Station Road, Hayes

Arbtech

Air Quality Assessment

July 2024

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Executive Summary

Rappor Consultants Limited was appointed by Arbtech to undertake an air quality assessment for the proposed redevelopment of 62 Station Road in Hayes, London. The proposals seek full planning permission for the change of use of the first floor of the development from financial services to residential use for 8 apartments including the provision of an additional storey of accommodation. The proposals also include external alterations to the façade and internal alterations to the ground floor to provide access, with the ground floor use remaining as financial services.

The proposed development Site is located within the administrative area of the London Borough of Hillingdon and lies within the Hillingdon borough-wide Air Quality Management Area (AQMA).

A qualitative construction phase dust assessment was undertaken in accordance with Institute of Air Quality Management and Mayor of London guidance and measures were recommended to minimise emissions during construction activities. With the implementation of these mitigation measures the impact of construction phase dust emissions was considered to be 'not significant' in accordance with Institute of Air Quality Management guidance.

The proposed development trip generation was screened using the Institute of Air Quality Management and Environmental Protection UK two stage screening process, to determine whether a detailed road traffic emissions impact assessment was required. The proposed development trip generation did not exceed the relevant screening criteria and therefore detailed dispersion modelling of development-generated road traffic was not undertaken.

Consideration was given to the suitability of the Site for the proposed sensitive uses with regard to air quality. A review of local air quality monitoring data identified that pollutant concentrations in the area were below relevant air quality objectives and local emission sources were not considered to give rise to elevated pollutant concentrations in areas where sensitive uses are proposed. The provision of sensitive uses on the first and proposed second floors only was considered to provide additional dispersion of pollutants prior to reaching sensitive areas. Taking into consideration the air quality monitoring data, local emission sources and proposed development layout, it was considered that the Site was suitable for the proposed use.

The air quality neutrality of the proposals was considered in accordance with the London Plan. The development proposals meet criteria for exclusion from the requirements for an air quality neutral assessment as it is a car-free development with no on-site energy generating plant. The proposed development was therefore considered to be air quality neutral.

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Appendices

1 Introduction

General

1.1 Rappor Consultants Limited was instructed by Arbtech to undertake an air quality assessment for a proposed change of use at 62 Station Road in Hayes, London ('the Site'). The proposals seek full planning permission for the change of use of the first floor of the development from financial services to residential use for 8 apartments including the provision of an additional storey of accommodation. The proposals also include external alterations to the façade and internal alterations to the ground floor to provide access, with the ground floor use remaining as financial services.

1.2 The assessment considers the potential impacts of the proposed development during both the construction and operational phases. A qualitative construction phase assessment was undertaken in accordance with relevant guidance. An operational phase road traffic emissions screening assessment was undertaken to consider the impact of development-generated road traffic on local air quality. Consideration was also given to the suitability of the Site for the proposed sensitive uses.

1.3 The assessment takes account of relevant local and national policy and guidance. A glossary of terms utilised in this report is provided in **Appendix A**.

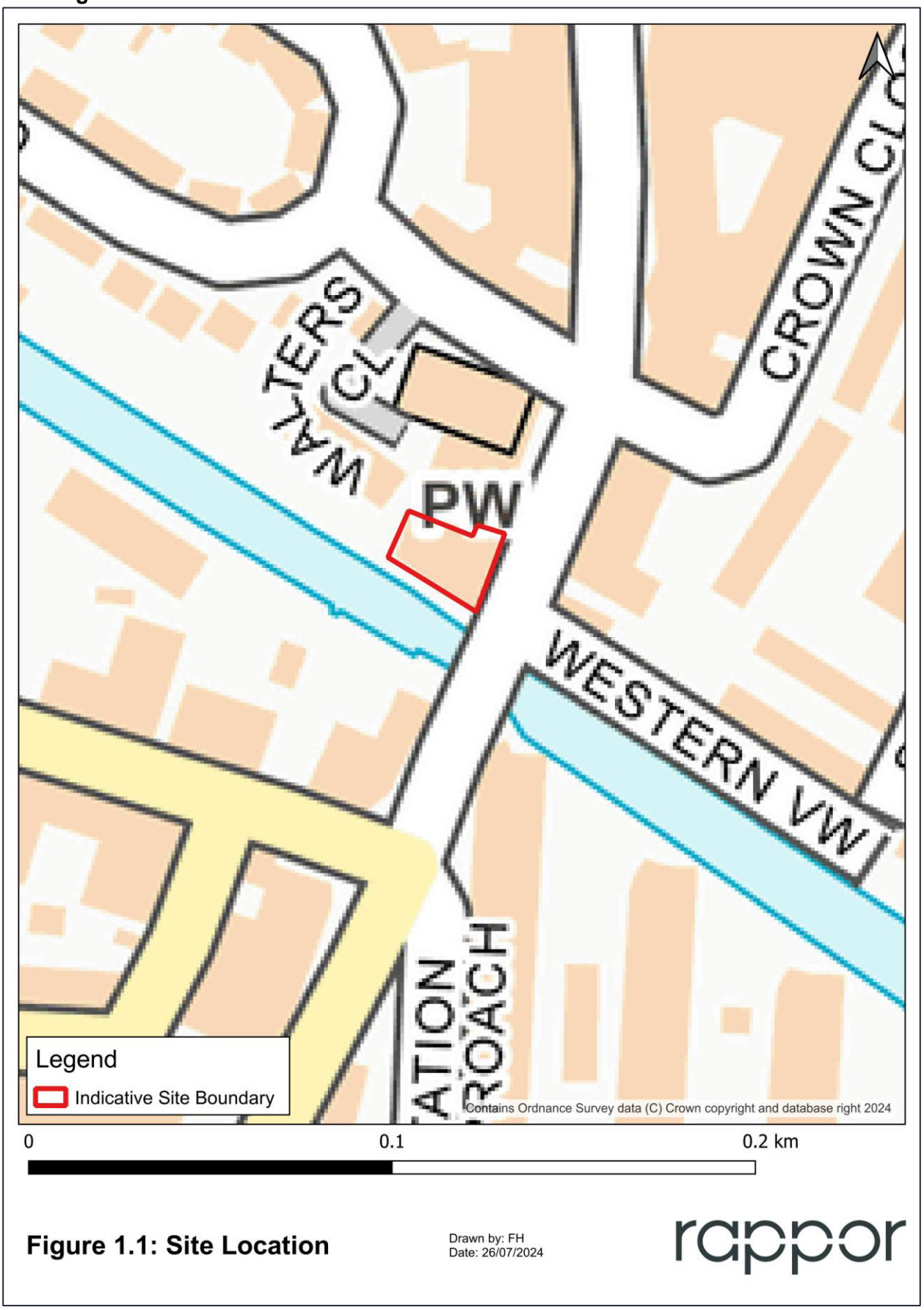
Site Location

1.4 The Site is located on Station Road in Hayes and currently comprises a two-storey building operated as a bank. To the north of the Site lies commercial premises with residential dwellings on the upper floors. Station Road forms the eastern boundary of the Site with further commercial premises with residential dwellings on the upper floors. The Grand Union Canal lies to the south of the Site with residential properties to the west.

1.5 The Site lies within the administrative area of the London Borough of Hillingdon (LBH) and lies within the Hillingdon borough-wide Air Quality Management Area (AQMA). The AQMA was declared for exceedances of the annual mean nitrogen dioxide (NO_2) objective.

1.6 The Site location is illustrated in **Figure 1.1**.

Figure 1.1 Site Location



2 Relevant Policy and Guidance

National Legislation and Planning Policy

2.1 The following national legislation and planning policy is relevant to air quality and was considered throughout this air quality assessment:

- European Parliament, EU 2008 Ambient Air Quality Directive (2008)[1];
- HMSO, Air Quality (England) Regulations (2000)[2];
- HMSO, Environment Act (1995)[3];
- HMSO, Environment Act (2021)[4];
- Department for Environment, Air Quality Strategy (1997)[5];
- Department for the Environment, Food and Rural Affairs (DEFRA), Air Quality Strategy (2007)[6];
- Department for the Environment, Food and Rural Affairs, The Environment (Miscellaneous Amendments) (EU Exit) Regulations (2020)[7];
- HMSO, The Environmental Targets (Fine Particulate Matter) (England) Regulations (2023)[8];
- Department for the Environment, Food and Rural Affairs, Air Quality Strategy: Framework for Local Authority Delivery (2023)[9];
- Department for the Environment, Food and Rural Affairs, Environmental Improvement Plan 2023 (2023)[10];
- Ministry of Levelling Up, Housing and Communities, National Planning Policy Framework (NPPF) (2023)[11]; and
- Ministry for Housing, Communities and Local Government, Planning Practice Guidance (PPG) for air quality (2019)[12].

Local Planning Policy

2.2 The following local planning policy was reviewed with regards to air quality and a summary of any relevant policies in provided in **Appendix B**:

- Greater London Authority, London Plan (2021)[13]; and

[1] European Parliament (2008) Council Directive 2008/50/EC on Ambient Air Quality and Cleaner Air for Europe
[2] HMSO (2000) Statutory Instrument 2000 No. 928, The Air Quality (England) Regulations 2000 (as amended), London: HMSO
[3] HMSO (1995) The Environment Act 1995, London: TSO
[4] HMSO (2021) The Environment Act 2021, London: TSO
[5] Department of the Environment (DoE) (1997) The UK National Air Quality Strategy, London: HMSO
[6] Department of the Environment, Food and Rural Affairs (Defra) (2007) The Air Quality Strategy for England, Scotland, Wales and Northern Ireland, London: HMSO
[7] Department of the Environment, Food and Rural Affairs (Defra) (2020) The Environment (Miscellaneous Amendments) (EU Exit) Regulations, London: HMSO
[8] HMSO (2023) The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023
[9] Defra (2023) Air Quality Strategy: Framework for Local Authority Delivery
[10] Defra (2023) Environmental Improvement Plan 2023, First revision of the 25 Year Environment Plan
[11] Ministry of Levelling Up, Communities and Local Government (2023) National Planning Policy Framework, HMSO London
[12] Ministry for Housing, Communities and Local Government (2019) Planning Practice Guidance Air Quality
[13] Greater London Authority (2021) London Plan

- London Borough of Hillingdon, Local Plan: Part 1 Strategic Policies[14].

Air Quality Guidance

2.3 The following air quality guidance was utilised in the air quality assessment:

- DEFRA, Local Air Quality Management Technical Guidance (LAQM.TG) 22) (2022)[15];
- Institute of Air Quality Management (IAQM), Guidance on the assessment of dust from demolition and construction (2024)[16];
- Greater London Authority, Control of Dust and Emissions during Construction and Demolition Supplementary Planning Guidance (2014)[17];
- IAQM and Environmental Protection UK (EPUK), Land-Use Planning and Development Control: Planning for Air Quality (2017)[18]; and
- Greater London Authority, London Plan Guidance Air Quality Neutral (2023)[19].

[14] London Borough of Hillingdon (2012) Local Plan Part 1 Strategic Policies
[15] Defra (2022) Local Air Quality Management Technical Guidance LAQM.TG(22)
[16] Institute of Air Quality Management (2024) Guidance on the assessment of dust from demolition and construction, Institute of Air Quality Management, London
[17] Greater London Authority (2014) Control of Dust and Emissions during Construction and Demolition Supplementary Planning Guidance
[18] Institute of Air Quality Management and Environmental Protection UK (2017) Land-Use Planning and Development Control: Planning for Air Quality
[19] Greater London Authority (2023) London Plan Guidance Air Quality Neutral

3 Assessment Methodology

Consultation

3.1 Consultation was undertaken with Environmental Health department at LBH detailing the proposed scope of works and assessment methodology to be utilised within the air quality assessment. At the time of writing, no response was received from LBH. Details of the consultation with LBH is provided in **Appendix C**.

3.2 The assessment methodology is detailed below.

Construction Phase - Dust Assessment

3.3 A qualitative assessment of the potential for construction phase activities to influence local air quality through dust soiling, human health and ecological effects was undertaken utilising the methodology set out in IAQM guidance[16] and GLA guidance[17]. The guidance provides a four-step approach, summarised below:

- Step 1: Screen the need for a detailed assessment. Where relevant sensitive receptors are located within 250m of the Site boundary, or within 50m of roads used by construction vehicles up to 500m from the Site, the assessment should progress to Step 2. No further assessment is required if there are no receptors within the specified distances of the works.
- Step 2: Assess the risk of dust impacts using the following steps:
  a) Define the potential dust emission magnitude for demolition, earthworks, construction and trackout, as appropriate;
  b) Define the sensitivity of the area to dust; and
  c) Define the risk of impacts.
- Step 3: Identify appropriate site-specific mitigation based on the identified dust risk;
- Step 4: Determine the significance of residual effects.

Operational Phase – Screening Assessment

3.4 IAQM and EPUK guidance[18] provides screening criteria to determine whether a detailed assessment of development-generated road traffic emissions is potentially required. The screening criteria are split into two stages:

Stage One:

3.5 The Stage One criteria detailed below are utilised to determine whether there is the need to proceed to Stage Two of the screening assessment:

- If any of the following apply:
  a) 10 or more residential units or a Site area greater than 0.5ha; or
  b) More than 1,000m^2 of floorspace for all other use classes or a Site area of greater than 1ha;
- Coupled with any of the following:
  a) The development has more than 10 parking spaces; or

b) The development will have a centralised energy facility or other centralised combustion process.

Stage Two:

3.6 Where the proposed development exceeds the criteria set out in Stage One, the following indicative criteria are used to determine whether a detailed assessment of development-generated road traffic emissions is required.

3.7 The Stage Two screening criteria are:

- A change in Light Duty Vehicles (LDVs) flows of:
  a) More than 100 Annual Average Daily Traffic (AADT) flow within or adjacent to an Air Quality Management Area (AQMA); or
  b) More than 500 LDVs as an AADT elsewhere.
- A change in Heavy Duty Vehicles (HDVs) of:
  a) More than 25 AADT flow within or adjacent to an AQMA; or
  b) More than 100 AADT flow elsewhere.

3.8 Where none of the Stage Two criteria are exceeded, IAQM and EPUK guidance[18] states:

"there should be no requirement to carry out an air quality assessment of the impact of the proposed development on the local area, and the impacts can be considered to have insignificant effects".

Operational Phase Site Suitability

3.9 As the proposed development will introduce new sensitive uses to a Site where no existing sensitive uses are located, consideration was given to the suitability of the Site for the residential use. The current relevant air quality objectives were utilised to consider Site suitability and are detailed in **Table 3.1**.

Table 3.2: Relevant Air Quality Standards and Objectives utilised in the Assessment

Pollutant	Averaging Period	Air Quality Objective (µg.m^{-3})	Date to Achieve by
NO_2	Annual Mean	40	31 December 2005
	1-hour mean not to be exceeded more than 18 times per year	200	31 December 2005
PM_{10}	Annual Mean	40	31 December 2004
	24-hour mean not to be exceeded more than 35 times per year	50	31 December 2004
$PM_{2.5}$	Annual Mean	20	1 January 2020
	Annual Mean	*10*	*31 December 2040*
	*Annual Mean Interim Target**	*12*	*31 January 2028*

*Detailed within the Environmental Improvement Plan 2023.
Italics denotes future air quality objectives that will come into force in the future.

4 Construction Phase Dust Assessment

4.1 Construction phase activities associated with demolition, earthworks, construction and trackout have the potential to generate dust and particulate matter which may influence local air quality at sensitive receptor locations.

4.2 As there are existing sensitive receptors within the distances set out in IAQM and GLA guidance[16,17], a construction phase dust assessment was undertaken. The assessment includes determining the dust emission magnitude for construction phase activities and identifying the sensitivity of the area to determine the overall risk of construction phase dust impacts. Mitigation measures proportionate to the level of dust impacts identified are then recommended to minimise the impact of construction phase activities on local air quality.

Assessing Risk of Dust Impacts

Defining the Dust Emission Magnitude

4.3 The scale and nature of construction phase activities were compared to the criteria set out in guidance to define the initial dust emission magnitude for each activity. **Table 4.1** summarises the dust emission magnitude for each activity and provides the justification for each assigned magnitude.

Table 4.1: Dust Emission Magnitude

Activity	Dust Emission Magnitude	Justification
Demolition	N/A	No demolition is proposed as part of the development and therefore this has not been considered further.
Earthworks	N/A	No earthworks are required as part of the development and therefore this has not been considered further.
Construction	Small	The total volume of construction is less than 12,000m^3.
Trackout	Small	Less than 20 outward HDV movements anticipated in any one day.

Defining the Sensitivity of the Area

4.4 The proximity of receptors to construction phase activities was reviewed alongside meteorological conditions and receptor use classes to define the sensitivity of the area. In accordance with guidance, different use classes can be more or less sensitive to dust and particulate matter emissions during the construction phase based on parameters such as the level of amenity typically expected, and the duration of time spent at the location.

4.5 The Site is not located in the vicinity of any ecological designations with dust sensitive features and therefore the impact of construction activities on ecological designations was not considered further. **Table 4.2** details the sensitivity of the area to dust soiling and human health effects for the different phases of construction activities. **Figure 4.1** was utilised to identify the number of sensitive receptors within the distances set out in guidance.

Table 4.2: Sensitivity of Study Area

Activity	Sensitivity to Dust Soiling	Sensitivity to Human Health
Construction	**High** – there are between 10 and 100 highly sensitive receptors within 20m of the Site. Receptors include residential units and car parking spaces.	**Low** – there are between 10 and 100 highly sensitive receptors within 20m of the Site. Receptors include residential units. Background PM_{10} concentrations are less than 24µg.m^{-3}.
Trackout	**High** – there are between 10 and 100 highly sensitive receptors within 20m of roads to be used by construction vehicles up to 50m from the Site. Receptors include residential units and car parking spaces.	**Low** – there are between 10 and 100 highly sensitive receptors within 20m of roads to be used by construction traffic up to 50m from the Site. Receptors include residential units. Background PM_{10} concentrations are less than 24µg.m^{-3}.

Figure 4.1: Construction Phase Dust Buffers

Figure 4.1: Construction Phase Dust Buffers

Drawn by: FH
Date: 26/07/2024

Defining the Risk of Impacts

4.6 The dust emission magnitude and sensitivity of the area for demolition, earthworks, construction and trackout are then combined to determine the overall risk of impacts associated with each activity. **Table 4.3** below summarises the risk of dust impacts for each activity.

Table 4.3: Summary of Risk of Dust Impacts

Activity	Dust Emission Magnitude	Highest Sensitivity of Area	Risk of Dust Impact
Construction	Small	High	Low Risk
Trackout	Small	High	Low Risk

Mitigation

4.7 IAQM and GLA guidance[16,17] provides a list of dust mitigation measures that should be implemented on site during the construction phase, where practicable. Mitigation measures proportionate to the level of dust risk identified in **Table 4.3** are detailed in **Appendix D**. With the implementation of these measures, the residual impacts associated with construction phase activities are considered to be 'not significant'.

5 Operational Phase Screening Assessment

5.1 The trip generation associated with the proposed development was reviewed and compared to the two stage screening criteria set out in IAQM and EPUK guidance[18].

Stage One

5.2 The development proposals do not exceed the 10 residential dwellings or the 10 car parking spaces thresholds. Therefore, the Stage One criteria set out in IAQM and EPUK guidance[18] are not exceeded.

5.3 In accordance with the guidance, where the criteria are not exceeded, a detailed assessment of the impact of the proposed development on local air quality is not required, and the proposed development is considered to have an insignificant effect.

6 Operational Phase Site Suitability

6.1 The Site currently comprises agricultural land with no existing sensitive uses present on Site. As the proposed development will introduce new sensitive uses to the Site, consideration was given to the suitability of the Site for residential use with regard to air quality.

6.2 A review of the following sources was undertaken to consider Site suitability:

- LBH's Annual Status Reports and Local Air Quality Management regime;
- Aerial imagery of the Site and local area; and
- Proposed development masterplan.

Local Air Quality Monitoring

Nitrogen Dioxide (NO_2)

6.3 LBH undertakes monitoring of NO_2 concentrations in its administrative area as part of its duty under the Local Air Quality Management regime. **Table 6.1** details the monitored NO_2 concentrations at the LBH-operated monitoring locations near the Site. It should be noted that monitoring data for 2020 and 2021 were influenced by COVID-19 lockdown restrictions that lead to reduced road traffic emissions and are therefore not considered to represent normal conditions. 2019 is the last year of 'pre-pandemic baseline' conditions whilst 2022 monitoring data is the first year of 'post-pandemic baseline' conditions.

Table 6.1: Annual Mean NO_2 Concentrations at LBH Monitoring Locations ($\mu g.m^{-3}$)

Site	X	Y	Site Type	Annual Mean NO_2 Concentration					
				2017	2018	2019	2020	2021	2022
HILL17	510361	179820	Background	32.7	31.0	31.6	24.7	24.2	24.1
HILL18	509683	179486	Roadside	**49.0**	38.5	37.4	29.9	27.6	28.3
HILL27	509755	179934	Roadside	33.8	32.5	33.2	24.5	25.3	26.8
HILL28	509328	179603	Roadside	35.7	31.7	31.7	23.0	23.5	27.1

6.4 The data presented in **Table 6.1** illustrate that annual mean NO_2 concentrations have been below the annual mean NO_2 objective of $40\mu g.m^{-3}$ at all monitoring locations near the Site in recent years, with the exception of HILL18. This location recorded an exceedance of the annual mean objective in 2017 however, there was a significant reduction in concentrations in 2018 which has continued through subsequent years of monitoring data. It is therefore considered that the exceedance recorded in 2017 was a result of localised factors that are no longer present in the area.

6.5 Overall, there is a clear downward trend in annual mean NO_2 concentrations in the area, demonstrating that air quality is improving. Monitoring locations HILL27 and HILL18 are located closest to the Site and on roads experiencing similar road traffic levels to Station Road where the Site is located. It is therefore considered that these monitoring locations are broadly representative of conditions at the Site.

Particulate Matter (PM_{10} and $PM_{2.5}$)

6.6 LBH also undertakes monitoring of PM_{10} and $PM_{2.5}$ concentrations within its administrative area. None of the PM_{10} or $PM_{2.5}$ monitors are located in the vicinity of the Site and are located in areas where traffic levels are greater than those experienced near the Site, or in areas where Heathrow Airport is considered to influence local air quality. None of the LBH-operated PM_{10} or $PM_{2.5}$ monitoring locations are therefore considered representative of conditions at the Site.

6.7 The PM_{10} and $PM_{2.5}$ concentrations recorded at these monitoring sites were all below the current relevant air quality objectives in recent years and it is therefore considered that PM_{10} and $PM_{2.5}$ concentrations at the Site would be lower than those recorded at the monitoring locations due to the smaller emission sources near the Site compared to those present near the monitoring sites.

Local Emission Sources

Road Traffic

6.8 The primary source of emissions in the vicinity of the Site is considered to be road traffic emissions associated with vehicles on the local road network. A review of traffic count data provided by the Department for Transport[20] was undertaken to consider the level of traffic on the closest primary roads in the vicinity of the Site. **Table 6.2** details the most recent traffic count data available from the DfT for these road links.

Table 6.2: DfT Traffic Count Data in the Local Area

Road	Traffic Flow	
	AADT	HDV
Pump Lane (count 811061)	11,000	127
Blyth Road (count 942673)	2,721	115
Botwell Lane (count 811102)	5,154	162

6.9 The traffic data detailed in **Table 6.2** illustrates that the primary road network in the vicinity of the Site does not carry significant road traffic levels that may give rise to elevated pollutant concentrations.

Other Emission Sources

6.10 The Site is located approximately 185m north of Hayes and Harlington Station. The line which serves this station is not identified in Defra guidance[15] as a heavy diesel usage line and the Site is not located within 30m of the station, sidings or railway lines. Therefore, in accordance with Defra, emissions associated with the railway are not considered to significantly influence air quality at the Site.

6.11 The Site is not located in the vicinity of any other significant sources of emissions that are considered to influence air quality at the Site.

[20] Department for Transport (2024) https://roadtraffic.dft.gov.uk/#16/51.5057/-0.4140/basemap-countpoints

Summary

6.12 The Site is located in an area that experiences low traffic volumes with no other significant emission sources nearby. The Site is located in an area of existing residential use and does not propose to locate new residential properties closer to the local road network than existing residential properties. Local air quality monitoring recorded concentrations below the current relevant air quality objectives in recent years. It is therefore considered that the Site is suitable for the proposed use with regard to air quality.

7 Air Quality Neutral Assessment

7.1 The London Plan Air Quality Neutral Guidance[19] provides benchmarks for acceptable building and transport emissions for new development across Greater London. The guidance considers the location of the Site and scale of the development proposals to determine emissions benchmarks for both transport and building emissions. To be determined air quality neutral, the development must meet, or fall below, these emissions benchmarks.

7.2 The guidance references that there are criteria where development is excluded from the requirement to undertake an air quality neutral assessment, stating:

> *"Development, including major developments, that do not include additional emission sources are assumed to be air quality neutral and to meet the air quality neutral benchmarks. As such, there is no need to do an ai quality neutral assessment. This would include developments that have no additional motor vehicle parking, do not lead to an increase in motor vehicle movements, and do not include new combustion plant".*

7.3 The proposed development will not provide any car parking and is a car-free development. Additionally, the proposed development will utilise an all-electric solution and therefore does not include any emissions associated with the operation of the building. It is therefore considered that the proposed development can be considered to be air quality neutral, and no further consideration is required.

8 Summary and Conclusions

8.1 Rappor was instructed by Arbtech to undertake an air quality assessment for submission with a planning application for a proposed change of use application at the site at 62 Station Road in Hayes, London.

8.2 A qualitative construction phase dust assessment was undertaken, and mitigation measures proportionate to the level of dust risk identified are recommended. With the implementation of these measures, the impact of construction phase dust is negligible which is not significant.

8.3 A qualitative operational phase road traffic emissions screening assessment was undertaken to consider the impact of the proposed development on local air quality. The two stage screening criteria set out in guidance were not exceeded and there was no need to undertake any further detailed assessment of the impact of development-generated road traffic. Where the two stage screening criteria are not exceeded, the proposed development can be considered as having a not significant impact on local air quality as a result of development-generated traffic.

8.4 A review of local air quality monitoring data and emission sources was undertaken to consider the suitability of the Site for residential use. Local monitoring data recorded concentrations below the relevant air quality objectives and the Site is located in an existing residential area. Local road traffic levels were not considered to give rise to elevated pollutant concentrations locally and the proposed masterplan does not located dwellings any closer to the road network than existing properties. It was therefore considered that the Site was suitable for the proposed use with regard to the current relevant air quality objectives.

8.5 Consideration was given to the air quality neutrality of the proposals in accordance with the London Plan. The development was identified to meet the criteria to be considered air quality neutral as it includes no parking, no on-site energy generating plant and will be car-free. Therefore, the development is excluded from the requirement to undertake a detailed air quality neutral assessment and can be considered air quality neutral.

Appendix A – Glossary

Term	Definition
AADT	Annual Average Daily Traffic flow.
Air quality objective	Policy target generally expressed as a maximum ambient concentration to be achieved, either without exception or with a permitted number of exceedances within a specific timescale (see also air quality standard).
Air quality standard	The concentrations of pollutants in the atmosphere which can broadly be taken to achieve a certain level of environmental quality. The standards are based on the assessment of the effects of each pollutant on human health including the effects on sensitive sub groups (see also air quality objective).
Annual mean	The average (mean) of the concentrations measured for each pollutant for one year. Usually this is for a calendar year, but some species are reported for the period April to March, known as a pollution year. This period avoids splitting winter season between two years, which is useful for pollutants that have higher concentrations during the winter months.
AQAP	Air Quality Action Plan.
AQMA	Air Quality Management Area.
AQS	Air Quality Strategy.
Defra	Department for Environment, Food and Rural Affairs.
EPUK	Environmental Protection UK.
Exceedance	A period of time where the concentrations of a pollutant is greater than, or equal to, the appropriate air quality standard.
HDV	Heavy Duty Vehicles (HGVs + buses and coaches)
HGV	Heavy Goods Vehicles.
IAQM	Institute of Air Quality Management.
LAQM	Local Air Quality Management.
LDV	Light Duty Vehicles (motorbikes, cars, vans and small trucks)
NO	Nitrogen monoxide, a.k.a. nitric oxide.
NO_2	Nitrogen dioxide.
NOx	Nitrogen oxides.
Percentile	The percentage of results below a given value.
PM_{10}	Particulate matter with an aerodynamic diameter of less than 10 micrometres.
$PM_{2.5}$	Particulate matter with an aerodynamic diameter of less than 2.5 micrometres.
micrograms per cubic metre ($\mu g.m^{-3}$)	A measure of concentration in terms of mass per unit volume. A concentration of 1μg.m-3 means that one cubic metre of air contains one microgram (millionth of a gram) of pollutant.

Appendix B – Local Planning Policy

London Plan 2021

The London Plan 2021 contains the following policies relevant to air quality:

"GG3 Creating a healthy city

To improve Londoners' health and reduce health inequalities, those involved in planning and development must:

[…]

F. seek to improve London's air quality, reduce public exposure to poor air quality and minimise inequalities in levels of exposure to air pollution;

[…]

Policy D3 Optimising site capacity through design-led approach

[…]

D. Development proposals should:

[…]

9) help prevent or mitigate the impacts of noise and poor air quality;

[…]

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 borough's 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 exceedance 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 that 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.

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."

London Borough of Hillingdon Local Plan Part 1

The Local Plan Part 1 contains the following policies relevant to air quality:

"Policy BE1: Built Environment

The Council will require all new development to improve and maintain the quality of the built environment in order to create successful and sustainable neighbourhoods, where people enjoy living and working and that serve long-term needs of all residents. All new developments should:

[…]

10) Maximise the opportunities for all new homes to contribute to tackling and adapting to climate change and reducing emissions of local air quality pollutants.

[…]

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.

All major development within the AMQA should demonstrate air quality neutrality where appropriate, actively contribute to the promotion of sustainable transport measures such as vehicle charging points and the increased provision of 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 Action Plans in particular where AQMAs 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."

Appendix C – Consultation

Freya Hoyle

From: Freya Hoyle
Sent: 17 July 2024 14:46
To: agrossinho@hillingdon.gov.uk
Subject: Station Road, Hayes

Good afternoon Ana,

I hope you're well? I understand that Val has now retired and that you are now the best person to speak to in regards to air quality assessments in Hillingdon.

Rappor has been instructed to undertake an air quality assessment for the proposed change of use application at the site at number 62 Station Road in Hayes. The proposals are for the submission of a Full Planning Application relating to Proposed Creation of 8 No. of Residential Units by Change of Use of First Floor from Financial Services [Class E(c)(i) Use] to Residential (Class C3 Use) and Erection of an Additional Storey with Flat Roof and Associated External Alterations to Façade and Internal Alterations on Ground Floor

The site is currently a two storey commercial unit and the proposals seek to change the use of the first floor to residential use, in addition to creating an additional storey for further residential accommodation. With the exception of internal alterations to the ground floor layout, and external alterations to the façade to provide a better street scene, the existing commercial use on the ground floor will remain as it stands.

I have provided the proposed assessment methodology for the air quality assessment below and would be grateful if you could advise if this is accepted, or if there are any queries that you may have.

Construction Phase:
As the proposals will include construction of an additional storey, as well as external façade alterations, we will undertake a qualitative construction phase dust assessment in accordance with both IAQM and GLA guidance. Mitigation measures proportionate to the level of dust risk identified will be recommended.

Operational Phase:
The proposed development is car free and therefore the development will not generate more than 100 LDVs and 25 HDVs in any one day. Where these criteria are not exceeded, IAQM and EPUK guidance states that the impact of the development on local air quality can be considered not significant and no detailed assessment of road traffic impacts is required.

The site is located within the Hillingdon AQMA however, we have reviewed local emission sources and Hillingdon's air quality monitoring. The closest and most representative monitoring locations to the site recorded concentrations of NO2 well below the current annual mean objective over the past five years, with an overall downward trend in concentrations also evident. The site sites to the west of Station Road carries daily traffic flows in the region of 15,000 vehicles a day. It is considered that the proposed development will be subject to pollutant concentrations below the current relevant air quality objectives based on the level of road traffic adjacent to the site and the local air quality monitoring data near the site.

With this in mind, we propose to undertake a qualitative operational phase site suitability assessment to consider the exposure of future residents to air pollution. The assessment will utilise a review of Hillingdon's local air quality monitoring data, local emission sources and plans for the development to determine the suitability of the site for the proposed sensitive upper floor uses.

Air Quality Neutral:
The site will provide fewer than 10 residential units and therefore falls into the minor development category identified in the latest Air Quality Neutral guidance. The development is car free and therefore in accordance with the Air Quality Neutral guidance, it is considered that the development is air quality neutral with regard to

transport emissions. With regard to building emissions, the development is heated through an all electric strategy and therefore, the development will not produce building emissions associated with heating and lighting. It is therefore considered that the development is air quality neutral with regard to building emissions.

I would be grateful if you could advise if the above methodology is accepted and if you have any queries, please don't hesitate to get in touch.

Best regards,

Freya

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Appendix D – Construction Phase Dust Mitigation

Mitigation Measure	Highly Recommended	Desirable
Communication	Develop and implement a stakeholder communications plan that includes community engagement before work commences on site.	None
	Display the name and contact details of person(s) responsible for air quality and dust issues on the site boundary. This may be the environment manager / engineer or the site manager.	
	Display the head or regional office contact information.	
	Develop and implement a Dust Management Plan which may include measures to control other emissions, approved by the Local Authority.	
Site Management	Record all dust and air quality complaints, identify causes and take appropriate action to reduce emissions in a timely manner and record any measures taken.	None
	Make the complaints log available to the local authority when asked.	
	Record any exceptional incidents that cause dust or air emissions, either on or off site and the action taken to resolve the situation in the log book.	
Monitoring	Carry out regular inspections to monitor compliance with the Dust Management Plan, record inspection results and make an inspection log available to the local authority when asked.	Undertake daily on site and off site inspections where receptors including roads are nearby, to monitor dust. Record inspection results and make the log available to the local authority when asked.
	Increase the frequency of site inspections when activities with a high potential to produce dust are being carried our and during prolonged dry or windy conditions.	
	Agree dust deposition, dust-flux or real-time dust monitoring locations with the local authority, where monitoring is required. Baseline monitoring should commence at least three months prior to works on site, where possible.	
Preparing and maintain the Site	Plan site layout so that machinery and dust causing activities are located away from receptors, as far as possible.	None
	Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as stockpiles on site.	
	Fully enclose the site or specific operations where there is a high potential for dust production and the site is active for an extensive period.	
	Avoid site runoff of water or mud.	
	Keep site fencing, barriers and scaffolding clean with wet methods.	
	Remove materials that have potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on site, cover as described below.	
	Cover, seed or fence stockpiles to prevent wind whipping.	
Operating vehicle / machinery and sustainable travel	Ensure all vehicles switch off engines when stationary – no idling.	Impost and signpost a maximum 15 mph speed limit on surfaced and 10mph speed limited on unsurfaced haul roads and work areas.

Mitigation Measure	Highly Recommended	Desirable
	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.
Operations	Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction.	None
	Ensure an adequate water supply to the site for effective dust suppression using non-potable water where possible and appropriate.	
	Use enclosed chutes and conveyors and covered skips.	
	Minimise drop heights from conveyors, loading shovels, hoppers and other loading and handling equipment and use fine water sprays on such equipment wherever appropriate.	
	Ensure equipment is readily available on site to clean any dry spillages and clean up spillages as soon as reasonably practicable.	
Waste management	Avoid bonfires and burning of waste materials.	None
Construction	Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.	Avoid scabbling (roughening of concrete surfaces) if possible.
		Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery.
		For smaller supplies of fine powder materials, ensure bags are sealed after use and stored appropriately to prevent dust.
Trackout	None	Use water-assisted dust sweepers on the access and local roads to remove, as necessary, any material tracked out of the site.
		Avoid dry sweeping of large areas.
		Ensure vehicles entering and leaving the site are covered to prevent any escape of materials during transportation.
		Record all inspections of haul routes and any subsequent action taking in site log book.
		Implement a wheel-washing system with rumble grids to dislodge mud prior to leaving the site, where practicable.

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