



AIR QUALITY ASSESSMENT REPORT

PARRS YARD, OLD BATH ROAD

MAPLE PARKING

NOVEMBER 2023

**PLANNING STAGE AIR QUALITY STATEMENT
PARRS YARD, OLD BATH ROAD**

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CONTENTS

EXECUTIVE SUMMARY	5
1 INTRODUCTION	5
2 AIR QUALITY POLICY, CRITERIA AND BASELINE CONDITIONS	6
3 PROPOSED DEVELOPMENT	12
4 AIR QUALITY ASSESSMENT	14
5 DUST RISK ASSESSMENT	15
6 AIR QUALITY NEUTRAL AND POSITIVE ASSESSMENT	18
7 CONCLUSIONS	19

EXECUTIVE SUMMARY

An air quality statement, an air quality neutral and positive assessment and construction dust risk assessment have been conducted to establish site suitability and potential air quality effects from the proposed park and ride scheme to operate from Parr's Yard. These assessments demonstrate the site and proposals are suitable for the proposed development and air quality policy compliant.

Air quality mitigation measures include use of Euro VI ULEZ compliant buses to reduce the number of cars in the ULEZ that do not meet the emissions requirements.

1 INTRODUCTION

Anderson Acoustics Ltd was commissioned by Maple Parking to produce an air quality assessment & mitigation statement to inform determination of the planning application for use of land at Parris Yard, Old Bath Road, London, UB7 0EF, for an express park and ride service to Heathrow Terminal 5 (T5). The site was formerly a Saints Transport freight and storage depot. The proposed development site is located within the London Borough of Hillingdon (LBH) local authority area.

Assessment of the potential effects of existing air quality on the future occupants is achieved through assessing the location of the development against modelled NO₂ and PM₁₀ concentrations in the context of the air quality objectives and limit values. The effect of the proposed development on the environment is assessed through screening the building and transport emissions against criteria, for further assessment if the criteria is exceeded.

An air quality neutral and air quality positive assessment and a dust risk assessment have been conducted to demonstrate compliance of the development with the 'air quality neutral' and 'air quality positive' requirements of policy SI1 of New London Plan, and the Mayor's Supplementary Planning Guidance on Sustainable Design and Construction and Control of Dust and Emissions During Construction and Demolition. Mitigation measures following the guidance are proposed.

Air quality policy, criteria and baseline concentrations relevant to the assessment have been presented and briefly discussed in Section 2 of this report. A brief description of the site and proposed development is given in Section 3. The air quality assessment is presented in Section 4. The dust risk assessment is presented in Section 5 and the air quality neutral and positive assessments in Section 6. The conclusions are provided in Section 7.

2 AIR QUALITY POLICY, CRITERIA AND BASELINE CONDITIONS

2.1 Air Quality – Pollutants for Consideration

The pollutants for consideration in the LBH area are nitrogen dioxide (NO₂) and particulate matter (PM).

PM₁₀ is the fraction of PM that is 10 microns or less in size, and PM_{2.5} is the fraction of PM that is 2.5 microns or less in size. Both can be drawn into the lungs and can cause respiratory illness, cardiovascular illness and mortality. Oxides of nitrogen include nitric oxide (NO) and nitrogen dioxide (NO₂). NO₂ can cause inflammation of the lung and can lead to shortness of breath, coughing and can reduce immunity to infections of the lung such as bronchitis.

2.2 Air Quality Policy and Guidance

2.2.1 European and National Air Quality Standards

Air Quality Directive 2008/50/EC¹ introduced legally binding “limit value” targets for the member governments to reduce air pollution to concentrations at which minimal effects on health are likely to occur. The directive was transposed into law through the Air Quality (England) Standards Regulations² with air quality objectives and dates they were to be achieved by. The sensitive locations, at which the standards and objectives apply, are places where the population is expected to be exposed to the various pollutants over the averaging period in question. For objectives to which an annual mean standard applies, the most common sensitive receptor locations used to measure concentrations are areas of residential housing, since it is reasonable to expect that people living in their homes could be exposed to pollutants over such a period of time. For shorter averaging periods of between 15 minutes, 1 hour or 1 day, the sensitive receptor location can be anywhere where the public could be exposed to the pollutant over these shorter periods of time. The annual mean objectives are not relevant for the building façades of offices or other places of work where members of the public do not have regular access, kerbsides or gardens.

Table 2.1: Air Quality Objectives for PM₁₀, PM_{2.5} and NO₂

Pollutant	Air Quality Objectives for Particulates and NO ₂		Date to be Achieved By
	Concentration	Measured as	
PM ₁₀	50 µg/m ³ not to be exceeded more than 35 times a year	24 hour mean	31 December 2004
	40 µg/m ³	Annual mean	31 December 2004
PM _{2.5}	25 µg/m ³	Annual mean	2020 (but not in UKAQS)
	15% reduction urban background	Annual mean	2010-2020
NO ₂	40 µg/m ³	Annual mean	31 December 2005
	200 µg/m ³ not to be exceeded more than 18 hours in a year	Hourly mean	31 December 2005

The Environment Act 1995³ introduced the requirement for local authority management of air quality. Part IV of this Act details the duties of local authorities in carrying out their local air quality management (LAQM) to

¹ Council Directive 2008/50/EC of 21 May 2008 on ambient air quality and cleaner air for Europe.

² DEFRA. 2010. The Air Quality Standards (England) Regulations.

³ Office of the Deputy Prime Minister. 1995. The Environment Act.

tackle poor air quality. Part of the requirements is for the Review and Assessment of air quality and production of Updating and Screening Assessments (USA) and Status Reports. Where exceedance of these objectives is shown or anticipated, the local authority is required to produce an Air Quality Action Plan to reduce emissions and pollutant concentrations.

2.2.2 National and Regional Planning Policy and Guidance

The **NPPF**⁴ presents the Government's planning policies for England and how these are expected to be applied, with the development of local and neighbourhood plans under the framework. Paragraph 174 e) of the NPPF identifies that the planning system should aim to conserve and enhance the natural and local environment by "*preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans;...*"

Paragraph 186 states "*Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications. Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan.*".

Planning Practice Guidance (PPG)⁵ for air quality has been produced that gives indication of details the local authority may want to consider when there are concerns about air quality, special requirements such as the height of chimneys and securing mitigation measures through planning conditions and obligations. The **PPG** considers that dust can also be a planning concern for effects on local amenity. The guidance considers that assessments should be proportional to the nature and scale of development proposed and the level of concern about air quality. The mitigation of air quality impacts and effects is to depend on the proposed development and should be proportionate to the likely impact.

The London Plan⁶ Policy SI1 'Improving Air Quality' continues the aims of the previous London Plan Policy 7.14 air quality policy in the new London Plan and aims for air quality positive and air quality neutral. Further information on air quality positive assessment is presented in the London Plan Air Quality Neutral Guidance⁷ and also the London Plan Air Quality Positive Guidance⁸ and includes the presentation of a matrix demonstrating the air quality positive elements of the proposed development.

The requirements for development proposals include:

...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 exceedance of legal limits*
- c) create unacceptable risk of high levels of exposure to poor air quality.*

2) In order to meet the requirements in 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*

⁴ Ministry of Housing, Communities & Local Government. National Planning Policy Framework. 2023.

⁵ Department for Communities and Local Government. 2019. Planning Practice Guidance – Air Quality. Revision date November 2019.

⁶ Mayor of London. The London Plan. 2021.

⁷ Mayor of London. London Plan Guidance. Air Quality Neutral. 2023.

⁸ Mayor of London. London Plan Guidance. Air Quality Positive. 2023.

- 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
- 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.

The Mayor's Environmental Strategy⁹ continues the requirement for all new developments to be air quality neutral, to ensure no new development has a negative impact on local air quality. Policy 4.3.3 aims to phase out the use of fossil fuels to heat, cool and maintain London's buildings, homes and urban spaces, and reduce the impact of building emissions on air quality.

The Mayor's Sustainable Design and Construction Supplementary Planning Guidance (SPG)¹⁰ states that all new gas boilers should produce low levels of nitrogen oxides (NOx) and developments should take measures to reduce and mitigate exposure to air pollution, and details emissions benchmarks for building emissions to avoid increases in NOx and PM emissions across London as a whole, and therefore be air quality neutral. These are considered as minimum benchmarks that will be kept under review and updated in line with technological and commercial advances. The air quality neutral policy applies to all major developments, and NOx and/or PM₁₀ emissions from the building and transport elements of the scheme need to be calculated and compared to the benchmarks. Where schemes do not meet the benchmarks, after mitigation has been implemented on site, the developer will be required to off-set emissions off site. This SPD has been revoked but is still referenced and used by local authority policy.

Offsetting measures where the schemes do not meet the air quality neutral benchmark can include NOx and PM abatement measures in the vicinity of the development, working with the local authority and nearby property owners and secured by planning condition or s106 agreement. Any agreement for off-site measures, including financial contribution, need to be considered by any restrictions imposed by the Community Infrastructure Levy Regulations 2010. These measures can include:

- Green planting/walls with special consideration given to planting that absorbs or suppresses pollutants;
- Upgrade or abatement to combustion plant;
- Retrofitting abatement technology to vehicles and flues; and
- Exposure reduction.

The Mayor's The Control of Dust and Emissions During Construction and Demolition SPG¹¹ seeks to reduce emissions of dust, PM₁₀ and PM_{2.5} from construction and demolition activities in London. It also aims to manage emissions of NOx from construction and demolition machinery by means of a new non-road mobile machinery ultra-low emissions zone (ULEZ). The SPG considers that during the pre-application phase, boroughs should provide and advise on controlling dust and emissions and should set out their requirements for the planning application.

During the detailed application phase, the developer should submit an Air Quality and Dust Risk Assessment (AQDRA), which should confirm that an Air Quality and Dust Management Plan (AQDMP), following the guidance in the SPG, will be submitted to the local authority prior to works commencing on-site.

The AQDRA provides a summary of the risk to soiling (dirt deposited on surrounding structures), health and the natural environment, and recommends emission control measures to be implemented as part of the scheme.

This document considers that the activities on construction sites can be divided into four types to reflect their different impact:

- demolition;
- earthworks;
- construction; and
- trackout.

⁹ Mayor of London. 2018. London Environmental Strategy.

¹⁰ Mayor of London. 2014. Sustainable Design and Construction Supplementary Planning Guidance.

¹¹ Mayor of London. 2014. The Control of Dust and Emissions from Construction and Demolition Supplementary Planning Guidance.

These activities can lead to three separate dust impacts:

- the risk of health effects due to an increase in exposure to PM₁₀;
- annoyance due to dust soiling; and
- harm to ecological receptors.

2.2.3 Local Air Quality Policy, Guidance and Local Air Quality Management

London Borough of Hillingdon Local Plan

The LBH Local Plan Development Management Policies¹² was adopted in 2020 and includes Policy DME1 14 Air Quality:

"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."

2.3 Baseline Conditions and Designations

The southern two-thirds of the borough was declared as an AQMA annual mean NO₂ in 2003. The Air Quality Action Plan¹³ was adopted by LBH to provide measures for improving air quality, including through sustainable transport and the development control system and a list of actions to meet these aims and objectives. The extent of the AQMA is shown in Figure 2.1. The LBH Air Quality Focus Areas (AQFA) for the London Atmospheric Emissions Inventory 2019 are shown in Figure 2.2, and the proposed development buses will pass into the Heathrow AQFA. The modelled annual mean NO₂ concentrations for 2025 are shown in Figure 2.3.

Measured NO₂ and PM₁₀ concentrations are presented in the LBH 2022 Annual Status Report¹⁴ (ASR). The site of the proposed development is indicated by the LAEI 2019 modelling for 2025 to be in areas below the annual mean NO₂ objective, with annual mean NO₂ concentrations being under 35 µg/m³ along the proposed bus route, as can be seen in Figure 2.3.

PM₁₀ is measured at a number of sites around Heathrow, including the T54 Heathrow Oaks Road and T55 Heathrow Green Gates sites which are closest to the area. The annual mean PM₁₀ objective has not been exceeded recently at the T54 and T55 sites with concentrations of 15 µg/m³ or below for the past five years and these sites had 0 days of exceedance of the 24-hour PM₁₀ concentration of 50 µg/m³ which is well within the limit of 35 days, for each year in the past three years.

¹² London Borough of Hillingdon. Local Plan: Development Management Policies. 2020.

¹³ London Borough of Hillingdon. Air Quality Action Plan 2019-2024. 2019.

¹⁴ London Borough of Hillingdon. Air Quality Annual Status Report for 2021. 2022.

Figure 2.1. LBH Air Quality Management Area for annual mean NO₂



Figure 2.2. Air Quality Focus Areas in the London Borough of Hillingdon 2019 LAEI

Focus Areas LAEI 2019 in Hillingdon

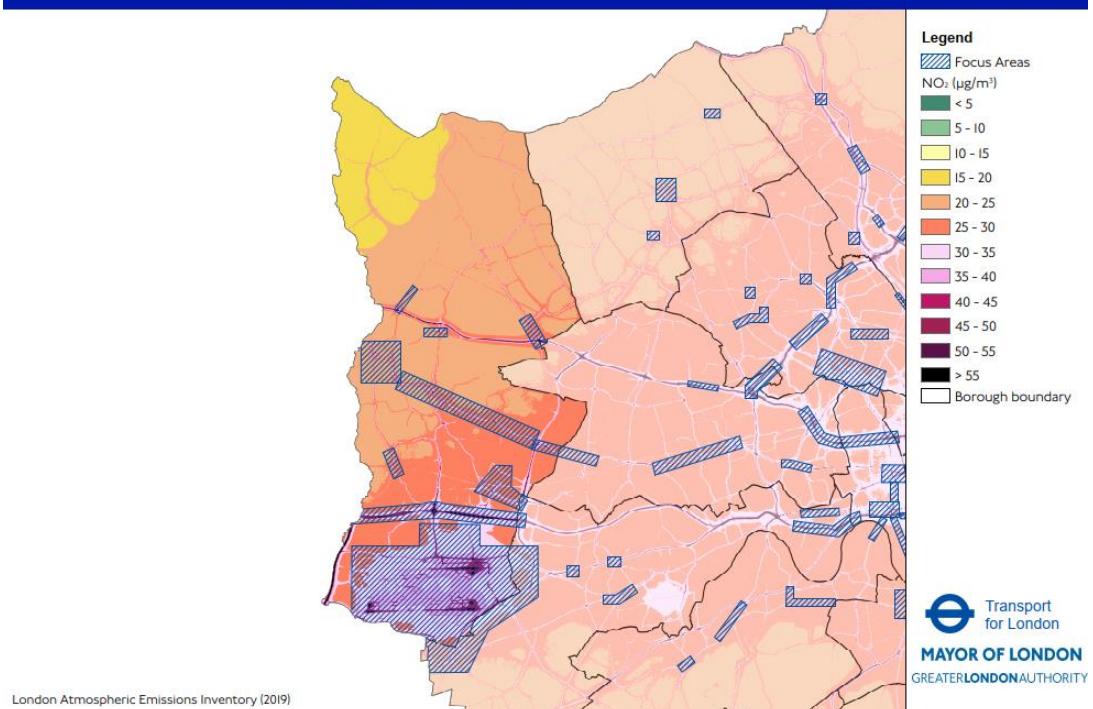
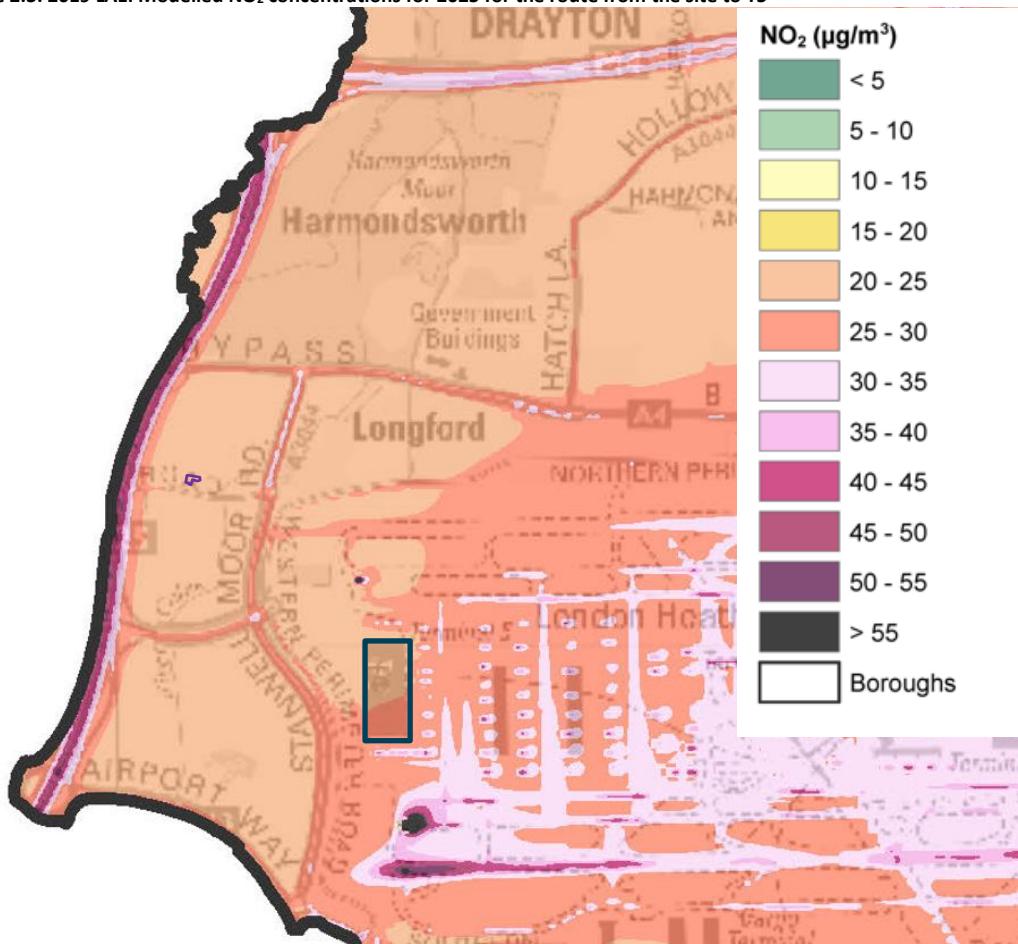


Figure 2.3. 2019 LAEI Modelled NO₂ concentrations for 2025 for the route from the site to T5



3 PROPOSED DEVELOPMENT

3.1 Proposed Development Site Current Use

The site is located at Parr's Yard, Old Bath Road, West Drayton, UB7 0EW. The site is bounded to the north, east and west by agricultural and associated land uses. To the south is a petrol metering station and the Old Bath Road with commercial uses, residential use at Moorbridge Bungalow, and the Colne Valley Biodiversity Site. Figure 3.1 shows the previous use for HGV trailer storage depot.

There are human health and dust soiling receptors around 35 m south of the site at Moorbridge Bungalow. The façade of the closest part of the dwelling is around 17 m from the kerb of the Old Bath Road. These are also the closest human health receptors to the route used by cars to and from the site and also the bus route to T5. There are no designated ecological sites nearby though there is the non-statutory Colne Valley Biodiversity Site. The LAE12019 2023 update projections for 2025 show the baseline NO₂ concentrations in the area to be below 25 µg/m³ and thus well within the national objective annual mean NO₂ concentration of 40 µg/m³. The closest NO₂ diffusion tube monitoring site is the HILL 12 site at Longford Close had annual mean NO₂ concentrations of 23 µg/m³ or below in 2020 and 2021.

Figure 3.1. Proposed development site



Key:

Proposed development site: 

3.2 Development Proposal

The proposed development aims to provide a high quality, bus-based, public transport route linking a park and ride site to Terminal 5. Use of the Site as a new multi-modal transport interchange, including park and ride, reflects a clear increase in demand for alternative options to access the Terminal. This is a demand driven proposal. The new car park is located off the M25 Junction 14. Two Euro VI Ultra Low Emission Zone ('ULEZ') compliant Optare MetroCity buses will provide express bus transfer every 10-15 minutes with a journey time to Terminal 5 of less than 5 minutes. The service is a timetable registered bus service registered with Transport for London and able to access Terminal 5 via the dedicated bus spur linking the Bath Road Stanwell Moor Road roundabout with Wright Way leading to Terminal 5.

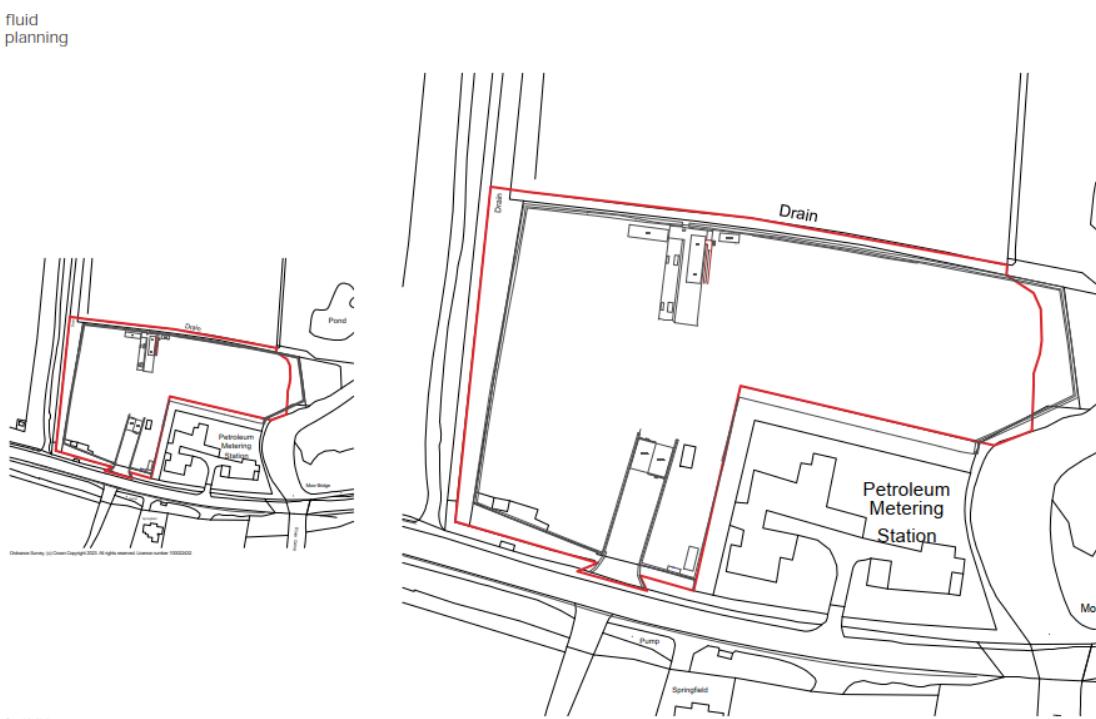
The Site allows for the parking of 200 cars on site in a managed block formation. On-site infrastructure includes entrance and exit camera tunnels with barrier controlled access, a bus shelter and two portacabin office units. The Proposal makes use of the existing hardstanding and on-site infrastructure, including the access, and so there is minimal earthworks or construction involved.

There are 200 parking spaces within the proposed development, and there is indicated to be 50 car movements to and from the site each day, giving an AADT of 100 LDV. The site runs 24 hours a day and there are 34 bus departures and 34 bus arrivals, giving a total of 68 Heavy Duty Vehicle (HDV) vehicle movements.

The emissions from Euro VI buses are less than those from a Euro 6 car. With the reduction of 100 car movements that would otherwise take place, and those movements being replaced by 68 buses, there would be a reduction in emissions and so the proposed development is demonstrated to improve air quality in the area. This is prior to the consideration that the HDV movements associated with the trailer storage and depot activities will no longer take place to and from the site, giving a further reduction in emissions in the area.

The car and vehicle flows use different routes, apart from Old Bath Road itself, and the use of the park and ride bus service is to reduce vehicle movements in the ULEZ and Heathrow AQFA. There are very few human-health receptors along the bus routes to and from T5 or also the car routes to and from the M25. Car movements on the northern part of the Stanwell Moor Road would take place with or without the proposed park and ride and traffic flows on the southern part of Stanwell Moor Road are reduced.

Figure 3.2. Proposed development site layout



Note: There are 200 parking spaces associated with the proposed development.

4 AIR QUALITY ASSESSMENT

4.1 Introduction

The impact of the development on the local area is considered, along with the impact of existing sources of pollution in the local area on the proposed development. The proposed development does not meet the criteria (within the Land-use Planning & Development Control: Planning for Air Quality¹⁵ guidance) for the need to assess the impact of the development on air quality in the local area for the change in traffic flows. The indicative screening criteria for further assessment of AADT of 100, or a change in HDV of 25 and where there is risk of a significant air quality effect, is not indicated to be met. With the use of the park and ride and reduction in traffic in the AQFA, other than on Old Bath Road, there is a beneficial air quality effect through reduction of emissions from vehicle movements, though the screening criteria for further assessment is not triggered. For the human health receptors at Moorbridge Bungalow, the risk of a significant effect is low as the proposal would not meet the criteria for a potential significant effect. Therefore, "Simple" assessment of the impact of the development on existing receptors is undertaken.

4.2 Methodology

The air quality assessment uses published pollutant concentrations that are supplied in the London Atmospheric Emissions Inventory 2019¹⁶ (2023 update) for the site of the proposed development.

These concentrations have been evaluated using the "Simple" assessment procedure in the "Planning for Air Quality" guidance using the modelled concentrations. The receptors considered are the human health receptors allow the transport routes to and from the proposed park and ride. The criteria in Table 4.1 have been used to describe the impact by the proposed development.

Table 4.1: Assessment Criteria Impact Descriptors for Individual Receptors

Annual mean pollutant concentration in assessment year	% Change in concentration relative to Air Quality Assessment Level (AQAL) – NO ₂ and PM ₁₀ annual mean			
	1	2-5	6-10	>10
75% or less of AQAL	Negligible	Negligible	Slight	Moderate
76-94% or less of AQAL	Negligible	Slight	Moderate	Moderate
95-102% or less of AQAL	Slight	Moderate	Moderate	Substantial
103-109 % or less of AQAL	Moderate	Moderate	Substantial	Substantial
110% or more of AQAL	Moderate	Substantial	Substantial	Substantial

Note: Where the predicted change is less than 0.5%, the impact descriptor is negligible.

4.3 Impacts

LAEI 2019 modelled annual mean NO₂ concentrations for 2025 are shown in Figure 2.3. The proposed development and the bus routes are in an area not in exceedance of the annual mean NO₂ objective of 40 µg/m³, with modelled 2025 annual mean NO₂ concentrations of under 25 µg/m³ at the proposed development site and under 30 µg/m³ at locations of human health receptors along the transport routes. The hourly mean NO₂ objective is unlikely to be exceeded where the annual mean NO₂ concentration is under 60 µg/m³.

The annual mean PM₁₀ concentrations and 24-hour mean PM₁₀ concentrations at the site of the proposed development and routes to be used are well within the PM₁₀ objectives. The park and ride is considered to result in a predicted change (beneficial) in NO₂ concentrations of less than 0.5% of the Air Quality Assessment

¹⁵ Institute of Air Quality Management. Land-Use Planning & Development Control: Planning for Air Quality. 2017.
¹⁶<https://data.london.gov.uk/dataset/london-atmospheric-emissions-inventory--laii--2019>. 2023/

Level for NO₂ and PM₁₀, in an area less than 75% of the NO₂ AQAL. Therefore, the impact of the proposed development is considered as **Negligible**.

4.4 Significance of Air Quality Impacts and Effects

The effect of the development on existing human health receptors such as at Moorbridge Bungalow is considered as **Not Significant** as the proposal does not exceed the criteria for concentrations which are not predicted to exceed the NO₂ or PM₁₀ objectives at human health receptors, and a reduction in emissions is anticipated as Euro VI buses have lower emissions than Euro 6 cars. The effect of the impact of the development on existing receptors is considered as **Negligible** as the proposed development does not have combustion plant, and transport emissions are below the IAQM indicative screening criteria for detailed assessment for significant effects.

4.5 Mitigation

The park and ride provides inbuilt mitigation through reducing the number of vehicle movements and the emissions from the vehicle movements in the Heathrow AQFA.

5 DUST RISK ASSESSMENT

5.1 Introduction

The purpose of this assessment is to identify the category of risk from dust emission associated with the demolition, earthworks, construction and track out phases, and to put in place a suitable management and mitigation strategy to ensure negative impacts and adverse effects are controlled and reduced.

This assessment follows the procedure in the GLA's Control of Dust and Emissions During Construction and Demolition SPG.

The works are assessed for four phases:

- demolition;
- earthworks;
- construction; and
- trackout.

The first step of the assessment is to conduct screening to establish if there is need to proceed to detailed assessment. A dust risk assessment usually proceeds to detailed assessment if there is a human receptor within 50 m of the boundary of the site or 50 m of the routes used by construction vehicles on the public highway, up to 500 m from the site entrances (for large sites).

The main steps are as follows:

- identify magnitude of dust emission for each of the phases of the worksite;
- identify the sensitivity of the receptors;
- identify the sensitivity of the area;
- determine potential risk category of each works phase; and
- outline how each risk will be mitigated.

There are human health and dust soiling receptors within 50 m of the site, and so the assessment proceeded to a detailed assessment and is described in the following sections.

5.2 Dust Emission Magnitude

Demolition

The demolition phase involves:

- No demolition works as no buildings;

The demolition phase dust emission magnitude is considered as **Not Applicable**, based on the aspects above and the IAQM and GLA dust risk guidance.

Earthworks

The earthworks phase involves:

- Very limited earthworks as existing hard standing used;

The earthworks phase dust emission magnitude is considered as **Not applicable** for the proposed development.

Construction

The construction phase involves:

- potentially dusty construction material (concrete); and
- use of portacabin style buildings.

The construction phase dust emission magnitude is considered as **Small** for the proposed development.

Trackout

The trackout phase involves:

- use of existing road hard standings;
- unpaved haul road less than 50 m; and
- <10 HDV movements per day.

The Trackout phase dust emission magnitude is considered as **Small**.

The dust emission magnitude is summarised in Table 5.1.

Table 5.1: Dust Emission Magnitude

Phase	Dust emission magnitude
Demolition	Not applicable
Earthworks	Not applicable
Construction	Small
Trackout	Small

5.3 Sensitivity of the Area

The next step of the assessment is to define the sensitivity of the area. The sensitivity of the area takes into account a number of factors, including:

- specific sensitivities of receptors in the area;
- the proximity and number of receptors;
- background PM₁₀ concentrations; and
- site specific factors such as topography.

The sensitivity is defined for:

- dust soiling effects;
- human health effects of PM₁₀; and
- ecological effects.

High sensitivity receptors for dust soiling in the vicinity of the site include dwellings. Medium sensitivity receptors for dust soiling include places of work and retail areas. The closest high sensitivity receptors would be residential areas within 20 m of the site.

Ecological effects are not considered further in this assessment as there are no designated dust sensitive ecological receptors within 50 m of the site boundary, or construction route or within 50 m of the site entrance.

For dust soiling effects there are 1-10 High sensitivity receptors within 50 m of the site boundary and so the sensitivity of the area is defined as **Low** for dust soiling effects. For trackout, as there are 1-10 High sensitivity receptors within 50 m of construction routes within 50 m of the site access, the sensitivity of the area is **Low** for dust soiling effects for trackout also.

For human health effects, the baseline annual mean PM_{10} concentration needs to be considered. The baseline conditions are described in Section 4.3. For the purpose of the dust risk assessment, background PM_{10} concentrations have been assumed as being below $24 \mu\text{g}/\text{m}^3$, based on the modelled annual mean PM_{10} concentrations from the LAEI 2019. With the background annual mean PM_{10} concentration of below $24 \mu\text{g}/\text{m}^3$ and 1-10 high sensitivity receptors within 50 m for demolition, earthworks and construction, the sensitivity of the area is considered as **Low** for human health effects. For trackout, as there are 1-10 High sensitivity receptors within 50 m of construction routes within 50 m of the site access, the sensitivity of the area is **Low** for trackout human health effects.

The sensitivity of the area is summarised below in Table 5.2.

Table 5.2: Sensitivity of the Area

Receptor sensitivity	Sensitivity of the surrounding area			
	Demolition	Earthworks	Construction	Trackout
Dust soiling	Low	Low	Low	Low
Human health	Low	Low	Low	Low

5.4 Risk of Impacts

When the dust emission magnitude is combined with the sensitivity of the area, the risk of impacts with no mitigation applied can be determined. The summary of the dust risk assessment is presented below in Table 5.3. In summary, the site is considered as Negligible Risk for human health effects or dust soiling effects. The dust risk is used to define the amount of site-specific mitigation that is required. As the site is Negligible risk no specific measures beyond good practice are required.

Table 5.3: Dust Risk Summary

Summary	Demolition	Earthworks	Construction	Trackout
Dust soiling	Not Applicable	Not Applicable	Negligible risk	Negligible risk
Human health	Not Applicable	Not Applicable	Negligible risk	Negligible risk

6 AIR QUALITY NEUTRAL AND POSITIVE ASSESSMENT

6.1 Introduction

The purpose of the air quality neutral and air quality positive assessment is to demonstrate that the proposed development is compliant with the air quality neutral policy of not exceeding the transport and building emissions minimum benchmarks and meets the aims of the air quality positive policy of improving air quality. The air quality neutral policy benchmarks are provided in the Air Quality Neutral Guidance¹⁷. The air quality positive guidance is provided in the Air Quality Positive Guidance¹⁸.

Air quality neutral and positive policy requirements are presented in Section 2.2.2 of this report.

6.2 Transport Emissions Assessment

Park and ride is a Sui Generis use and as such there are no benchmarks to assess to.

6.3 Buildings Emissions Assessment

There are no on-site building emissions to assess and so the development can be considered as air quality neutral.

6.4 Air Quality Neutral and Positive Matrix

A summary of the Air Quality Neutral and Positive measures is presented in Table 6.1.

Table 6.1: Air Quality Neutral and Positive Measures of the Proposed Development

Measure	Summary of measure	Reason for measure	Expected benefits	Qualitative Assessment	Quantitative Assessment	Measure secured through:
Euro VI buses to reduce vehicle movements and emissions.	Sustainable transport	Minimise traffic emissions	Use of sustainable modes of transport and health benefit	Y - Air Quality Positive	N	Consent of the development
No combustion plant	No emissions from combustion plant	To minimise emissions	No on site building emissions	Y – Air Quality Neutral	N	Secured through approved plans

¹⁷ Greater London Authority. London Plan Air Quality Neutral Guidance. 2023.

¹⁸ Greater London Authority. London Plan Air Quality Positive Guidance. 2023.

7 CONCLUSIONS

Anderson Acoustics Ltd was commissioned by Maple Parking to undertake an air quality assessment, dust risk assessment, air quality neutral and air quality positive assessment for the proposed park and ride development to reduce emissions in the ULEZ and Heathrow AQFA. The impact of the development on existing receptors is considered **Negligible** and the effect is **Not Significant**. The proposed park and ride gives a reduction in emissions as the emissions from vehicle movements is reduced.

The 2019 LAEI modelled annual mean NO₂ and PM₁₀ for 2025 for the site indicate that concentrations at the site of the development are within the annual mean objectives, with annual mean NO₂ concentrations being below 25 µg/m³ and with less than 30 µg/m³ at residential receptors in proximity to roads used by the development transport. The annual mean PM₁₀ concentrations are well within the air quality objectives at the site and transport routes.

The annual and hourly mean NO₂ objectives, and the 24-hr mean and annual mean PM₁₀ objectives are unlikely to be exceeded at the proposed development site and at residential receptors in proximity to the transport routes used.

The effect of the introduction of the park and ride is considered as **Not Significant** and the site is considered suitable for its use.

The dust risk assessment shows the site to be **Negligible Risk** for dust soiling and human health effects. The effect of dust from the works is considered as "**Not Significant**"

The air quality neutral and positive assessment shows the development is considered as '**air quality neutral**' and '**air quality positive**'. There are no on-site building emissions, and the scheme is designed to reduce emissions in the Heathrow AQFA and ULEZ.

Accordingly, the proposed development is considered a suitable use and compliant with relevant air quality policy.