)	-

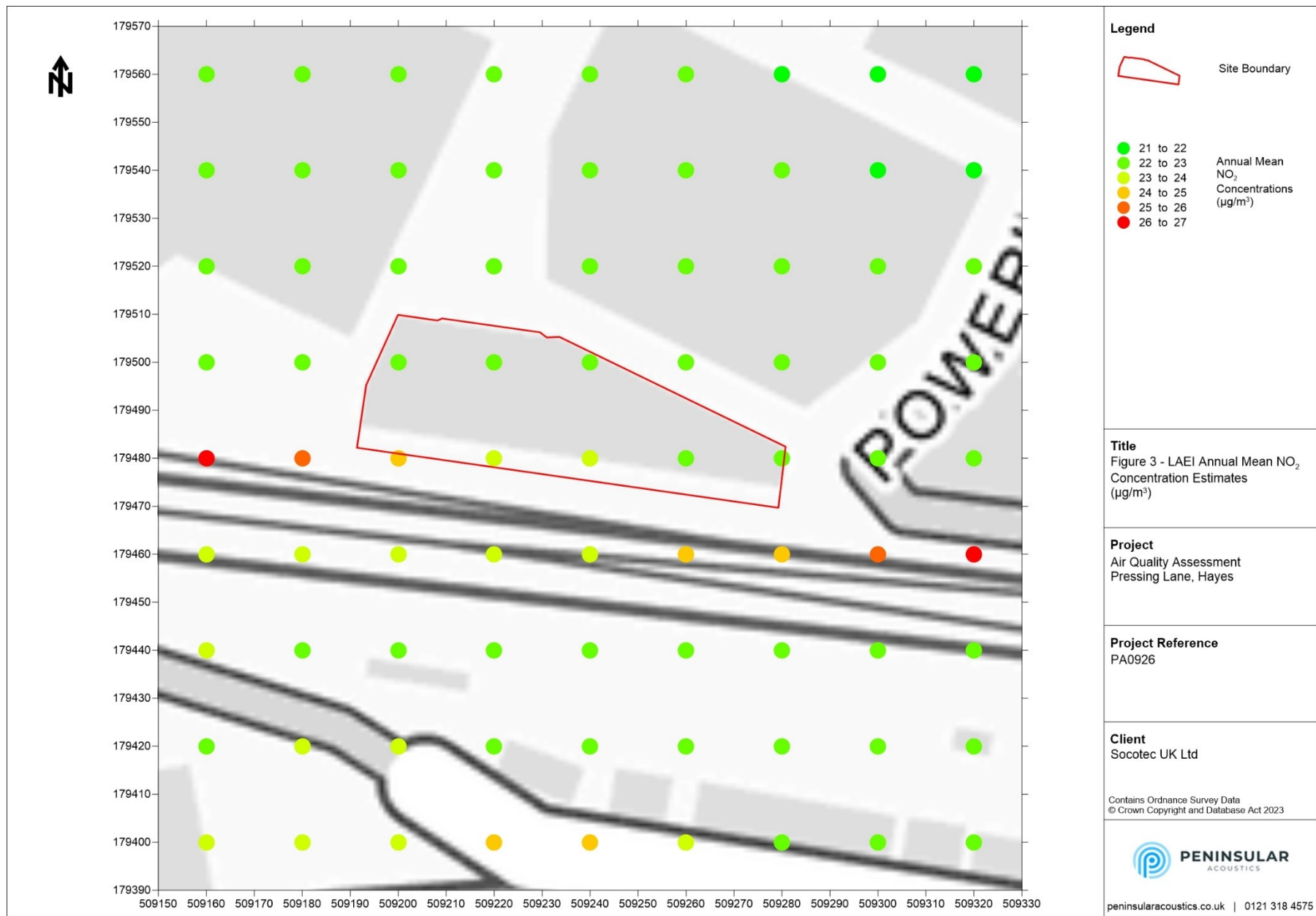
London Borough of Hillingdon (LBoH)	-
Light Duty Vehicle (LDV)	-
National Grid Reference (NGR)	-
Nitrogen dioxide (NO₂)	-
Oxides of Nitrogen (NO_x)	-
National Planning Policy Framework (NPPF)	-
National Planning Practice Guidance (NPPG)	-
Particular matter with an aerodynamic diameter of less than 10µm (PM₁₀)	-
Particular matter with an aerodynamic diameter of less than 2.5µm (PM_{2.5})	-
Transport Emissions Benchmark (TEB)	Emissions from private vehicles travelling to and from the development
World Health Organisation (WHO)	-

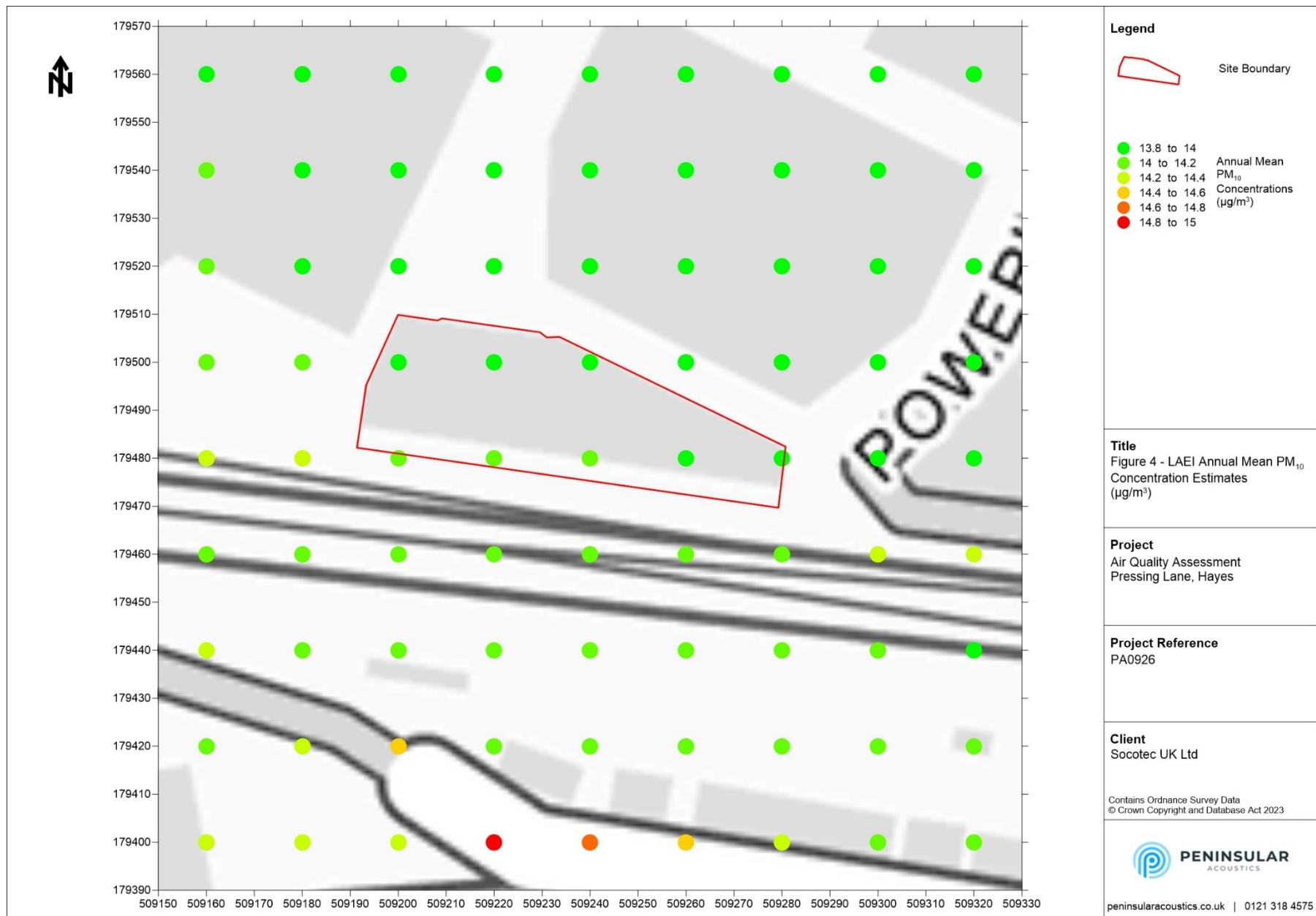
Appendix B

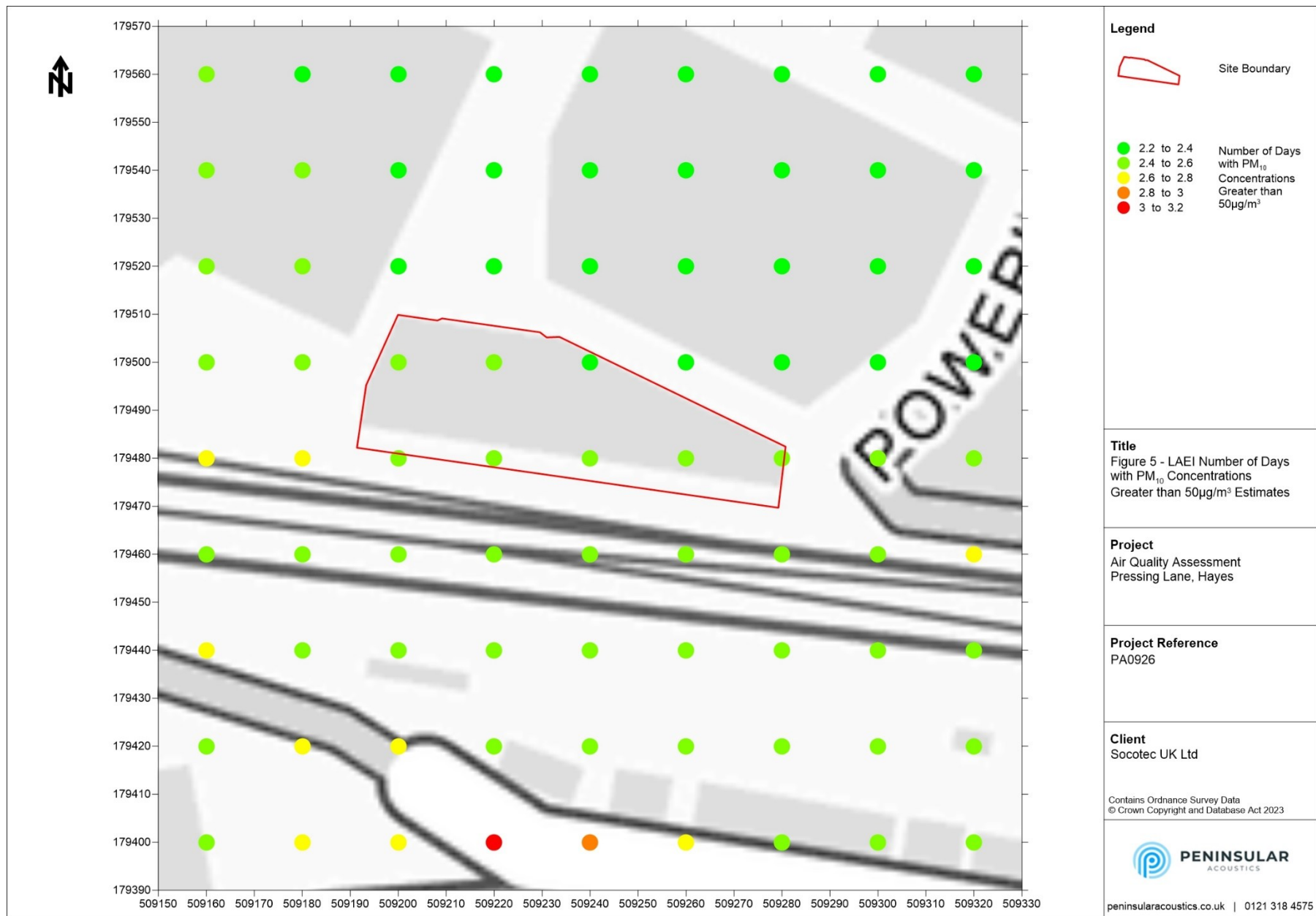
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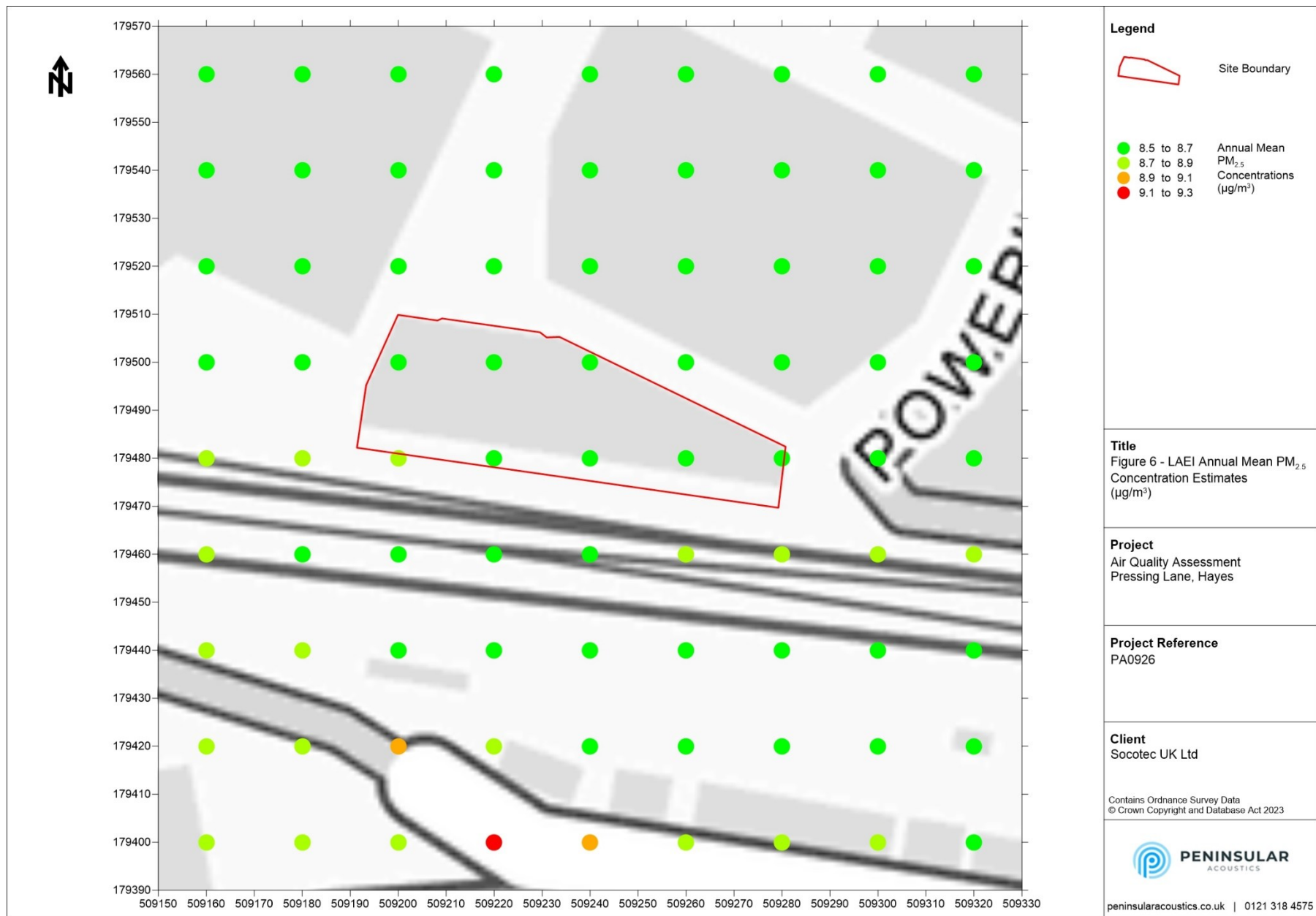












Appendix C

Report Limitations

This report has been prepared for the titled project or named part thereof and should not be used in whole or part and relied upon for any other project without the written authorisation of Peninsular Acoustics Limited. Peninsular Acoustics Limited accept no responsibility or liability for the consequences of this document if it is used for a purpose other than that for which it was commissioned. Persons wishing to use or rely upon this report for other purposes must seek written authority to do so from the owner of this report and/ or Peninsular Acoustics Limited and agree to indemnify Peninsular Acoustics Limited for any and all loss or damage resulting therefrom. Peninsular Acoustics Limited accepts no responsibility or liability for this document to any other party other than the person by whom it was commissioned.

The findings and opinions expressed are relevant to the dates of the site works and design drawings/specifications and should not be relied upon to represent conditions at substantially later dates. Opinions included therein are based on information gathered during the study and from our experience. If additional information becomes available which may affect our comments, conclusions or recommendations Peninsular Acoustics Limited reserve the right to review the information, reassess any new potential concerns and modify our opinions accordingly.



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