Novotel, 234 Bath Road, Heathrow, UB3 5AP

Air Quality Assessment

On Behalf of Nine Group
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1 Introduction

Background

1.1 This Air Quality Assessment has been prepared by Greenavon Ltd in support of a full planning application (41331/APP/2025/3250), to the London Borough of Hillingdon (LBH), for a proposed hotel development at Novotel, 234 Bath Road, Heathrow, UB3 5AP (the Site). A Site Location Plan is included in Figure 1.1, below.

1.2 The planning application seeks permission for the *"erection of a new 4 storey hotel extension building with accommodation at roof and basement levels to provide 128 rooms with covered link bridge to existing hotel building associated with ancillary works"*

1.3 It seeks to regularise changes to the commenced planning permission (41331/APP/2016/1035) for a 108-room hotel. The main changes sought, which will occur within the consented building envelope, are:

- An increase in the number and layout of the rooms within the extension,
- An increase to the size of the basement level.
- Use of the roof level and installation of dormers to increase the total number of rooms.
- The reduction in car parking provision from 70 spaces to 63 (removal of 14 spaces, and provision of 7 disabled bays). An increase in coach parking from 2 to 4 spaces. The provision of 14 motorcycle parking spaces.

Site Context

1.4 The Site is in an area of mixed land-use with commercial and residential uses in proximity. Heathrow Airport, a major local emission source, is located at its closest circa 200m to the South of the Site. Bath Road (the A4) also presents another, more local source of emissions.

1.5 The Site is also located within the LBH's Air Quality Management Area (AQMA), i.e. an area of known poor air quality, which is declared for elevated concentrations of nitrogen dioxide (NO_2), released primarily from road transport.

Scope

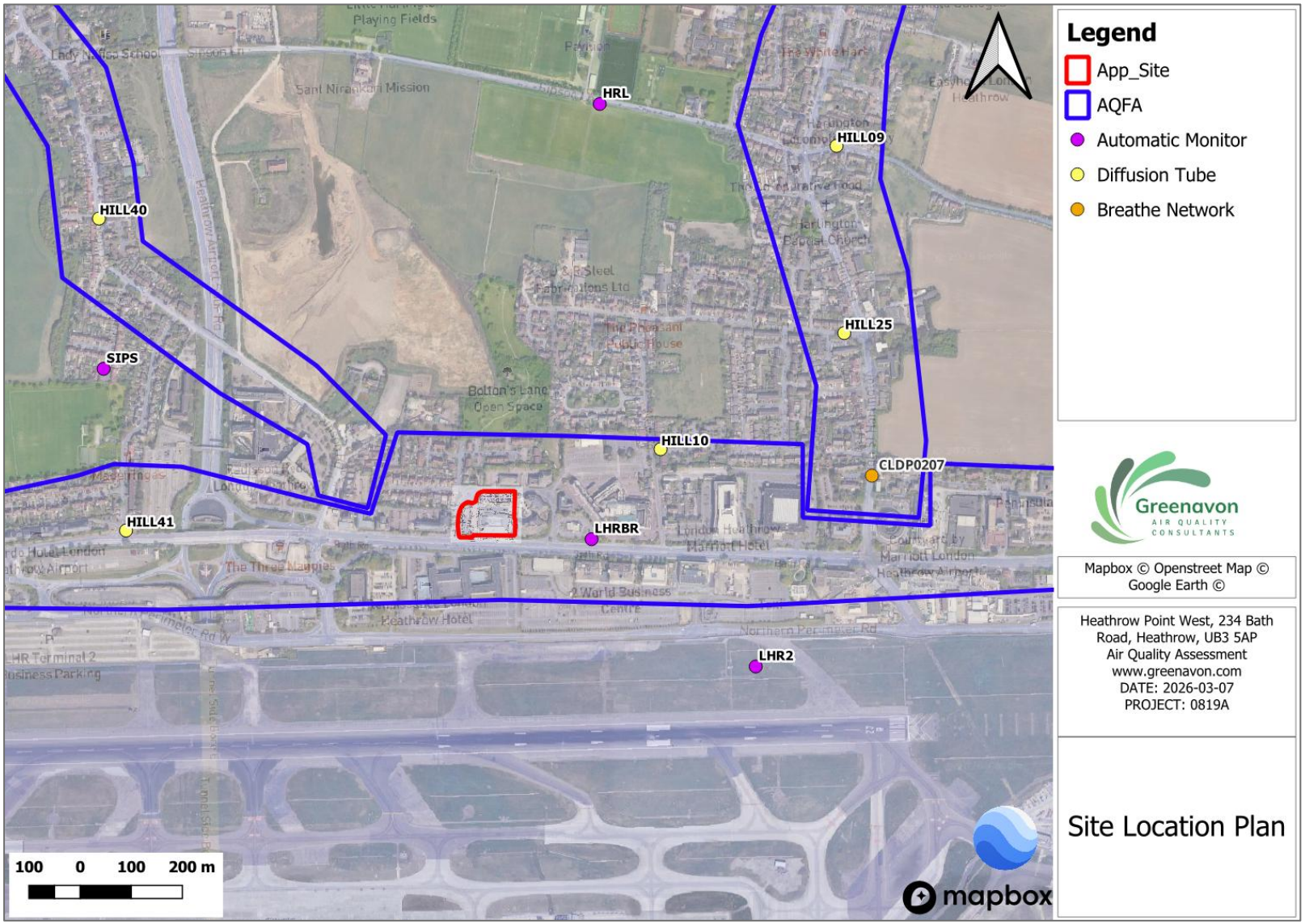
1.6 This Air Quality Assessment evaluates whether the proposed development could, during operation:

- expose future users to unacceptable air quality;
- contribute to significant increased pollution off-site; and
- meet Air Quality Neutral benchmarks.

1.7 The assessment has been prepared in accordance with best practice guidance from the Department for Environment Food and Rural Affairs (Defra), Environmental Protection UK (EPUK) & the Institute of Air Quality Management (IAQM), evaluating compliance with relevant local and national policies and regulations.

1.8 As the proposed development retains the consented building envelope (41331/APP/2016/1035), it is assumed that no update to the adopted CMP would be required. As such, this assessment focuses on operational impacts.

Figure 1:1: Site Location Plan



2 Policy Context

Air Quality Standards Regulations

2.1 The Air Quality Standards (AQS) Regulations 2010[1] and subsequent amendments, regulate the concentrations of major pollutants in outdoor air in the UK, including particulate matter (PM_{10} & $PM_{2.5}$), nitrogen dioxide (NO_2), sulphur dioxide (SO_2), ozone (O_3), carbon monoxide (CO) and lead (Pb). These regulations seek to minimise the public's exposure to air pollution by requiring ambient concentrations to be within legally binding limit values, as well as target values.

2.2 The AQSs of relevance to this assessment are summarised in Table 2.1 below.

Table 2.1: Air Quality Standards for England

Pollutant	Averaging Period	Objective ($\mu g/m^3$)	Date to be achieved by
Nitrogen dioxide (NO_2)	1-hour mean not to be exceeded more than 18 times per year.	200	31 December 2005
	Annual mean	40	31 December 2005
Particulate Matter (PM_{10})	24-Hour Mean not to be exceeded more than 35 times per year	50	31 December 2004
	Annual mean	40	31 December 2004
Particulate Matter ($PM_{2.5}$)	Annual mean	20	1 January 2020

Air Quality Strategy and Environment Improvement Plan

2.3 The Environment Act 1995 requires the Government and devolved administrations to produce a National Air Quality Strategy (NAQS) for the UK. This strategy sets out the framework for improving ambient air quality across the UK. The last major update was published in 2007, with further updates issued in 2011.

2.4 Under the Environment Act 2021[2], the Secretary of State is required to review the NAQS every five years. The first review under the 2021 Act was completed in 2023, and accompanying secondary legislation introduced new statutory air quality targets

[1] Air Quality Standards Regulations 2010 (as amended), S.I. 2010/1001
[2] *Environment* Act 2021 SI No. 1274 (C. 72).

for $PM_{2.5}$ in England. The long-term statutory target is that the annual mean concentration of $PM_{2.5}$ must not exceed 10 µg/m³ by 2040. The *Environment Improvement Plan for England*[3] also sets an ambition to achieve 10 µg/m³ at as many monitoring locations as possible by 2030; however, this is a policy target and not a legal requirement,

2.5 The national government is responsible for meeting the statutory $PM_{2.5}$ targets, which aim to improve air quality and protect public health. These targets emphasise driving sustained reductions in $PM_{2.5}$ concentrations, rather than establishing limit values to be applied on a site-specific basis.

2.6 According to Interim Defra guidance[4], these targets are not intended to be applied in the same way as air quality limit values within the planning process. The updated approach shifts away from solely assessing whether a development may exceed a legal threshold (i.e. a limit value). Instead, it emphasises that, wherever reasonably practicable, mitigation measures should be incorporated into design to minimise emissions of, and exposure to, $PM_{2.5}$.

Local Air Quality Management Regime

2.7 Part IV of the Environment Act 1995 and Part II of the Environment (Northern Ireland) Order 2002 sets out that it is the responsibility of every local authority to review air quality within its area and designate AQMAs where air quality limit values are not being achieved. An Air Quality Action Plan (AQAP) setting out the measures to reduce pollution in that area must then be put in place.

2.8 The LBH has adopted an AQAP[5] which includes several measures outlining how emissions from development will be minimised. Of particular relevance, Action 5 seeks to enforce Air Quality Neutral requirements, stating that *"in AQ focus areas NOx damage calculation costs are requested to form the basis of planning obligation for costs where the developer mitigation is insufficient".* The Borough has also designated a series of supplementary Air Quality Focus Areas (AQFAs), in addition to those identified by the

[3] Department for Environment, Food & Rural Affairs (2025). Environmental Improvement Plan 2025. Available at: GOV.UK (Accessed: 06 December 2025).
[4] Department for Environment, Food & Rural Affairs (DEFRA), 2025. $PM_{2.5}$ Targets and Planning. Available at: https://uk-air.defra.gov.uk/pm25targets/planning [Accessed 2 May 2025].
[5] LBH (2019) Air Quality Action Plan 2019-2024: Available at: https://modgov.hillingdon.gov.uk/documents/s45069/Air%20Quality%20Action%20Plan%202019-2024.pdf [Accessed 07/03/2026]

Greater London Authority, reflecting localised areas of elevated pollution and high human exposure.

National Planning Policy Framework

2.9 The revised National Planning Policy Framework (NPPF)[6], updated in December 2024, sets out the Government's planning policies for England and how these are expected to be applied. A key aim of the NPPF is to promote sustainable development and regarding conserving the natural environment, paragraph 187 states:

> *"Planning policies and decisions should contribute to and enhance the natural and local environment by: […]*
>
> *e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans".*

2.10 Paragraph 199 relates to compliance with legal limit values and how planning decisions should be consistent with local air quality policy and action plans. It 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".*

[6] Ministry of Housing, Communities & Local Government (2024) National Planning Policy Framework

2.11 Paragraph 198 relates to the appropriate siting of development and the assessment of cumulative effects, it states:

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

2.12 Whilst principally relating to sustainable transport, Paragraph 110 is indirectly related to air quality and states:

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

London Plan

2.13 The London Plan[7] is the overarching spatial development strategy for Greater London. It contains several policies of relevance to air quality, including Policy SI 1 Improving Air Quality, which states:

> *"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*

[7] Greater London Authority (2021) The London Plan: https://www.london.gov.uk/programmes-strategies/planning/london-plan

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

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. [….]

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."

Local Planning Policy

2.14 The Development Plan for Hillingdon forms the statutory basis for planning decisions. It consists of Hillingdon's *Local Plan: Part 1 – Strategic Policies*[8] (previously known as the Core Strategy) that was adopted on 8th November 2012. The Local Plan: Part 1 contains policy of relevance to air quality, including:

> *"Policy EM8: Land, Water, Air and Noise*
>
> *All development should not cause deterioration in the local air quality levels and should ensure the protection of both existing and new sensitive receptors.*
>
> *All major development within the Air Quality Management Area (AQMA) should demonstrate air quality neutrality (no worsening of impacts) where appropriate; actively contribute to the promotion of sustainable transport measures such as vehicle charging points and the increased provision for vehicles with cleaner transport fuels; deliver increased planting through soft landscaping and living walls and roofs; and provide a management plan for ensuring air quality impacts can be kept to a minimum.*
>
> *The Council seeks to reduce the levels of pollutants referred to in the Government's National Air Quality Strategy and will have regard to the Mayor's Air Quality Strategy. London Boroughs should also take account of the findings of the Air Quality Review and assessments and Actions plans, in particular where Air Quality Management Areas have been designated.*
>
> *The Council has a network of Air Quality Monitoring stations but recognises that this can be widened to improve understanding of air quality impacts. The Council may therefore require new major development in an AQMA to fund additional air quality monitoring stations to assist in managing air quality improvements."*

2.15 The Local Plan Part 2 comprises *Development Management Policies, Site Allocations and Designations and the Policies Map*[9]. The Local Plan: Part 2 contains policies of relevance to air quality, including:

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[8] LBH (2012) Local Plan: Part 1 Strategic Policies: https://modgov.hillingdon.gov.uk/documents/s14281/121108%20-%2007%20-%20local%20plan%20document.pdf

[9] LBH (2020) *Local Plan Part 2 comprises Development Management Policies, Site Allocations and Designations and the Policies Map*

"Policy DMEI 1: Living Walls and Roofs and on-site Vegetation

All development proposals are required to comply with the following:

i) All major development should incorporate living roofs and/or walls into the development. Suitable justification should be provided where living walls and roofs cannot be provided; and

ii) Major development in Air Quality Management Areas must provide onsite provision of living roofs and/or walls. A suitable offsite contribution may be required where onsite provision is not appropriate."

and

"Policy DMEI 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."

Air Quality Guidance

2.16 This assessment has been undertaken with reference to the following regional and national guidance:

- Defra (2022), *Local Air Quality Management Technical Guidance* (LAQM.TG (22))[10];

[10] Defra. 2022. Part IV of the Environment Act 1995, Environment (Northern Ireland) Order 2002 Part III, Local Air Quality Management, Technical Guidance LAQM. TG(22).

- Institute of Air Quality Management (IAQM) and Environmental Protection UK (2017), *Land-Use Planning and Development Control: Planning for Air Quality*[11];
- IAQM (2021), *A guide to the assessment of air quality impacts on designated nature conservation sites*[12]; and
- Greater London Authority (2023) (GLA) *Air Quality Neutral Guidance*[13].

[11] EPUK & IAQM. (2017). *Land-Use Planning & Development Control: Planning for Air Quality.*
[12] EPUK & IAQM. (2020). *A guide to the assessment of air quality impacts on designated nature conservation sites.*
[13]Greater London Authority (2023) *Air Quality Neutral Guidance*
https://www.london.gov.uk/sites/default/files/2023-02/Air%20Quality%20Neutral%20LPG.pdf

3 Methodology

Baseline Conditions

3.1 The purpose of a baseline assessment is to gather information on existing air quality to better understand how air quality might constrain, or be impacted by, a proposal.

3.2 A review of baseline conditions has been undertaken using data provided by DEFRA's UK AIR information resource[14], annual status reports from the LBH[15] and the London Atmospheric Emissions Inventory (LAEI)[16].

3.3 DEFRA's Pollutant Release and Transfer Register[17] was also reviewed to identify any major industrial or waste management sources in the vicinity.

Operational Phase Assessment

Screening Assessment

3.4 Minor developments, on their own, are highly unlikely to cause significant increases in local air pollution concentrations. EPUK & IAQM guidance, therefore, advocates a two-stage screening approach. EPUK & IAQM guidance states that the impact of a proposal on air quality cannot be screened out, based on size alone, if there are:

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

3.5 Coupled with any of the following:

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

3.6 At the second screening stage, EPUK & IAQM guidance provides indicative criteria which can be used to screen out the potential for significant impacts caused by a proposed development. As a major development with over 10 car parking spaces, the proposed development has been evaluated against these second stage criteria.

[14] Defra (2024) Background Mapping data for local authorities – 2021 [Accessed online: https://uk-air.defra.gov.uk/data/laqm-background-maps?year=2021]
[15] LBH (2025) *London Borough of Hillingdon Air Quality Annual Status Report for 2024*
[16] LAEI (2025) London Atmospheric Emissions Inventory LAEI 2022 [accessed online: https://data.london.gov.uk/dataset/london-atmospheric-emissions-inventory-laei-2022-2lg5g/]
[17] Defra. *UK Pollutant Release and Transfer Register (PRTR) data sets*. [Accessed online: https://prtr.defra.gov.uk/pollutant-releases]

Ecological Receptors

3.7 The IAQM advises that, where traffic increases by fewer than 1,000 light-duty vehicles (LDVs) or 200 heavy-duty vehicles (HDVs) per day on roads within 200m of a designated ecological site, the change may, when considered in isolation, be regarded as having an insignificant effect on air quality.

3.8 The proposed development is not located in relevant proximity to any statutory designated conservation site, nor will it result in an increase of more than 1,000 LDVs or 200 HDVs per day on any road. Accordingly, its impact on sensitive designated sites can be screened out.

Sensitivity of Site / Compliance Assessment

3.9 The proposed development comprises hotel use only. Members of the public would not reasonably be expected to spend periods of time there approaching the annual objective, nor other longer-term standards. As such, the following AQSs for NO_2, PM_{10} and $PM_{2.5}$ are judged to apply at the proposal:

- 1-hour mean AQO for NO_2
- 24-hour mean AQO for PM_{10}

3.10 LAQM.TG (22) suggests that where annual mean concentrations of NO_2 and PM_{10} are less than 60 µg/m^3 and 31.9 µg/m^3, respectively, that exceedances of either the 1-hour mean AQS for NO_2 or the 24-hour mean AQS for PM_{10} are unlikely.

3.11 LAQM.TG (22) and AEA[18] guidance provides details on how pollution concentrations fall with increasing distance from sources. These criteria, in combination with the results of the baseline assessment have been used to determine whether an exceedance of any UK AQS is likely across any part of the Site and whether detailed modelling would be required.

Air Quality Neutral Assessment

3.12 All developments, unless specifically excluded, are required to undertake an Air Quality Neutral Assessment. A development that does not include additional emissions sources can be excluded from an Air Quality Neutral Assessment. This would, for example, include developments that have:

[18] AEA Energy & Environment (2008) Diffusion Tubes for Ambient NO2 Monitoring: Practical Guidance:
https://laqm.defra.gov.uk/documents/0802141004_NO2_WG_PracticalGuidance_Issue1a.pdf

- No additional motor vehicle parking,
- do not lead to an increase in motor vehicle movements; and
- do not include new combustion plant such as gas-fired boilers

3.13 Whilst there is a reduction in car parking spaces, there is an increase in coach and motorcycle spaces, and the proposed hotel will incorporate low Nox boilers. Furthermore, the increase in beds may increase motor vehicle movements. As such, an Air Quality Neutral Assessment is required.

3.14 An Air Quality Neutral Assessment compares a proposed development against benchmarks for transport and building emissions. These benchmarks set out the maximum allowable emissions of NO_X and PM based on the size and use class of the proposed development. A development must be Air Quality Neutral for both transport and building emissions.

3.15 Air Quality Neutral Assessments only apply to emissions directly associated with development users (e.g. staff and hotel guests)—they do not consider emissions associated with operation (e.g. deliveries and taxis).

4 Baseline Conditions

4.1 A baseline assessment has been undertaken to provide a summary of the existing air quality environment in the local area.

Local Air Quality Management

4.2 The LBH has declared an AQMA, which covers the area from the southern boundary north to the border defined by, the A40 corridor from the western borough boundary, east to the intersection with the Yeading Brook north until its intersection with the Chiltern-Marylebone railway line, for exceedances of the annual mean AQS for NO_2. The proposed development is located within this AQMA.

Air Quality Focus Area

4.3 An Air Quality Focus Area (AQFA) is an area of known poor air quality and high human exposure. The proposed development is located within the LBH's A4 Corridor Focus Area.

Industrial Sources

4.4 A review of the UK Pollutant Release and Transfer Register could not identify any industrial sources that would have the potential to significantly impact air quality in the vicinity of the proposed development. The nearest facilities on the register--the *Heathrow Boilers, Building 448 - EPR/BQ3789IK and the Airside Waste Sweepings Transfer & Treatment Facility EPR/DP3035AY*—are located over 1 km from the Site.

DEFRA / UK-AIR

4.5 DEFRA provides predictions of annual mean concentrations of background NO_2, PM_{10} and $PM_{2.5}$, at 1km^2 resolution across the UK. A summary of the highest predictions for the grid squares containing the Site (508500,177500 and 508500,176500) for the years 2021-2028 are set out in Table 4.1 below.

Table 4:1: UK-AIR predicted background concentrations for the Site

Pollutant	Annual Mean Concentration (µg/m^3)							
	2021	2022	2023	2024	2025	2026	2027	2028
NO_2	25.0	26.2	27.4	28.3	29.1	28.9	28.7	28.5
NO_X	37.8	40.4	42.9	44.8	46.7	46.2	45.7	45.4

PM_{10}	13.7	13.6	13.5	13.5	13.4	13.3	13.2	13.2
$PM_{2.5}$	8.3	8.2	8.1	8.0	7.9	7.9	7.8	7.7

4.6 The data in Table 4.1 show that background annual mean concentrations of NO_2, PM_{10} and $PM_{2.5}$ are predicted to be below their respective AQSs across the Site, between 2021 and 2028.

4.7 Predicted background concentrations of NO_2, PM_{10} and $PM_{2.5}$ are predicted to fall between 2021 and 2028. This is likely due to the gradual improvement of the UK fleet with vehicles with cleaner engines, the Ultra-Low Emission Zone (ULEZ) and other local, regional, and national policy to reduce emissions across all sectors.

Source Apportionment

4.8 The predicted breakdown in background concentrations of NO_X, PM_{10} and $PM_{2.5}$ at the grid square containing the Site are displayed, respectively, in Figures 4.1-4.3.

Figure 4.1: NOx Source Apportionment

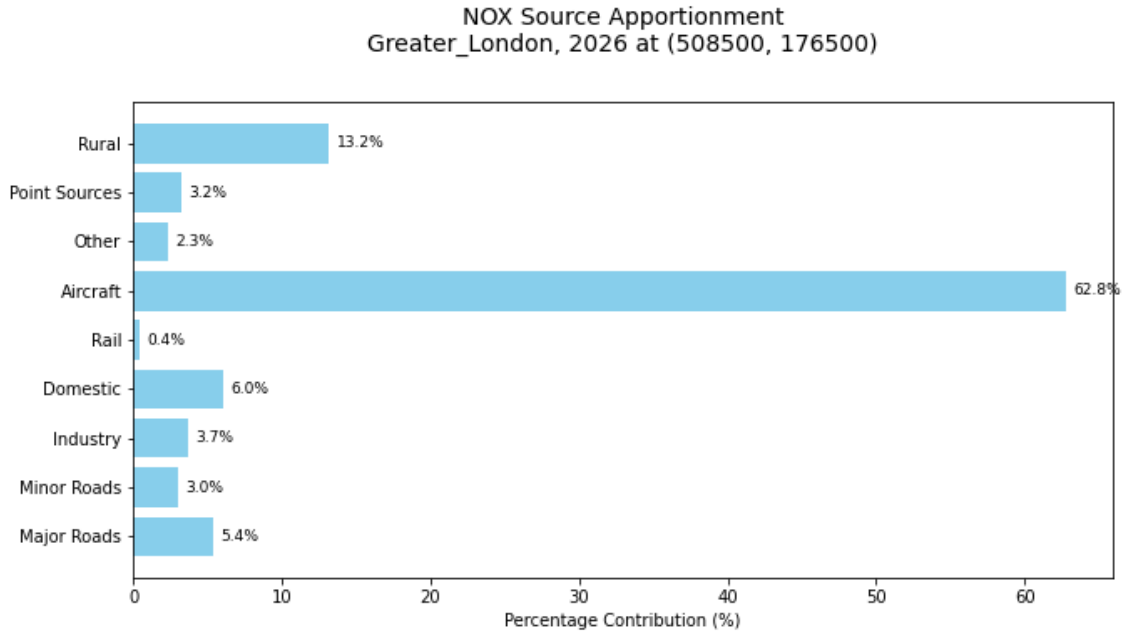


Figure 4.2: PM_{10} Source Apportionment

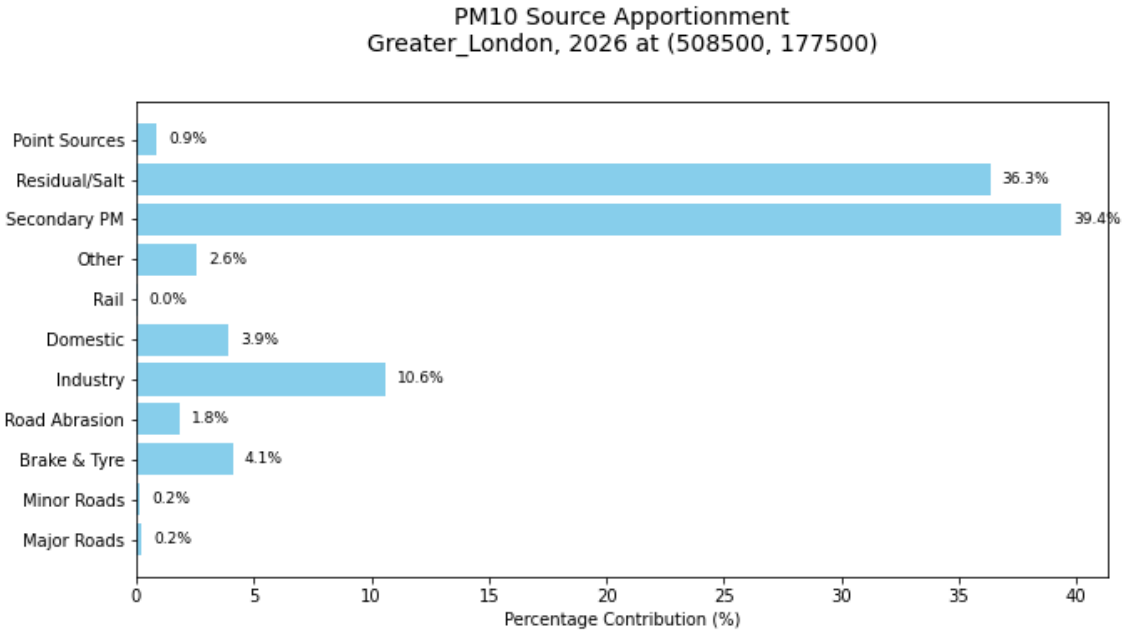
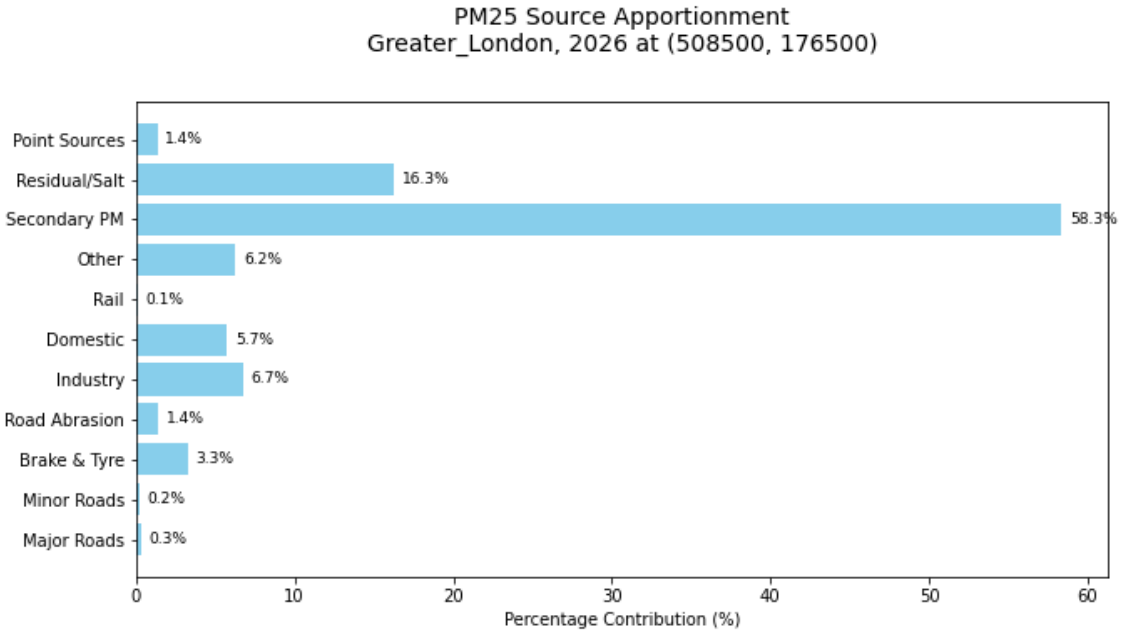


Figure 4.3: $PM_{2.5}$ Source Apportionment



4.9 Figure 4.1 shows that for background NOx—a precursor for NO_2—that Heathrow Airport makes up the largest contributing source to background concentrations. The rural background makes up the next most significant contributor.

4.10 Figure 4.2 shows that for background PM_{10}, regional primary emissions and secondary formation make up the most significant contributions.

4.11 Figure 4.3 shows that for background $PM_{2.5}$, secondary particulate matter (PM) makes up the most significant contributing source. Secondary PM forms in the atmosphere from local and regional emissions (for example, nitrates from road traffic and ammonia from agriculture), as well as from transboundary pollution.

London Atmospheric Emissions Inventory

4.12 The London Atmospheric Emissions Inventory (LAEI) contains predictions for NO_2, PM_{10} and $PM_{2.5}$ across London, for the year 2022. The predictions for annual mean NO_2, PM_{10} and $PM_{2.5}$, and the number of exceedances of the 24-hour mean PM_{10} objective, for one of the grid squares on the proposed extension's southern boundary (508080, 177020) are provided in Table 4.2 below.

Table 4:2: LAEI concentrations and 24-hour mean exceedances.

Pollutant	Annual Mean Concentration (µg/m^3)	Number of Exceedances
NO_2	27.7	-
PM_{10}	13.9	-
$PM_{2.5}$	8.8	-
PM_{10} (daily)	-	2.4

4.13 Annual mean concentrations of NO_2, PM_{10} and $PM_{2.5}$ were predicted to be below their relevant AQS at the Site, in 2022. Furthermore, the predicted number of daily exceedances of the 24-hour mean standard of 50 µg/m^3 at the Site was 2.4, which is below the objective by 32.6 days.

Local Authority LAQM Monitoring

4.14 Table 4.3 below summarises the most recently published LBH monitoring data within 2.0 km of the Site.

Table 4:3: Measured Concentrations of NO_2, PM_{10} and $PM_{2.5}$

Site ID	Site Type	Distance To Site (m)	Distance to Kerb (m)	Annual Mean Concentration (µg/m³) / Number of Exceedances					
				2019	2020	2021	2022	2023	2024
NO_2 (Annual Mean Concentration)									
LHRBR	Roadside	150	6	-	**44.5**	34	36	36	32
HILL10	Roadside	296	1	39.7	25.2	26.4	28.3	31.5	26.0
LHR2	Airport	536	N/A	**42**	25	25	30	32	29
HILL41	Roadside	649	0.7	**48.7**	31.8	32.9	**40.1**	38.6	32.0
HILL25	Background	714	33	38.7	28.3	28.5	32.8	30.2	25.7
SIPS	Urban Background	749	2.5	30	19	19	24	23	22
HRL	Airport	775	3	31	20	20	24	22	19
HILL40	Roadside	905	1.8	35.5	23.6	23.4	26.6	27.8	24.1
HILL09	Roadside	923	1	36.4	23.8	24.5	28.8	26.7	23.5
HILL38	Roadside	1396	1.2	**44.0**	33.0	28.9	35.6	34.4	29.1
HI3	Roadside	1427	33	33	22	25	29	27	27
HIL	Urban Background	1918	2.5	**45**	28	25	28	25	23
HILL26	Roadside	1907	27	**40.0**	28.2	26.8	29.2	27.7	23.1
HILL01	Roadside	1940	30	38.6	25.6	25.7	29.4	27.5	24.0
NO_2 (Number of Exceedances of 200 µg/m³)									
LHRBR	Roadside	150	6	-	-	0	0	0	0
LHR2	Airport	536	N/A	1	0	0	0	0	0
SIPS	Urban Background	749	2.5	0	0	0	0	0	0
HRL	Airport	775	3	0	0	0	0	0	0
HI3	Roadside	1427	33	0	0	0	0	2	0
HIL	Urban Background	1918	2.5	0	0	0	0	0	0
PM_{10} (Annual Mean Concentration)									
LHRBR	Roadside	150	6	-	-	14	14	16	13
LHR2	Airport	536	N/A	14	13	11	11	13	11
HRL	Airport	775	3	15	14	13	13	12	11
HI3	Roadside	1427	33	24	23	20	20	22	18
HIL	Urban Background	1918	2.5	-	-	-	-	14	13
PM_{10}(Number of 24-hour mean exceedances of 50 µg/m³)									
LHRBR	Roadside	150	6	-	0	0	4	1	0
LHR2	Airport	536	N/A	6	0	0	2	1	0
HRL	Airport	775	3	6	1	0	2	0	0
HI3	Roadside	1427	33	4	6	0	1	4	3
HIL	Urban Background	1918	2.5	-	-	-	0	3	0
$PM_{2.5}$ (Annual Mean Concentration)									
LHRBR	Roadside	150	6	-	-	11	8	9	8

LHR2	Airport	536	N/A	8	9	7	7	8	7
HRL	Airport	775	3	9	10	8	8	8	7
HIL	Urban Background	1918	2.5	-	-	-	-	7	7
Bold denotes exceedance of annual mean AQS/ AQO. **Bold and underlined** denotes exceedance of potential short-term AQS for NO_2 or PM_{10}									

4.15 Measured annual mean concentrations of NO_2 at monitoring locations within approximately 2 km of the Site show a clear overall reduction between 2019 and 2024. Although some roadside monitors exhibit year-to-year variability, the general trend across the dataset is downward.

4.16 The highest annual mean NO_2 concentration within 2 km of the Site was recorded at roadside monitor HILL41 in 2019, where a value of 48.7 µg/m³ was measured. This monitor is located just 0.7 m from the kerb of the A4 Bath Road and is strongly influenced by emissions from it. Concentrations at this location have since declined substantially, falling to 32.0 µg/m³ in 2024.

4.17 Short-term NO_2 concentrations remained well within the 1-hour mean AQS at all nearby monitoring locations. No exceedances of the 200 µg/m³ objective were recorded in 2024, and a maximum of two exceedances at any location were recorded between 2019 and 2024.

4.18 The closest NO_2 monitor to the Site is LHRBR, located approximately 150 m away. Annual mean concentrations at this location have decreased from 44.5 µg/m³ in 2020 to 32 µg/m³ in 2024. Conditions at this monitor likely represent an upper limit to measured concentrations at the Proposal, as the monitor is located 6m from Bath Road, whilst the proposed development is located approximately 75m to the north of Bath Road.

4.19 Annual mean PM_{10} concentrations at the nearest monitors (LHRBR, LHR2 and HRL) remained well below the relevant AQS throughout the monitoring period. Values ranged from 11–24 µg/m³ between 2019 and 2024. The number of 24-hour exceedances of the PM_{10} objective also remained within the permitted limit at all sites, with exceedances generally decreasing over time.

4.20 $PM_{2.5}$ concentrations at the nearby monitors remained consistently below the annual mean AQS across all years with available data. Concentrations in 2024 ranged from 7–8 µg/m³, indicating relatively low particulate levels in the local area.

5 Operational Phase Assessment

Impact Assessment

5.1 Table 5.1 includes a series of indicative criteria for assessing a proposals impact on air quality. Where these criteria are exceeded, further detailed assessment might be required.

Table 5.1: Indicative/ Qualitative Screening Criteria

Indicative Criteria to proceed to AQA	Proposal
A change of light duty vehicle (LDV) flows of: - more than 100 average annual daily traffic (AADT) within or adjacent to an AQMA; and - more than 500 AADT elsewhere.	According to Lanmor, the transport consultants for the project, the daily vehicle trip rate, per bedroom, is 1.839. As such, the proposed 128-bedroom hotel would generate an additional: - 235 LDV movement daily (cars, delivery vehicles and taxis) - 2 HDV movements (coaches) This represents an uplift of circa 37 LDV movements on the consented scheme for an 108-bedroom hotel. As air quality is improved in the local area, and the proposal represents a 20 bedroom uplift on a consented hotel, it is judged that the higher indicative threshold (500 AADT) should apply in the study area. Regardless, the previous Air Quality Assessment[19] carried out for the previous 108 bed proposed extension, in 2016, predicted that the maximum change at any receptor relative to the AQS was 0.1%, and judged to be not significant. As a result, it is judged highly unlikely that a 128-bed hotel (an additional 20 rooms) would cause local significant effects.
A change of HDV flows of: - more than 25 AADT within or adjacent to an AQMA; and - more than 100 AADT elsewhere	
Where a change in road alignment is 5m or more and the road is within an AQMA.	The proposed development would not cause any existing road layout to change by more than 5m.
The introduction of a new junction which causes traffic to significantly change in terms of acceleration/ deceleration, e.g., traffic lights, or roundabouts.	No major offsite junction improvements are planned.

[19] Resource & Environmental Consultants Ltd (2016) AIR QUALITY ASSESSMENT 234 BATH ROAD, HAYES. **REC REFERENCE:** AQ101041R1. Planning reference: 41331/APP/2016/1035. Available at: https://planning.hillingdon.gov.uk/OcellaWeb/viewDocument?file=dv_pl_files%5C41331_APP_2016_1035%5C890+Air+Quality+Assessment.pdf&module=pl Accessed: 08/03/2026

Typically, any combustion plant where the single or combined NO_X emission rate is less than 5 $mg.s^{-1}$ is unlikely to give rise to impacts, provided that the emissions are released from a vent or stack in a location and at a height that provides adequate dispersion.	The proposed development incorporates low NOx gas-fired condensing water heaters, supplemented with a domestic hot water pre-heat system. New efficient Air Source Heat Pumps (ASHP) will also provide heating for the hotel.

5.2 As none of the criteria in Table 5.1 were exceeded, it can be concluded that the proposed development would have no significant effect on local air quality.

Sensitivity

5.3 AEA and LAQM.TG (22) guidance provide the following criteria to determine the site type, for the purposes of classifying monitoring locations. By combining the site type definition (e.g., background, roadside, urban background), reproduced in Table 5.2 below, with data provided in the baseline assessment, a judgement can be made on the likelihood of exceeding the relevant AQS at the Site.

Table 5:2 Site Type Classification

Guidance	Definition of Site	Description
LAQM.TG (22)	Roadside	A site sampling typically within one to five metres of the kerb of a busy road (although distance can be up to 15 m from the kerb in some cases)
	Background	An urban location distanced from sources and therefore broadly representative of citywide background conditions, e.g., urban residential area
AEA Diffusion Tube	Roadside/ Kerbside	Kerbside sites should be within 1 m of the kerb and are usually fixed to street furniture. Roadside diffusion tubes should be sited between 1 and 5 m from the kerb edge and mounted ideally either on a lamp post or road sign on the pavement, or on the face of a building adjoining the pavement.
	Background	Urban background sites must be located: • >50 m from any major source of NO_2, such as multi-storey car parks. • >30 m from any very busy road (> 30,000 vehicles per day). • >20 m from a busy road (10,000 – 30,000 vehicles per day) or from any medium sized sources, e.g., petrol stations or ventilation outlets from catering establishments. • >10 m from any main road. (Quiet roads, for example within residential estates, are acceptable); and • >5 m from anywhere where vehicles may stop with their engines idling.

5.4 The façade of the proposed development is approximately 75m set back from the free-flowing section of A4 Bath Road. As such, the proposed development would be

classified as being at a 'Background' location in both LAQM.TG (22) and AEA guidance.

5.5 As shown in Table 4.1, background concentrations of NO_2, PM_{10} and $PM_{2.5}$ are predicted to be well below the relevant AQSs across the Site (including indicative thresholds for potential exceedances of the 1-hour mean NO_2 and 24-hour mean PM_{10} objectives).

5.6 There is also additional evidence to suggest that all AQSs for NO_2, PM_{10} and $PM_{2.5}$ would be met at the Site:

- Monitoring site HIL10 is judged to be the most representative of conditions at the Site as it is located within 150m, and within 6m of the main source of local pollution—the A4 Bath Road. The 1-hour mean AQS for NO_2, as well as the 24-hour mean AQS for PM_{10} have been met at this monitor (and all others) since at least 2019.
- the LAEI modelling predicts that all relevant objectives would be met at the proposed development.

Air Quality Neutral Assessment

Building Emissions

5.7 The hot water generation plant will consist of highly efficient gas fired condensing water heaters, with a domestic solar hot water pre-heat system. The water heaters shall be selected to have low NOx emissions. Space heating requirements will be met through an ASHP.

5.8 Based on a Building Emission Benchmark (BEB) of 15.42 g NOx/m²/year — the applicable benchmark for hotel developments with a gas boiler network and heat pumps — the Proposed Development's annual benchmark NOx emission rate is 81.2 kg NOx/year, using the GIA of 5,264.3 m².

5.9 The energy statement suggested that the proposed development would require 277.77 kWh/m^2/ year for hot water. The total development area is 5,264.3 m^2 and therefore the annual energy demand that would be met by the low NOx gas boilers is 1462265 kWh. The gas boilers are low NOx emission (<40mg/kWh), meaning that the entire 128-bed development would emit, at most, 58.49 kg NOx per year, or 11.1 g/NOx/m^2/year.

5.10 As total emissions are lower than the benchmark, the proposed development is therefore Air Quality Neutral with respect to building emissions.

Transport Emissions

5.11 The transport emissions benchmark (TEB) for the proposed development is presented in Table 5.3.

Table 5.3: Transport Emissions Benchmarks for the Proposed Development

Land Use	Proposed Area (m^2)	Benchmark (trips/m^2/annum)	Trips Per Annum
Hotel	5264.3	6.9	36,324
	Total (day)		99.5

5.12 Based on the trip rate provided by Lanmor Consulting, the proposed hotel development would generate an additional 235 LDV movements daily (cars, delivery vehicles and taxis) and 2 HDV movements (coaches). However, when considering only trips undertaken by hotel guests and staff members, the proposal generates 203.3 car trips per day.

5.13 As proposed trip generation exceeds the TEB, the proposal is not Air Quality Neutral with respect to transport emissions. Measures to reduce trips from the proposal should be implemented, or as a last resort, a financial contribution should be made to LBH to support wider initiatives to improve air quality in the area.

5.14 Lanmor Consulting provided further clarification on the suitability of the TRICS data used in the Air Quality Neutral Assessment. They noted that the selected TRICS site is not located near an airport, meaning coach and taxi trips are likely to be underestimated, while guest car trips may be overestimated. They also confirmed that the existing hotel (and proposed extension) does not permit staff parking, so car trips associated with staff are expected to be minimal.

Mitigation

5.15 The proposed development is Air Quality Neutral for building emissions. For transport emissions, based on the current inputs, the uplift in trip generation associated with the additional rooms results in an exceedance of the relevant TEB.

5.16 In accordance with London Plan Policy SI1 and LBH Policies DMEI 14 and EM8, a proportionate mitigation package will be required to minimise transport-related emissions (by approximately 103.8 journeys per day). It is recommended that an Air Quality Management Plan (AQMP) is secured by condition, incorporating measures such as:

- Reduce car parking provision across the Site to discourage car trips.

- Implementation of a Travel Plan across the wider hotel.
- captive fleets being zero-emission (shuttle buses etc)
- procurement agreements in place for deliveries and other hotel related services (laundry etc).
- robust and effective measures to encourage their staff to travel clean.
- Onsite provision of living roofs and/or walls
- Electric vehicle charging point provision above recommended standards.

5.17 It is strongly recommended that the proposed trip generation data is refined to better reflect the Site's proximity to an airport, as direct car trips are likely overestimated and taxi trips underestimated. Without this refinement, the development may be required to mitigate emissions that it does not have direct control over, particularly those associated with taxi activity.

5.18 If further analysis is not undertaken to refine the assessment, or if sufficient on-site mitigation cannot be secured to reduce vehicle trips below the Air Quality Neutral Benchmark or to actively improve air quality in line with LBH planning policy, the LBH may seek a financial contribution in accordance with its AQAP.

6 Discussion

6.1 Local and national air quality policies seek to sustain compliance with national objectives and limit values, and to prevent new development from contributing to, or being put at unacceptable risk, from unacceptable levels of air pollution. Furthermore, a key theme of the NPPF requires development to identify opportunities to improve air quality.

Compliance and Impact Assessments

6.2 The proposed hotel use does not introduce receptors with long-term exposure, and therefore only short-term objectives apply. Baseline monitoring confirms that the Site lies within an area of historic elevated NO_2, associated with the A4 corridor and Heathrow Airport. However, air quality has improved markedly in recent years, and since 2023 all measured concentrations at nearby monitoring stations have been below the relevant standards and below indicative thresholds for likely exceedances. Screening against LAQM.TG(22) criteria, in combination with the nearby monitoring evidence, provides strong evidence that exceedances of the 1-hour NO_2 or 24-hour PM_{10} objectives are unlikely at the proposed development.

6.3 The uplift in rooms may generate an increase in vehicle movements, but this is judged to be insufficient to trigger detailed dispersion modelling under EPUK/IAQM criteria as pollutant concentrations (as per Table 4.3) were lower than 10% below the relevant objectives, in 2024. In addition, a previous air quality assessment for a 108-bed extension, undertaken in 2016, predicted a maximum increase at nearby sensitive receptors of just 0.1% relative to the objective, providing further evidence of the likely scale of impact. Compared to this consented application, the proposed development would increase vehicle trips by approximately 37 LDV movements daily.

6.4 The assessment therefore demonstrates that the proposed development would not lead to a significant deterioration in local air quality, nor would it introduce any new pollutant sources capable of materially affecting compliance with statutory objectives.

6.5 On this basis, the proposal is considered compliant with the relevant clauses of the NPPF and LBH Policies EM8 and DMEI 14, all of which require development to avoid worsening existing poor air quality, prevent unacceptable exposure, and contribute to improved local conditions wherever possible.

Air Quality Neutral

6.6 The development is Air Quality Neutral for building emissions. For transport emissions, the uplift in trip generation associated with the additional rooms results in an exceedance of the relevant benchmark. A mitigation package or Air Quality Management Plan may therefore be required to minimise associated emissions. This could be secured via condition, and implemented prior to occupation, The AQAP suggests that where on-site measures are inadequate, a financial contribution may be levied on the developer to support delivery of LBH's AQAP.

6.7 It is, however, strongly recommended that additional transport analysis is undertaken to refine the inputs used in the Air Quality Neutral Assessment. The TRICS dataset applied is based on a hotel in a non-airport location, meaning taxi trips are likely underestimated and car trips (by guests and staff) overestimated. As taxi trips are exempt from the Air Quality Neutral Assessment, this could materially influence the assessment and scale of mitigation package required,

7 Conclusions

7.1 Greenavon Ltd was commissioned by Nine Group to undertake an Air Quality Assessment associated with a planning application, to the London Borough of Hillingdon (LBH), for a proposed hotel development at Heathrow Point West, 234 Bath Road, Heathrow, UB3 5AP (the Site).

7.2 The assessment concludes that during the operational phase, the proposed development would have no significant impact on, nor would be significantly impacted by, local air quality.

7.3 The proposed development is Air Quality Neutral with respect to building emissions.

7.4 The proposed development is not Air Quality Neutral with respect to transport emissions. An Air Quality Management Plan, secured via condition, may therefore be required to minimise road-transport related emissions from the Proposal.

7.5 It is, however, strongly recommended that the transport inputs used in the Air Quality Neutral Assessment are refined, as the current values do not reflect a hotel near an airport. This could materially affect the conclusions of the assessment, and the required package of mitigation.

7.6 Providing the recommendations of this report are implemented, the proposed development would be considered broadly compliant with all local and national planning policy. Air quality should not, therefore, present a material constraint to the planning process.

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