

E2 CONSULTANTS

**67-77 HIGH STREET, NORTHFLEET,
GRAVESEND DA11 9HJ**

AIR QUALITY ASSESSMENT

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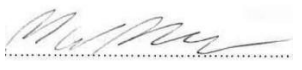
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1. INTRODUCTION

- 1.0.1 By instruction from E2 Consultants, Air Dust Odour were instructed to undertake an Air Quality Assessment (AQA) in support of a proposed residential development at 67-77 High Street, Northfleet, Gravesend DA11 9HJ.
- 1.0.2 It is understood that a planning application is to be submitted to Gravesham Borough Council (GBC), for the redevelopment of the Site with the erection of 14 flats with associated infrastructure including nine parking spaces.
- 1.0.3 Report limitations are outlined in **Appendix A**.

1.1 SITE LOCATION AND CONTEXT

- 1.1.1 The Site is located at the former 67-77 High Street, Northfleet, Gravesend DA11 9HJ, at approximate National Grid Reference (NGR): 562025, 174365. **Figure 1** details the location of the Site. This is within GBC's administrative area.
- 1.1.2 The Site is located in an area where air quality is mainly influenced by road traffic emissions along the local road network and, as such, elevated pollutant concentrations may be experienced both at and around the Site. The Proposed Development may lead to adverse impacts at nearby existing sensitive receptors as a result of fugitive dust emissions during construction and road vehicle exhaust emissions during operation. Therefore, an AQA is required to determine potential impacts associated with the Proposed Development in accordance with the requirements of The National Planning Policy Framework (NPPF)¹. The AQA will therefore consider dust deposition as well as ambient pollutant concentrations of nitrogen dioxide (NO₂) and particulate matter (PM₁₀ and PM_{2.5}) at and around the Site.
- 1.1.3 The main potential sources of air pollution were identified as emissions from road transport using the local road network. There are no significant combustion sources identified within the immediate vicinity of the Site that will influence local air quality.

¹ Ministry of Housing, Communities & Local Government (2024) National Planning Policy Framework.

2. LEGISLATION & POLICY

2.1 AIR QUALITY LEGISLATION AND POLICY

UK Air Quality Strategy

- 2.1.1 The government's policy on air quality within the UK is set out in the Air Quality Strategy for England, Scotland, Wales and Northern Ireland (AQS)². The revised AQS³ which replaces the previous volume 2, provides a framework for reducing air pollution in the UK with the aim of meeting the requirements of European Union Legislation.
- 2.1.2 The AQS also sets standards and objectives for nine key pollutants to protect health, vegetation and ecosystems. These are benzene (C₆H₆), 1,3 butadiene (C₄H₆), carbon monoxide (CO), lead (Pb), NO₂, PM₁₀ and (non-statutory) PM_{2.5}, sulphur dioxide (SO₂), ozone (O₃) and polycyclic aromatic hydrocarbons (PAHs).
- 2.1.3 The air quality standards are levels recommended by the Expert Panel on Air Quality Standards (EPAQS) and the World Health Organisation (WHO) with regards to current scientific knowledge and the effects of each pollutant on health and the environment.
- 2.1.4 The Air Quality Objectives (AQOs) are medium-term policy-based targets set by Government. They take into account economic efficiency, practicability, technical feasibility and timescale. Some objectives are equal to EPAQS recommended standards or WHO guideline limits, whereas others involve a margin of tolerance, i.e. a number of permitted exceedances of standards over a given period.
- 2.1.5 **Appendix B** presents the AQOs for pollutants considered within this assessment.
- 2.1.6 For the pollutants considered in this assessment, there are both long-term (annual mean) and short-term standards. For NO₂, the short-term standard is for a 1-hour averaging period, whereas for PM₁₀ it is a 24-hour averaging period. The periods reflect the varying impacts on health from differing pollutant exposure, e.g., temporary exposure on the pavement adjacent to a busy road compared with the exposure of residential properties adjacent to a road.

² Department for Environment, Food and Rural Affairs (Defra) and Devolved Administrations (2007). The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (Volumes 1 and 2).

³ Defra Policy paper – Air quality strategy: framework for local authority delivery (28th April 2023).

Air Quality Regulations

- 2.1.7 Many of the objectives in the AQS has been made statutory in England with the Air Quality (England) Regulations 2000⁴ and The Air Quality (England) (Amendment) Regulations 2002⁵ for the purpose of Local Air Quality Management (LAQM).
- 2.1.8 These Regulations require that likely exceedances of the AQS objectives are assessed in relation to:
- “[...] the quality of air at locations which are situated outside of buildings or other natural or man-made structures, above or below ground, and where members of the public are regularly present.”*
- 2.1.9 The Air Quality Standards (Amendment) Regulations 2016⁶ amends the Air Quality Standards Regulations 2010 that transpose the European Union Ambient Air Quality Directive (2008/50/EC) into law in England. This Directive sets legally binding limit values for concentrations in outdoor air of major air pollutants that impact public health such as NO₂, PM₁₀ and PM_{2.5}.

Environmental Protection Act 1990

- 2.1.10 Section 79 of the Environmental Protection Act 1990⁷ gives the following definitions of statutory nuisance relevant to dust and particulates:
- “Any dust, steam, smell or other effluvia arising from industrial, trade or business premises or smoke, fumes or gases emitted from premises so as to be prejudicial to health or a nuisance.”*
- “Any accumulation or deposit which is prejudicial to health or a nuisance.”*
- 2.1.11 Following this, Section 80 says that where a statutory nuisance is shown to exist, the local authority must serve an abatement notice. Failure to comply with an abatement notice is an offence and, if necessary, the local authority may abate the nuisance and recover expenses.
- 2.1.12 There is no statutory limit values for dust deposition above which ‘nuisance’ is deemed to exist. Nuisance is a subjective concept, and its perception is highly dependent upon the existing conditions and the change which has occurred.

⁴ The Air Quality (England) Regulations 2000 – Statutory Instrument 2000 No.928.

⁵ The Air Quality (England) (Amendment) Regulations 2002 – Statutory Instrument 2002 No.3043.

⁶ The Air Quality Standards (Amendment) Regulations 2016 – Statutory Instrument 2016 No.1184.

⁷ Environmental Protection Act. London 1990 HMSO.

Clean Air Strategy

- 2.1.13 In 2019 the UK Government released its Clean Air Strategy⁸, which forms part of its 25 Year Environment Plan⁹. The Strategy sets out the comprehensive action that is considered to be required from across all parts of government and society.
- 2.1.14 The primary focus of air quality management is related to NO₂ and its principal source in the UK – road traffic. The Strategy aims to broaden the focus to include others areas, including actions on clean growth and emissions from domestic wood burning stoves, industry and agriculture.

Reducing Emissions from Road Transport: Road to Zero Strategy

- 2.1.15 The Office for Low Emission Vehicles (OLEV) and Department for Transport (DfT) published a Policy Paper¹⁰ outlining how the government will support the transition to zero tailpipe emission road transport and reduce tailpipe emissions from conventional vehicles during the transition. This Policy asserts the governments pledge to end the new sale of Internal Combustion petrol and diesel cars and vans by 2040. It further states the governments expectation that the majority of new cars and vans sold to be 100% zero tailpipe emission and all new cars and vans to have significant zero tailpipe emission capability by this year, and that by 2050 almost every car and van should have zero tailpipe emissions. The government wants to see at least 50% - 70% of new car sales, and up to 40% of vans sales being ultra low emission by 2030.
- 2.1.16 The paper sets out measures by which the government will support this transition, but it expects it to be industry and consumer led. The government has since announced that the phase out date for the sale of new petrol and diesel cars and vans will be brought forward to 2030 and all new cars must be fully zero emission at the tailpipe from 2035. If these ambitions are realised, then road traffic-related NO_x emissions can reasonably be expected to reduce significantly over the coming decades, which could be beyond the scale of reductions forecast in the tools utilised in this air quality assessment.

Environment Act 2021

- 2.1.17 The UK's new legal framework for protection of the natural environment, the Environment Act (2021) gives the government the power to set long-term, legally binding environmental targets. It establishes an Office

⁸ Department for Environment, Food and Rural Affairs (Defra, 2019) Clean Air Strategy 2019.

⁹ Department for Environment, Food and Rural Affairs (Defra, 2018) A Green Future Our 25 Year Plan to Improve the Environment.

¹⁰ Department for Transport (DfT, 2018) The Road to Zero: Next Steps towards cleaner road transport and delivering our Industrial Sources.

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for Environmental Protection (OEP), responsible for holding the government to account, ensuring compliance with these targets.

- 2.1.18 The Environmental Targets (Fine Particulate Matter, England) Regulations 2023 (SI 2023 No. 96) sets two new future targets for PM_{2.5} concentrations.

Environmental Improvement Plan 2023

- 2.1.19 Defra published its 25 Year Environment Plan in 2018¹¹. The Environment Act (2021) required Defra to review this Plan at least every five years. The Environmental Improvement Plan 2023¹² is the first revision. It outlines progress since 2018, adding detail to goals which were defined in the 2018 Plan, including that of achieving clean air.
- 2.1.20 The Plan sets out the new air quality targets set for PM_{2.5} concentrations. The targets include long-term targets in the Statutory Instrument and interim targets to be achieved by 2028.
- 2.1.21 The Plan outlines the role of local authorities in helping it meet both its targets and existing commitments. It notes that and Air Quality Strategy will be published to provide guidance on how local authorities should assist. The Plan makes clear that this will focus on reducing emissions from sources within a local authority's control, including through traffic management and planning powers. This focus on emissions, as opposed to directly requiring local authorities to assess PM_{2.5} concentrations against the new targets, recognises that PM_{2.5} is a cross-boundary issue; most PM_{2.5} within a Local Authority's area is not, for the most part, emitted by that particular local authority. The Plan also outlines the respective roles of industry, agricultural sectors, and the Department for Transport in providing the coordinated action required to meet both its new, and pre-existing targets and commitments.

2.2 PLANNING POLICY

- 2.2.1 A summary of the national and local planning policy relevant to the Proposed Development and air quality is provided below.

¹¹ Defra (2018). A Green Future: Our 25 Year Plan to Improve the Environment. Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf [Accessed 16/07/2025]

¹² Defra (2023) Environment Improvement Plan 2023. Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1168372/environmental-improvement-plan-2023.pdf [Accessed 16/07/2025]

National Planning Policy Framework

2.2.2 The Government's overall planning policies for England are described in the NPPF¹³. The core underpinning principle of the Framework is the presumption in favour of sustainable development, defined as:

"[...] meeting the needs of the present without compromising the ability of future generations to meet their own needs."

2.2.3 One of the three overarching objectives of the NPPF is that planning should:

"contribute to the achievement of sustainable development, including the provision of homes, commercial development and supporting infrastructure in a sustainable manner."

2.2.4 In relation to air quality, the following paragraphs in the document are relevant.

- Paragraph 56 states *"Local planning authorities should consider whether otherwise unacceptable development could be made acceptable through the use of conditions or planning obligations. Planning obligations should only be used where it is not possible to address unacceptable impacts through a planning condition"*;
- Paragraph 110 states *"The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focussed 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 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."*
- 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 at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans"*;
- Paragraph 198 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"*;

¹³ Ministry of Housing, Communities & Local Government (2025). National Planning Policy Framework.

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- Paragraph 199 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 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”*;
- Paragraph 201 states *“The focus of planning policies and decisions should be on whether proposed development is an acceptable use of land, rather than the control of processes or emissions (where these are subject to separate pollution control regimes). Planning decisions should assume that these regimes will operate effectively. Equally, where a planning decision has been made on a particular development, the planning issues should not be revisited through the permitting regimes operated by pollution control authorities.”*

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

2.3 LOCAL PLANNING POLICY

2.3.1 The Local Plan does not mention air quality in a way that is relevant to the Proposed Development.

2.4 AIR QUALITY ACTION PLANS

National Air Quality Plan

2.4.1 Defra has produced an Air Quality Plan¹⁴ to tackle roadside NO₂ concentrations in the UK, a supplement to the 2017 plan¹⁵ sets out steps the Government is taking in relation to another 22 local authorities where shorter-term exceedances of the limit value were identified. This is alongside national measures, with these plans supplementing those identified English Local Authorities to produce local action plans and/or feasibility studies. These plans and feasibility studies must have regard to achieve the statutory limit values within the shortest time, and could include the implementation of a Clean Air Zone (CAZ). There is currently no easy way to take account the effect of the Plan or Supplement in this AQA, but consideration has been given

¹⁴ Defra (2018) Supplement to the UK plan for tackling roadside nitrogen dioxide concentrations. Available at: <https://www.gov.uk/government/publications/air-quality-plan-for-nitrogen-dioxide-no2-in-uk-2017> [Accessed 16/07/2025]

¹⁵ Defra (2017) Air quality plan for nitrogen dioxide (NO₂) in the UK. Available at: <https://www.gov.uk/government/publications/air-quality-plan-for-nitrogen-dioxide-no2-in-uk-2017> [Accessed 16/07/2025]

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where there currently is, or likely to be in the future, an exceedance of the limit value within the vicinity of the Proposed Development. This assessment has been carried out in relation to the Air Quality Objectives rather than the limit values that are in the Air Quality Action Plan.

Local Air Quality Action Plan

2.4.2 The measures are general in nature, and are not specifically relevant to the Proposed Development.

2.5 GUIDANCE

2.5.1 A summary of the publications referred to in undertaking this assessment is provided below.

Local Air Quality Management Review and Assessment Technical Guidance (2022)

2.5.2 The Department for Environment, Food and Rural Affairs (DEFRA) has technical guidance published for use by local authorities in their review and assessment work¹⁶. The guidance was last updated in August 2022 following enactment of measures in the Environment Act 2021, which aims to enhance the LAQM framework, enabling greater localised action on air pollution. Herein referred to as LAQM.TG22, this updated guidance has been used, where appropriate within this assessment.

National Planning Practice Guidance – Air Quality (2019)

2.5.3 A number of guiding principles on how the planning process can take into account impacts of new development on air quality is provided in this guidance¹⁷. It outlines how much detail and air quality assessment needs to include for proposed developments and how their impacts can be mitigated. Information on how local authorities take air quality into account is provided, in both the wider planning context and in individual cases where air quality is a consideration in a planning decision.

Guidance on the Assessment of Dust from Demolition and Construction (2024)

2.5.4 Published by the IAQM, this guidance document¹⁸ follow previous versions in providing guidance to developers, consultants and environmental health officers on how to assess the impacts arising from

¹⁶ Department for Environment, Food and Rural Affairs (Defra, 2021) Part IV The Environment Act 1995 as amended by The Environment Act 2021 Environment (Northern Ireland) Order 2002 Part III, Local Air Quality Management Technical Guidance LAQM.TG22.

¹⁷ Department of Communities and Local Government (DCLG, Updated November 2019) National Planning Practice Guidance.

¹⁸ Institute of Air Quality Management (Version 2.2, January 2024) Guidance on the Assessment of Dust from Demolition and Construction.

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construction activities. The emphasis of the methodology is on classifying site according to the risk of impacts (in terms of dust nuisance, PM₁₀ impacts on public exposure and impacts on relevant sensitive ecological receptors) and identify appropriate mitigation measures to the identified level of risk.

Land-Use Planning & Development Control: Planning for Air Quality (2017)

2.5.5 Environmental Protection UK (EPUK) and the Institute of Air Quality Management (IAQM) have published guidance¹⁹ that offers comprehensive advice on: when an air quality assessment may be required along with what should be included, determining the significance of air quality impacts, if any, associated with a proposed development and mitigation measures that may be implemented to minimise these.

¹⁹ Environmental Protection UK and Institute of Air Quality Management (Version 1.2 Updated January 2017) Land Use Planning & Development Control: Planning for Air Quality.

3. SCOPE AND METHODOLOGY

3.1 SCOPE

3.1.1 The Scope of this assessment has been determined through the following:

- A review of the Masterplan of the Proposed Development;
- Desktop study to confirm the locations of nearby existing sensitive receptors that may be sensitive to changes in local air quality; and
- Review of available air quality data surrounding the site, including data from DEFRA²⁰ and the latest Annual Status Report²¹ (ASR).

3.1.2 The assessment considers potential air quality impacts resulting from:

- Dust and particulate matter generated by on-site activities during the construction phase;
- Increases in pollutant concentrations from exhaust emissions arising from construction traffic and plant; and
- Increases in pollutant concentrations from exhaust emissions arising from traffic generated by the Proposed Development once operational.

3.2 CONSTRUCTION PHASE ASSESSMENT

3.2.1 Dust comprises of particles which typically range in size from 1-75 micrometres (μm) in aerodynamic diameter. The action of crushing and abrasive forces on materials leads to its creation. Larger dust particles fall from the atmosphere quickly following release and is therefore generally deposited in close proximity to the emission source. Therefore, dust is unlikely to cause long term or wide spread changes to air quality; however, deposition on cars and property can cause discolouration and 'soiling' which may result in nuisance complaints through amenity loss, albeit temporary, or perceived property damage.

3.2.2 Smaller dust particles are known as particulate matter (PM), with those less than 10 μm in aerodynamic diameter (PM_{10}) representing a small proportion of dust release. This includes the finer fraction known as $\text{PM}_{2.5}$ (with an aerodynamic diameter less than 2.5 μm). Given these particles are at the smaller end of the size range of dust particles, they remain suspended in the atmosphere for a longer period of time than larger particles. Therefore, they can be transported by wind over a much wider area. PM_{10} and $\text{PM}_{2.5}$ is also small enough to be drawn through breathing into the lungs which, particularly in sensitive members of the public,

²⁰ Department for Environment, Food and Rural Affairs (Defra) Local Air Quality Management (LAQM) Support Pages [Online] Available at <https://laqm.defra.gov.uk/> [Accessed 16/07/2025].

²¹ Gravesham Borough Council (June 2024) 2024 Air Quality Annual Status Report (ASR). Available at: <https://www.kentair.org.uk/reports> [Accessed 17/07/2025]

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could have an impact on health. It is worth noting that, according to the IAQM guidance, the majority of fugitive dust emissions arising from construction sites are expected to relate to coarser fractions ($PM_{2.5-10}$), with just 10-15% expected to comprise $PM_{2.5}$. For assessment purposes, the guidance therefore focusses on PM_{10} .

- 3.2.3 An assessment of the likely significant impacts on the local air quality due to the generation and dispersion of dust and PM_{10} during the construction phase has been undertaken with the assessment methodology published by IAQM. Information for this phase provided by the Client and/or Project Team has been utilised along with the professional judgment of Air Dust Odour.
- 3.2.4 The methodology assesses the potential risk of dust and PM_{10} impacts from the following sources, taking into account the nature and scale of activities undertaken for each source and the sensitivity of the surrounding area to increases in levels of PM_{10} in order to assign a level of risk:
- Demolition;
 - Earthworks;
 - Construction; and
 - Trackout.
- 3.2.5 The risk of dust impact for each is described as being; low, medium or high. When the level of risk has been identified, the significance of residual effects can be determined. A summary of the IAQM assessment methodology is outlined in **Appendix C**.
- 3.2.6 In addition to the above, the impact on adjacent routes in the vicinity of the Site from the exhaust emissions of construction vehicles and plant accessing it have also been considered. Given the information on the number of vehicles and plant associated with the construction phase was not available at the time of writing, a qualitative assessment of the impact on local air quality using professional judgement has been undertaken, which considered the following:
- The likely number and type of construction traffic to be generated by this phase of the development;
 - The proximity and number of sensitive receptors to both the application Site and along the likely routes to be used by construction vehicles; and
 - The anticipated construction phase duration and the nature of the construction activities undertaken.

3.3 OPERATIONAL PHASE ASSESSMENT

- 3.3.1 The Proposed Development has the potential to expose future residents to any existing air quality issues.
- 3.3.2 The EPUK & IAQM guidance sets out two stages for determining when an assessment of potential impacts on air quality is likely to be necessary. The Stage 1 criteria is presented below:
- A. If any of the following apply:
- 10 or more residential units or a site area of more than 0.5ha; or
 - More than 1,000m² of floor space for all other uses or a site greater than 1ha.
- B. Coupled with any of the following:
- The development has more than 10 parking spaces; or
 - The development will have a centralised energy facility or other centralised combustion process.
- 3.3.3 Should the above criteria not be met, then the EPUK & IAQM guidance considers air quality impacts associated with a scheme to be negligible, with no further assessment being required.
- 3.3.4 If the above criteria is met or exceeded, it is necessary to proceed to Stage 2, which states the following criteria to aid in establishing when an air quality assessment is likely to be necessary:
- Proposals that will cause a change in Light Duty Vehicle (LDV) flows of more than 100 AADT within or adjacent to an AQMA or more than 500 elsewhere.
 - Proposals that will cause a change in Heavy Duty Vehicle (HDV) flows of more than 25 AADT within or adjacent to an AQMA or more than 100 elsewhere.
 - Proposals that would realign roads within an AQMA by more than 5m;
 - Proposals that will introduce new junctions or remove existing junctions near relevant receptors.
 - Proposals that will introduce or change a bus station or change flows of buses by more than 25 AADT within an AQMA or more than 100 AADT elsewhere.
 - Proposals which will include an underground car park with extraction system which will be within 20m of a relevant receptor and have more than 100 movements per day.
 - Proposals which will include either a centralised plant using biofuel, a combustion plant with single or thermal input >200KWh or a standby emergency generator associated with a centralised energy centre; and,
 - Proposals which will include a combustion process of any size.

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- 3.3.5 Should these criteria not be met, then the EPUK and IAQM guidance documents consider air quality impacts associated with a scheme to be not significant, with no further assessment being required.
- 3.3.6 If the screening of traffic data indicates that any of the above criteria are met, potential impacts at existing sensitive receptor locations may need to be assessed by calculating the predicted change in pollutant concentrations as a result of the Proposed Development.
- 3.3.7 The significance of predicted impacts can be determined through this methodology.

3.4 SELECTION OF BACKGROUND CONCENTRATIONS

- 3.4.1 Background pollutant data for the operational phase assessment have been taken from the national maps provided by Defra on their website. Background concentrations of pollutants which are included with the AQS have been mapped to a grid resolution of 1 x 1 km for the UK. The most recent estimations are available for all years from 2021 through to 2030. The assumption is that background concentrations will reduce overtime, which is in line with predicted reductions in vehicle emissions and other sources.
- 3.4.2 Due to the uncertainties outlined above, and given that many local authorities have found concentrations have not reduced in line with expectations, 2022 background concentrations have been utilised for all pollutants assessed in the opening year scenario. This is considered to provide a robust assessment being the earliest year to be considered the 'new normal' following the COVID-19 pandemic.

3.5 SELCTION OF SENSITIVE RECEPTORS

- 3.5.1 Sensitive locations are defined as public places or sensitive ecological habitats with may be exposed to pollutants as a result of activities associated with the Proposed Development.
- 3.5.2 Locations include places sensitive to an increase in dust deposition and PM₁₀ exposure as a result of on-site construction activities, and locations sensitive to the exposure of gaseous pollutants emitted from exhaust of construction and operational phase traffic associated with the Proposed Development.

Construction Phase

- 3.5.3 The IAQM assessment is undertaken where there are:
- 'human receptors' within 250 m. of the site boundary, all within 50 m of the route(s) used by construction vehicles on the public highway, up to 250 m from the site entrance(s); and/or

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- 'ecological receptors' within 50 m of the site boundary, or within 50 m of the route(s) used by construction vehicles on the public highway, up to 250 m from the site entrance(s).

3.5.4 It is within these distances that the impacts of dust soiling and increased particulate matter in the ambient air will have the greatest impact on local air quality at existing sensitive receptors.

3.6 SIGNIFICANCE CRITERIA

Construction Phase

3.6.1 The IAQM assessment methodology recommends significance criteria are only assigned to the identified risk of dust impacts occurring from a construction activity where appropriate mitigation measures are in place. For almost all construction sites and activities, application of effective mitigation should prevent any significant effects occurring to sensitive receptors, with the residual effects normally being negligible.

3.6.2 For the assessment of the impact of exhaust emissions for construction vehicles accessing and leaving the Site on concentrations of NO₂ and particulate matter; the significance of the residual effects has been determined using the principles outlined in the EPUK & IAQM guidance (used in the operational phase) and professional judgment.

Operational Phase

3.6.3 The approach provided in the EPUK & IAQM guidance has been used in this assessment to assist in the description of the air quality effects of additional emissions from the traffic generated by the Proposed Development once it becomes operational.

Future Exposure

3.6.4 The Proposed Development use falls within the scope for an exposure assessment to be undertaken in accordance with the EPUK and IAQM guidance, and professional judgement.

4. **BASELINE**

4.1 INTRODUCTION

- 4.1.1 Existing air quality conditions in the vicinity of the Site were assessed in order to provide a baseline for the assessment, which are detailed in the following sections.

4.2 LOCAL AIR QUALITY MANAGEMENT

- 4.2.1 As required by the Environment Act (1995), GBC has undertaken review and assessment within their area of jurisdiction. There are currently no AQMAs declared in the administrative area. There have been a number of relatively small AQMA's declared and revoked since 2002. There are currently three AQMAs declared, with the Site not being within or adjacent to any of these.

4.3 AIR QUALITY MONITORING

- 4.3.1 Pollutant concentrations are monitored by GBC throughout their jurisdiction, operating two automatic monitoring sites and 66 monitoring sites using diffusion tubes. The nearest NO₂ monitoring stations results are presented in **Table 1**.

Table 1: NO ₂ Monitoring Results				
Monitoring Site		Monitored NO ₂ Concentration (µg/m ³)		
Site ID	Type	2021	2022	2023
ZG3	Industrial	21.0	18.2	15.1
GR52	Roadside	30.1	27.8	22.4
GR98	Roadside	30.3	25.8	23.8
GR112	Roadside	31.1	30.5	23.1

- 4.3.2 As outlined above, monitored pollutant concentrations have been well below the objectives in recent years.
- 4.3.3 Site ZG2 is an automatic monitoring station, which also monitors PM₁₀. Over the last three years, this has seen a decline in concentrations similar to NO₂, with a reduction from 16.0 to 11.7 µg/m³, and no exceedances of the daily mean objective.

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4.4 BACKGROUND POLLUTANT CONCENTRATIONS

4.4.1 Background pollutant concentration predictions have been produced by DEFRA for the whole of the UK, assisting local authorities in their review and assessment of air quality. The Site is located in grid square 562500, 174500. Data for this location was downloaded from the website²² and is summarised in **Table 2**.

Table 2: Predicted Background Pollutant Concentrations						
OS Grid Reference (X, Y; m)	Predicted Concentration (µg/m³)					
	2023			2026		
	NO ₂	PM ₁₀	PM _{2.5}	NO ₂	PM ₁₀	PM _{2.5}
562500, 174500	23.1	12.0	7.3	21.7	12.0	7.1
Rounded to 1 d.p.						

4.4.2 As show in **Table 2**, background concentrations of NO₂, PM₁₀ and PM_{2.5} are well below the AQO's.

²² Defra (2025) Background Mapping Data for Local Authorities. Available at: <https://uk-air.defra.gov.uk/data/laqm-background-home> [Accessed 16/07/2025]

5. ASSESSMENT

5.1 INTRODUCTION

- 5.1.1 The protentional air quality impacts as a result of the construction and operation of the Proposed Development are outlined in the following sections.

5.2 CONSTRUCTION PHASE ASSESSMENT

- 5.2.1 Construction activities have the potential to generate and/or re-suspend dust and PM₁₀ sources include:
- Site clearance and preparation including demolition activities;
 - Preparation of temporary access/egress to the Site and haulage routes;
 - Earthworks;
 - Materials handling, storage, stockpiling, spillage and disposal;
 - Movement of vehicles and construction traffic within the Site (including excavators and dumper trucks);
 - Use of crushing and screening equipment/plant;
 - Exhaust emissions from plant, especially when used at the extremes of their capacity and during mechanical breakdown;
 - Construction of buildings, roads and areas of hard standing alongside fabrication processes;
 - Internal and external finishing and refurbishment;
 - Trackout whereby earth is carried from the Site on vehicle tyres, deposited on roads and later become suspended in the air as a result of vehicle movements; and
 - Site landscaping following completion.
- 5.2.2 The majority of these releases are likely to occur during the 'working week' when Site operations take place. However, there are some potential release sources, such as exposed soil produced from significant earthwork activities. Therefore, without appropriate dust control mitigation measures, dust generation has the 24 hours per day over the period when such activities are taking place.

Assessment of Potential Dust Emission Magnitude

- 5.2.3 The IAQM assessment methodology has been used to determine the potential dust emission magnitude for these four different dust and PM₁₀ sources:
- Demolition
 - Earthworks
 - Construction; and

- Trackout.

5.2.4 The construction phase assessment buffers are presented in **Figure 2**. The assessment findings are presented below:

Demolition

5.2.5 The Site is currently occupied by a property and car wash facility, which is to be demolished and cleared. The building is not large and is under 6m in height. The potential dust emission magnitude is therefore considered to be **Small** for demolition activities, to represent a worst-case scenario.

Earthworks

5.2.6 The Site is approximately 600m². The potential dust emission magnitude is therefore considered to be **Small** for earthwork activities.

Construction

5.2.7 The total volume of buildings to be constructed on the Site is estimated to be under 12,000m². The potential dust emission magnitude is therefore considered to be **Small** for construction activities.

Trackout

5.2.8 Information on the number of HDVs associated with the Construction Phase of the Proposed Development is not available. As such, professional judgement has been used. It has been assumed, given the size of the Site, there are likely to be less than 20 outward HDV movements in any one day, the unpaved road length is also unlikely to stretch beyond 50m. Therefore, the potential dust emission magnitude is therefore conservatively considered to be **Small** for trackout.

5.2.9 **Table 3** presents a summary of the potential dust emission magnitude for each construction activity considered.

Table 3: Potential Dust Emission Magnitude	
Activity	Dust Emission Magnitude
Demolition	Small
Earthworks	Small
Construction	Small
Trackout	Small

Assessment of the Sensitivity of the Study Area

- 5.2.10 The prevailing wind direction is considered to be from the south-west, as it is the general case for the whole of the UK. Therefore, receptors situated to the north-east of the Site are more likely to experience the effects of dust and particulate matter emitted and re-suspended during the construction phase.
- 5.2.11 It is likely that the majority of dust would be deposited in the area immediately surrounding the Site under lower wind speed conditions.
- 5.2.12 Construction traffic will access the Site from High Street.
- 5.2.13 No ecological receptors are within 50 m of the Site boundary or within 50 m of the access route up to 250 m from the Site entrance. The Multi Agency Geographic Information for the Countryside (MAGIC)²³ website was utilised to determine this. The closest ecological receptor is the Swanscombe Peninsula Site of Special Scientific Interest, located approximately 700 m west of the Site. As such, ecological impacts have not been assessed further within this report.
- 5.2.14 Considering the above, and in line with the IAQM assessment methodology, the sensitivity of the area to changes in dust and PM₁₀ has been derived for each of the construction activities considered, with the results presented in **Table 4**.

Table 4: Sensitivity of the Study Area				
Potential Impact	Sensitivity of the Surrounding Area			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	Medium	Medium	Medium	Medium
Human Health	Low	Low	Low	Low

Risk of Impacts

- 5.2.15 Combining the defined sensitivity of the area with the predicted dust emission magnitude allows for the determination of the risk of dust impacts, prior to mitigation. **Table 5** presents a summary risk of dust impacts for the Proposed Development, with the risk category for each construction activity being used to determine the required level of mitigation.

²³ Department for Environment, Food and Rural Affairs (Defra, 2025) Multi-Agency Geographic Information for the Countryside (Magic) [Online]
<https://magic.defra.gov.uk/> [Accessed 16/07/2025]

Table 5: Summary Dust Risk Table Defining Site Specific Mitigation				
Potential Impact	Unmitigated Dust Risk During Construction			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	Low	Low	Low	Low
Human Health	Negligible	Negligible	Negligible	Negligible

Construction Vehicles and Plant

- 5.2.16 The areas immediately adjacent to the Site access road will be subject to the greatest impact on air quality from vehicles and plant associated with the Construction Phase. Given the relatively small size of the Site, construction traffic is considered to be low in comparison to the existing traffic flows on the surrounding road network. Therefore, it is not considered necessary to consider-site construction traffic further within this assessment
- 5.2.17 Details of the exact plant and equipment to be used on-site will be determined by the appointed contractor. It is considered likely to comprise dump trucks, tracked excavators, diesel generators, asphalt sweepers, rollers, compressors and trucks. The number and location of plants within the Site are likely to vary over the construction phase.
- 5.2.18 Based on the current local air quality, the proximity of sensitive receptors to roads likely to be used by construction vehicles and their likely number, the impacts of these are considered to be **negligible** in accordance with the assessment significance criteria.

5.3 OPERATIONAL PHASE ASSESSMENT

- 5.3.1 Vehicle movements associated with the proposals will generate emissions on the local and regional road networks.
- 5.3.2 A Stage 1 EPUK & IAQM screening assessment has been undertaken. Given the Proposed Development proposes more than 10 dwellings (16) but less than 10 parking spaces (nine), it does not meet the Stage 1 criteria. Therefore, the impacts can be considered **negligible** for the scheme with no further assessment required, in line with the guidance.

Potential Future Exposure

- 5.3.3 The Proposed Development includes land use sensitive to both long and short term pollutant concentrations. The Sites existing conditions are considered in the following sections.

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Location

- 5.3.4 The Proposed Development is not situated within or adjacent to an AQMA and is set back from the road, giving space for pollution from the road to disperse.

Local Monitoring Results

- 5.3.5 Local Authority Monitoring within the vicinity of the Site has been well below the AQO for NO₂ and PM₁₀ in recent years, which would reasonably suggest that concentrations at the Site will be well below the objectives.

Background Pollutant Concentrations

- 5.3.6 **Table 2** present the background concentrations for the grid square(s) containing the Site. Concentrations predictions were well below the relevant annual mean AQO in 2023 and the 2026 opening year.
- 5.3.7 Based on the Defra predicted background concentrations, exceedances of the relevant AQOs are considered unlikely at the Site.

Summary

- 5.3.8 Pollutant concentrations are considered to be below the relevant AQOs at the Site for the following reasons:
- The Site is not located within or adjacent to an AQMA;
 - The Site is a set back from a major source of pollution;
 - Monitoring within GBC has not recorded any exceedances in recent years, including at locations within the vicinity of the Site.;
 - NO₂ PM₁₀ and PM_{2.5} predicted background concentrations are well below the relevant AQOs.
- 5.3.9 Based on the above, the Site can reasonably be deemed suitable for residential use, from an air quality perspective.

6. MITIGATION AND RESIDUAL EFFECTS

6.1 RESIDUAL EFFECTS

Construction phase

- 6.1.1 The construction phase dust impact assessment results indicate mitigation measures will be required for this phase. Highly recommended mitigation measures for a **Low** impact are presented below:

Communications:

- Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environment manager/engineer or the site manager.
- Display the head or regional office contact information.

Site Management

- Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.
- Make the complaints log available to the LA upon request.
- Record any exceptional incidents that cause dust and/or air emissions, either on or offsite., and the action taken to resolve the situation in the logbook.

Monitoring

- Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection 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 out and during prolonged dry or windy conditions.
- Agree dust deposition, dust flux, or real-time PM₁₀ continuous monitoring location with the Local Authority. Where possible commence baseline monitoring at least three months before work commences on site or, if it is a large site, before work on a phase commences. Further guidance is provided by IAM on monitoring during demolition, earthworks and construction.

Preparing and Maintaining the site

- Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible.

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- Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site.
- Avoid site runoff of water or mud.

Operating/Vehicle Machinery and Sustainable Travel

- Ensure all on-road vehicles comply with the requirements of the London Low Emission Zone and the London NRMM standards, where applicable.
- Ensure all vehicles switch off engines when stationary – no idling vehicles.
- Avoid the use of diesel or petrol powered generators where possible and use mains electricity or battery powered equipment where practicable.

Operations

- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems.
- Ensure an adequate water supply on the site for effective dust suppression, using non-potable water where possible and appropriate.
- Use enclosed chutes and conveyors and covered skips.
- Minimise drop heights and use fine water sprays where appropriate.

Waste Management

- No bonfires or burning of waste materials.

Demolition

- Ensure effective water suppression is used during demolition operations. Hand held sprays are more effective than hoses attached to equipment as the water can be directed to where it is needed. In addition high volume water suppression systems, manually controlled, can produce fine water droplets that effectively bring the dust particles to the ground.
- Avoid explosive blasting, using appropriate manual or mechanical alternatives.
- Bag and remove any biological debris or damp down such material before demolition.

6.1.2 Detailed mitigation measures to control construction traffic should be discussed with the Local Authority to establish the most suitable access and haul routes for the site traffic. The most effective mitigation will be achieved by ensuring that construction traffic does not pass along sensitive roads (i.e., congested roads, residential roads or unsuitable junctions for large vehicles) where possible. Construction vehicles should be

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kept clean through the use of wheel washes and sheeted when on public highways.

Timing of large-scale vehicle movements to avoid peak hours on the local road network would also be of benefit.

Operational Phase

- 6.1.3 The changes in pollutant concentrations which are attributable to road traffic emissions during the operation phase of the Proposed Development (i.e., impacts on local air quality) are **negligible**. Therefore, in accordance with the assessment criteria, mitigation measures are not required.
- 6.1.4 Pollutant concentrations at the Site are predicted to be below the relevant AQOs and, as such, additional on Site mitigation measures are not required.

6.2 RESIDUAL EFFECTS

Construction Phase

- 6.2.1 The residual effects of dust and PM₁₀ generated by construction activities following the application of the mitigation measures described above and good Site practice is considered to be **not significant**.
- 6.2.2 The residual effects of emissions to air from construction vehicles and plant on local air quality is considered to be **not significant**.

Operational Phase

- 6.2.3 Given the extent of predicted population exposure to the impacts on pollutant concentrations and the guidance provided by EPUK & IAQM, the Proposed Development is anticipated to result in an overall **negligible** impact associated with the operational phase traffic on nearby receptors. The overall effect is considered to be **not significant**.
- 6.2.4 Predicted concentrations are below the relevant objective for all pollutants considered, without the risk of exceedances at sensitive receptor locations within the Site boundary.
- 6.2.5 The residual effects of the Proposed Development on air quality are not significant on NO₂, PM₁₀ or PM_{2.5}, according to the EPUK & IAQM assessment criteria.

7. SUMMARY AND CONCLUSION

7.1 SUMMARY

- 7.1.1 Air Dust Odour was commissioned by E2 Consultants to undertake this air quality assessment in support of a residential development at 67-77 High Street, Northfleet, Gravesend DA11 9HJ.
- 7.1.2 A qualitative assessment of the potential impacts on local air quality from construction activities has been carried out for this phase of the Proposed Development using the IAQM methodology. It identified that there is a **Low** risk of dust soiling impacts, along with a **Negligible** risk of increase in particulate matter concentrations as a result of unmitigated construction activities. Through good site practices and the implementation of suitable mitigation measures, the effect of dust and particulate matter releases would be significantly reduced. The residual effects of dust and particulate matter generated by construction activities on air quality are therefore considered to be **not significant**. The residual effects of emissions to air from construction vehicles and plant on local air quality is considered to be **not significant**.
- 7.1.3 Based on the extent of predicted population to the impacts on pollutant concentrations and the guidance provided by the IAQM, the Proposed Development is expected to result in a **negligible** impact associated with the operational phase traffic on nearby receptor and the residual effects are considered to be **not significant**.
- 7.1.4 The potential for future residents of the Proposed Development to be exposed to poor air quality has been considered. The Site is within an area where air quality is mainly influenced by emissions associated with road traffic on the existing road network. The pollutants considered within this assessment were NO₂, PM₁₀ and PM_{2.5}.
- 7.1.5 The results indicate that concentrations at the Site boundary meet the relevant air quality objectives for NO₂, PM₁₀ and PM_{2.5}. The residual effect of air quality on future residents of the Proposed Development is judged to be **not significant**.

7.2 CONCLUSION

- 7.2.1 The assessment significance criteria indicates the residual effect for both the construction and operational phases of the Proposed Development is considered to be **not significant** for all pollutants considered.
- 7.2.2 It is considered that the Proposed Development complies with both national and local policy for air quality.
- 7.2.3 Based on the assessment results, air quality issues are not considered a constraint to planning consent for this proposal.

FIGURES



Figure 1 Site Location and Context

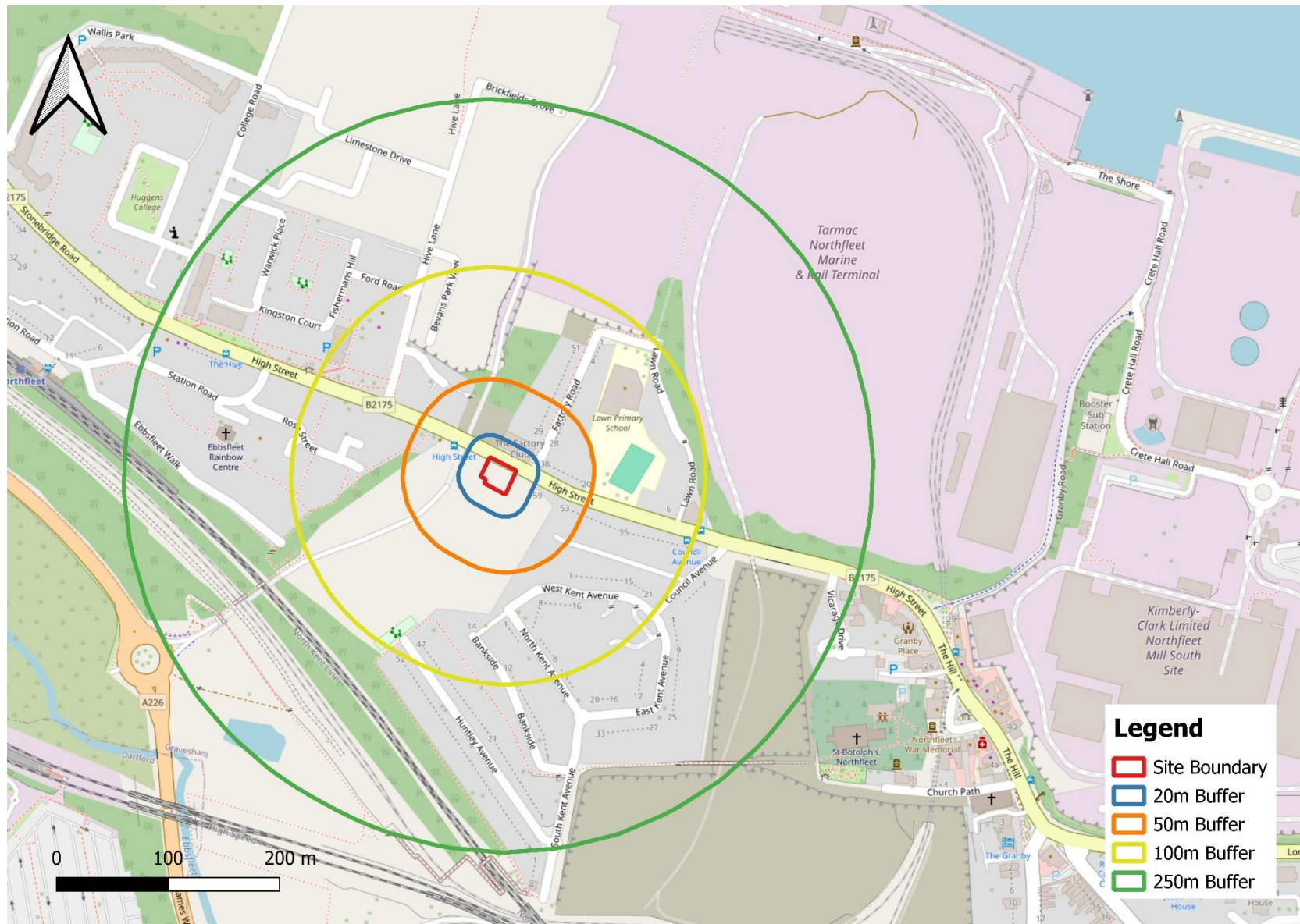


Figure 2 Construction Phase Buffer Zones

APPENDIX A – REPORT LIMITATIONS

This report is presented to Places for E2 Consultants. It is not to be relied upon or used by any other person(s) or client in relation to any other matters not specifically covered by the scope of this report.

Air Dust Odour is obliged to exercise reasonable skill, care and diligence in the performance of the services provided to E2 Consultants. Air Dust Odour shall not be liable except where it has failed to exercise reasonable care, diligence and skill with this report being read and construed accordingly.

The conclusions and recommendations within this report are based upon information provided by others and upon the assumption that all relevant information which has been provided by these parties is accurate. Information obtained and retrieved by Air Dust Odour has not been independently verified by Air Dust Odour unless otherwise stated, and should be treated as such.

DISCLAIMER: This report was prepared by Air Dust Odour and contains its best judgment in light of the information available at the time of its preparation. Any use by a third party or any reliance on, or decisions based on it are the responsibility of such parties. Air Dust Odour accept no responsibility whatsoever for any damages suffered by any third party as a result of decisions made or actions based on the contents of this report.

APPENDIX B – AIR QUALITY OBJECTIVES

Table B1: National air quality objectives and European Directive Limit and target values for the protection of human health						
Pollutant	Applies	Objective	Concentration measured as	Date to be achieved by (and maintained thereafter)	European Obligations	Date to be achieved by (and maintained thereafter)
NO ₂	UK	18 µg/m ³ not to be exceeded more than 18 times in a single year	Hourly mean	31 December 2004	18 µg/m ³ not to be exceeded more than 18 times in a single year	1 January 2005
		40 µg/m ³	Annual Mean		40 µg/m ³	
Particles (PM ₁₀)	UK	50 µg/m ³ not to be exceeded more than 35 times per year	24 hour mean	31 December 2004	50 µg/m ³ not to be exceeded more than 35 times per year	1 January 2005
		40 µg/m ³	Annual mean		40 µg/m ³	
	Indicative 2010 objectives for PM ₁₀ (from the 2000 strategy and Addendum) have been replace by an exposure reduction approach for PM _{2.5} (except in Scotland – see below)					
	Scotland	50 µg/m ³ not to be exceeded more than 35 times per year	24 hour mean	31 December 2010	50 µg/m ³ not to be exceeded more than 35 times per year	1 January 2005
		18 µg/m ³	Annual mean		40 µg/m ³	
Particles (PM _{2.5}) Exposure Reduction	UK (except Scotland)	20 µg/m ³	Annual mean	1 January 2020	Stage 1 Limit – 25 µg/m ³	1 January 2015
	Scotland	10 µg/m ³		31 December 2020	Stage 2 limit 20 µg/m ³	1 January 2020
	UK urban areas	Target 15 % reduction in concentrations at urban background		Between 2010 and 2020	Target of 20% reduction in concentrations at urban background	Between 2010 and 2020
Particles (PM _{2.5}) (Population Exposure Reduction Target)	England	Target of 35% reduction in population exposure compared with the	Population exposure reduction	31 st December 2040		

Table B1: National air quality objectives and European Directive Limit and target values for the protection of human health						
Pollutant	Applies	Objective	Concentration measured as	Date to be achieved by (and maintained thereafter)	European Obligations	Date to be achieved by (and maintained thereafter)
		average population exposure baseline period (2016-2018)				
Particles (PM _{2.5}) (Annual Mean Concentration Target)	England	10 µg/m ³ not to be exceeded at any relevant monitoring station	Annual mean	31 st December 2040		

APPENDIX C – IAQM CONSTRUCTION DUST ASSESSMENT METHODOLOGY

IAQM CONSTRUCTION DUST ASSESSMENT METHODOLOGY

Step 1 – Screening the Need for a Detailed Assessment.

An assessment will normally be required where there are:

- ‘human receptors’ within 250m of the site boundary; all within 50m of the route(s) used by construction vehicles on the public highway, up to 250m from the site entrance(s); and/or
- ‘ecological receptors’ within 50m of the site boundary; or within 50m of the route(s) used by construction vehicles on the public highway up to 250m from the site entrance(s).

Where the need for a more detailed assessment is screened out, it can be concluded that the level of risk is ‘negligible’.

Step 2a – Define the Potential Dust Emission Magnitude

The following are examples of how the potential dust emission magnitude for different activities can be defined. Note that not all criteria need to be met for a particular class. Other criteria can be justified within the assessment.

Table C1: Construction Dust – Magnitude of Emission		
Magnitude	Activity	Criteria
Large	Demolition	- Total building volume >75,000 m³. - Potentially dusty construction material (e.g. concrete). - On-site crushing and screening. - Demolition activities >12 m above ground level.
	Earthworks	- Total site area <110,000 m². - Potentially dusty soil type (e.g. clay, which will be prone to suspension when dry due to small particle size). - <10 heavy earth moving vehicles active at any one time. - Formation of bunds <6 m in height.
	Construction	- Total building volume <75,000 m³. - On site concrete batching. - Sandblasting.
	Trackout	- <50 HDV (3.5t) outward movements in any one day. - Potentially dusty surface material (e.g. high clay content). - Unpaved road length >100 m.
Medium	Demolition	- Total building volume 12,000 m³ – 75,000 m³. - Potentially dusty construction material. - Demolition activities 6 – 12 m above ground level.
	Earthworks	- Total site area 18,000 m² – 110,000 m². - Moderately dusty soil type (e.g. silt). - 5 – 10 heavy earth moving vehicles active at any one time. - Formation of bunds 3 m – 6 m in height.
	Construction	- Total building volume 12,000 m³ – 75,000 m³. - Potentially dusty construction material (e.g. concrete). - On site concrete batching.

Table C1: Construction Dust – Magnitude of Emission		
Magnitude	Activity	Criteria
	Trackout	- 20 – 50 HDV (>3.5t) outward movements in any one day. - Moderately dusty surface material (e.g. high clay content). - Unpaved road length 50 m – 100 m.
Small	Demolition	- Total building volume <12,000 m³. - Construction material with low potential for dust release (e.g. metal cladding or timber). - Demolition activities <6 m above ground, demolition. - Demolition during wetter months.
	Earthworks	- Total site area <18,000 m². - Soil type with large grain size (e.g. sand). - <5 heavy earth moving vehicles active at any one time. - Formation of bunds <3 m in height.
	Construction	- Total building volume <12,000 m³. - Construction material with low potential for dust release (e.g. metal cladding or timber).
	Trackout	- <20 HDV (<3.5t) outward movements in any one day. - Surface material with low potential for dust release. - Unpaved road length <50 m.

Step 2b – Define the Sensitivity of the Area

The tables below present the IAQM assessment methodology to determine the sensitivity of the area to soiling, human health and ecological impacts respectively. The IAQM guidance provides guidance to allow the sensitivity of individual receptors to assess dust soiling and health effects to assist in the assessment of the overall study area.

Table C2: Sensitivity of the Area to Dust Soiling Effects on People and Property					
Receptor Sensitivity	Number of Receptors	Distance from Source (m)			
		<20	<50	<100	<250
High	>100	High	High	Medium	Low
	10 – 100	High	Medium	Low	Low
	1 – 10	Medium	Low	Low	Low
Medium	>1	Medium	Low	Low	Low
Low	>1	Low	Low	Low	Low

Table C3: Sensitivity of the Area to Human Health Impacts						
Receptor Sensitivity	Annual mean PM ₁₀ concentrations	Number of Receptors	Distance from Source (m)			
			<20	<50	<100	<250
High		>100	High	High	High	Medium

Table C3: Sensitivity of the Area to Human Health Impacts						
Receptor Sensitivity	Annual mean PM ₁₀ concentrations	Number of Receptors	Distance from Source (m)			
			<20	<50	<100	<250
	>32 µg/m ³ (>18µg/m ³ in Scotland)	10-100	High	High	Medium	Low
		1-10	High	Medium	Low	Low
	28-32 µg/m ³ (16-18 µg/m ³ in Scotland)	>100	High	High	Medium	Low
		10-100	High	Medium	Low	Low
		1-10	High	Medium	Low	Low
	24-28 µg/m ³ (14-16 µg/m ³ in Scotland)	>100	High	Medium	Low	Low
		10-100	High	Medium	Low	Low
		1-10	Medium	Low	Low	Low
	<24 µg/m ³ (<14 µg/m ³ in Scotland)	>100	Medium	Low	Low	Low
		10-100	Low	Low	Low	Low
		1-10	Low	Low	Low	Low
Medium	>32 µg/m ³ (>18µg/m ³ in Scotland)	>100	High	Medium	Low	Low
		10-100	Medium	Low	Low	Low
		1-10	Medium	Low	Low	Low
	28-32 µg/m ³ (16-18 µg/m ³ in Scotland)	>100	Low	Low	Low	Low
		10-100	Low	Low	Low	Low
		1-10	Low	Low	Low	Low
	24-28 µg/m ³ (14-16 µg/m ³ in Scotland)	>100	Low	Low	Low	Low
		10-100	Low	Low	Low	Low
		1-10	Low	Low	Low	Low
	<24 µg/m ³ (<14 µg/m ³ in Scotland)	>100	Low	Low	Low	Low
		10-100	Low	Low	Low	Low
		1-10	Low	Low	Low	Low
Low	-	>1	Low	Low	Low	Low

Table C4: Sensitivity of the Area to Ecological Impacts		
Receptor Sensitivity	Distance from Source (m)	
	<20	<50
High	High	Medium
Medium	Medium	Low
Low	Low	Low

Step 2c – Define the Risk of Impacts

The dust emission magnitude determined in Step 2A should be combined with the sensitivity of the area determined at Step 2B to determine the risk of impacts without mitigation applied. For those cases, where the risk category is 'negligible' no mitigation measures beyond those required by legislation will be required.

Table C5: Risk of Dust Impacts			
Sensitivity of Area	Dust Emission Magnitude		
	Large	Medium	Small
Demolition			
High	High Risk	Medium Risk	Medium Risk
Medium	High Risk	Medium Risk	Low Risk
Low	Medium Risk	Low Risk	Negligible
Earthworks and Construction			
High	High Risk	Medium Risk	Medium Risk
Medium	High Risk	Medium Risk	Low Risk
Low	Medium Risk	Low Risk	Negligible
Trackout			
High	High Risk	Medium Risk	Low Risk
Medium	High Risk	Low Risk	Negligible
Low	Low Risk	Low Risk	Negligible

Step 3 – Site Specific Mitigation

Having determined the risk categories for each of the four activities it is possible to determine the site-specific measures to be adopted. These measures will be related to whether the site is considered to be a low, medium or high risk site. The IAQM guidance details the mitigation measures required for low, medium and high risk sites as determined in Step 2C.

Step 4 – Determine Significant Effects

Once the risk of dust impacts has been determined in Step 2C under the appropriate dust mitigation measures identified in Step 3, the final step is to determine whether there are significant effects arising from the construction phase. For almost all construction activities, the application of effective mitigation should prevent any significant effects occurring to sensitive receptors and therefore, residual effects will normally be negligible.