



Air Quality Assessment:

Land at Dutton Lane, Eastleigh

Determinari-001 Ltd

5th August 2026



Report Details:

Report Title	Air Quality Assessment
Site	Land at Dutton Lane, Eastleigh
Client	Determinari-001 Ltd
Report No.	H4662 – AQ – v3

Version History:

Version	Date	Notes	Author	Checked
V1	27 th November 2025	Original Issue	Will Totty MSc AMIEnvSc	Nick Hawkins MSc MIOA MIAQM
V2	19 th January 2026	Minor Amendments	Will Totty MSc AMIEnvSc	Nick Hawkins MSc MIOA MIAQM
V3	31 st July 2026	EH Comments Addressed	Will Totty MSc AMIEnvSc	Nick Hawkins MSc MIOA MIAQM
V4	5 th August 2026	Minor Text Changes	Will Totty MSc AMIEnvSc	Nick Hawkins MSc MIOA MIAQM

This report has been prepared by Hawkins Environmental Limited for the sole purpose of assisting in gaining planning consent for the proposed development described in the introduction of this report.

This report has been prepared by Hawkins Environmental Limited with all reasonable skill, care and diligence, and taking account of the manpower and resources devoted to it by agreement with the client. Information reported herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid.

This assessment takes into account the prevailing conditions at the time of the report and assesses the impact of the development (if applicable) using data provided to Hawkins Environmental Limited by third parties. The report is designed to assist the developer in refining the designs for the proposed development and to demonstrate to agents of the Local Planning Authority that the proposed development is suited to its location. This should be viewed as a risk assessment and does not infer any guarantee that the site will remain suitable in future, nor that there will not be any complaints either from users of the development or from impacts emanating from the development site itself.

This report is for the exclusive use by the client named in the report. Hawkins Environmental Limited does not accept any liability in negligence for any matters arising outside of the agreed scope of works.

Unless otherwise agreed, the copyright of this document and all other Intellectual Property Rights remain the property of Hawkins Environmental Limited at all times.

Table of Contents

1.	INTRODUCTION	5
1.1.	Overview	5
1.2.	Site Description	5
2.	LEGISLATION, POLICY & GUIDANCE.....	7
2.1.	Legislation	7
2.2.	Planning Policy and Strategy.....	9
2.3.	Best Practice Guidance	11
3.	METHODOLOGIES	13
3.1.	Identification of Receptors	13
3.2.	Baseline Investigation.....	14
3.3.	Site Suitability	14
3.4.	Impact Assessment	15
3.5.	Construction Phase	16
4.	BASELINE CONDITIONS.....	17
4.1.	Air Quality Review and Assessment.....	17
4.2.	Pollutant Monitoring Data	18
4.3.	Background Concentrations	18
4.4.	Local Traffic Sources.....	19
4.5.	Industrial Emissions.....	20
4.6.	Evaluation.....	20
5.	SCOPING	22
5.1.	Site Suitability	22
5.2.	Impact Assessment	22
5.3.	Site Specific Scoping Summary	23
6.	MITIGATION.....	24
6.1.	Site Suitability	24
6.2.	Impact Assessment	24
7.	CONCLUSIONS & SUMMARY	25

List of Appendices

Appendix 1 Glossary of Terms.....	26
-----------------------------------	----

List of Tables

Table 2.1: Air Quality Standards Regulations 2010 – Limit Values.....	8
Table 3.1: Pollutant Change Impact Descriptors.....	15
Table 4.1: Background Pollutant Concentrations.....	19
Table 4.2: DfT Traffic Counts.....	19
Table 4.3: Baseline Data Sources.....	20
Table 5.1: Site Specific Scoping Summary.....	23

List of Figures

Figure 1.1: Site Location Plan.....	6
-------------------------------------	---

1. INTRODUCTION

1.1. Overview

Hawkins Environmental Limited has been instructed by Determinari-001 Ltd to undertake an Air Quality Assessment for the proposed redevelopment of land at Dutton Lane, situated in the town of Eastleigh in the Non-Metropolitan Borough of Eastleigh in the Non-Metropolitan County of Hampshire.

During the planning process, it has been identified that the site requires an Air Quality Assessment to determine whether there are constraints on the suitability of the site for use, and to determine whether the proposed development would have an adverse impact on local air quality.

Consequently, this assessment has been conducted in line with the latest guidance in order to determine whether the proposed development achieves compliance with national, regional and local planning policy.

This report primarily assesses concentrations of nitrogen dioxide (NO₂), particulate matter <10 µm diameter (PM₁₀), and particulate matter <2.5 µm diameter (PM_{2.5}). The assessment considers both the constraints that existing air quality may have on the development of the site (site suitability) as well as the impacts of development on local air quality (impact assessment).

This assessment has been undertaken in accordance with the guidance contained within the Institute of Air Quality Management (IAQM) and Environmental Protection UK (EPUK) *Land-Use Planning & Development Control: Planning for Air Quality* (January 2017) and the Department for Environment, Food and Rural Affairs' (Defra) *Local Air Quality Management Technical Guidance (TG22)* (May 2025).

As this is for a retrospective planning application, an assessment of the impact of the demolition and construction phases on local air quality has not been conducted.

A glossary of terms is detailed in **Appendix 1**.

1.2. Site Description

The proposed development site is situated on Dutton Lane in Eastleigh, bound to the south by Bishopstoke Road, to the west by a railway line, to the north by other commercial and light industrial uses and to the east by a terrace of residential properties.

The site currently comprises an open storage and operational facility of seven individual working yards.

The proposed development entails a retrospective planning application for change of use to storage and distribution (B8) in the southern and central portions of the site and general industry/storage and distribution (B2/B8) in the northern part of the site with all associated infrastructure.

The local planning authority is Eastleigh Borough Council.

A location plan of the proposed development site is provided in **Figure 1.1** below.

Figure 1.1: Site Location Plan



2. LEGISLATION, POLICY & GUIDANCE

2.1. Legislation

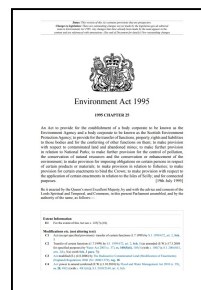
The legislative framework governing air quality in England is based on the primary legislation of the *Environment Act 1995* and the *Environment Act 2021*; as well as the secondary legislation of *The Air Quality Standards Regulations 2010* and *The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023*.

2.1.1. Environment Act 1995

The *Environment Act 1995* is a major piece of primary legislation addressing environmental issues in the UK, including air quality. It established the Environment Agency to regulate pollution, enforce environmental laws, and protect natural resources.

Part IV of the Act focuses on air quality, providing a legal framework for its management and improvement.

Part IV requires the UK government to develop and maintain a *National Air Quality Strategy* (see **Section 2.2.1**) with standards, objectives and measures for improving air quality, and introduced the *Local Air Quality Management (LAQM)* regime (see **Section 2.3.3**), mandating local authorities to monitor and assess air quality in their areas.



2.1.2. Air Quality Standards Regulations 2010

The *Air Quality Standards Regulations 2010* are secondary legislation under the earlier European Communities Act 1972. They transpose Directive 2008/50/EC (the Ambient Air Quality and Cleaner Air for Europe Directive) of the European Parliament into UK law.

The Regulations set limits for pollutant concentrations to protect human health and the environment. These limits remain in force post-Brexit as retained EU law.

The Regulations contain legally binding Limit Values that must not be exceeded. These are set for individual pollutants (sulphur dioxide, nitrogen dioxide, benzene, lead, PM₁₀, PM_{2.5} and carbon monoxide), specifying a concentration, an averaging time over which it is measured, the number of exceedances allowed per year (if any) and a date by which it must be achieved. Some pollutants have more than one Limit Value covering different averaging times.

The Regulations also contain Target Values for other pollutants (ozone, arsenic, cadmium, nickel, mercury, polycyclic aromatic hydrocarbons), structured similarly, which while not legally binding, must be met where possible without disproportionate costs.

The UK is bound to the Limit Values to mitigate harmful effects on health and the environment. The National Air Quality Objectives (NAQOs), as stated in the *National Air Quality Strategy* (see **Section 2.2.1**), are largely based on the Limit Values.

The Limit Values are based on an assessment of the health effects of each pollutant and are therefore a good indicator as to whether air quality may be detrimental to health. The limit values are presented in **Table 2.1**.

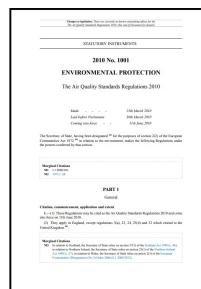


Table 2.1: Air Quality Standards Regulations 2010 – Limit Values

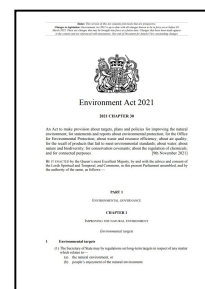
Pollutant	Averaging Period	Limit Value
Sulphur Dioxide (SO ₂)	One Hour	350 µg/m ³ no more than 24 times per calendar year
	One Day	125 µg/m ³ no more than three times per calendar year
Nitrogen Dioxide (NO ₂)	One Hour	200 µg/m ³ no more than 18 times per calendar year
	Calendar Year	40 µg/m ³
Benzene	Calendar Year	5 µg/m ³
Lead	Calendar Year	0.5 µg/m ³
PM ₁₀	One Day	50 µg/m ³ no more than 35 times per calendar year
	Calendar Year	40 µg/m ³
PM _{2.5}	Calendar Year	20 µg/m ³
Carbon Monoxide	Running 8-hour mean	10 mg/m ³

2.1.3. Environment Act 2021

The *Environment Act 2021* is a further significant piece of primary legislation in the UK that formed part of a new legal framework for environmental protection post-Brexit.

The Act made further provisions for air quality, primarily addressing the issue of fine particulate matter by mandating the setting of new targets for PM_{2.5} concentrations.

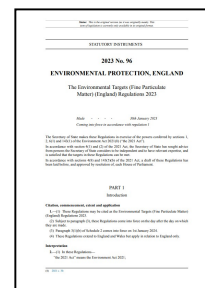
It also refined and strengthened the LAQM regime introduced under the Environment Act 1995, furthering the basis for the introduction of Clean Air Zones, and established the Office for Environmental Protection to protect and improve the environment by holding government and public authorities to account for their environmental policies.



2.1.4. Environmental Targets (Fine Particulate Matter) (England) Regulations 2023

The *Environmental Targets (Fine Particulate Matter) (England) Regulations 2023* are a piece of secondary legislation to protect human health and the environment by setting new legally binding targets on concentrations of PM_{2.5} under the framework set out in the Environment Act 2021. The two targets are:

- Annual mean concentration of PM_{2.5} to be 10 µg/m³ or lower by 2040, with an interim target of 12 µg/m³ by 2028.
- Population exposure to PM_{2.5} to be reduced by 35% compared to 2018 levels



by 2040, with an interim target of a 22% reduction by 2028.

The two targets are designed to work together to drive actions that both reduce concentrations where it is highest and reduce the pollution that everyone in the country experiences.

It should be noted that the meaning of 'Targets' here is different to that in the Air Quality Standards Regulations 2010, wherein 'Target Values' have specific meaning. Both PM_{2.5} 'Targets' as set out above are legally binding in the way that 'Limit Values' are in the 2010 Regulations.

Defra has published *PM_{2.5} Targets: Interim Planning Guidance* (see **Section 2.3.2**) to assist with the consideration of the new targets in planning decisions. The policy paper *Air quality Environment Act target delivery plan* has since revised the interim targets to an annual mean concentration of 10 µg/m³ and a 30% reduction in population exposure, both by 2030. This is considered increasingly ambitious in response to good progress towards the previous interim targets.

2.2. Planning Policy and Strategy

The air quality policy landscape is dominated by the National Planning Policy Framework (NPPF) and associated Planning Practice Guidance (PPG), supplemented by individual Local Plans. These exist alongside the National Air Quality Strategy, the overall framework published by Defra for managing ambient air quality and delivering air quality objectives.

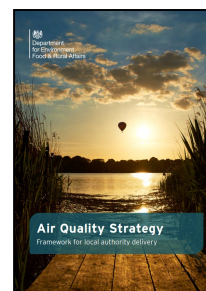
2.2.1. National Air Quality Strategy (2023)

As per Part IV of the Environment Act 1995, successive governments have produced, maintained and updated air quality policy in the form of various Air Quality Strategies.

The original *National Air Quality Strategy* 1997 was the first UK-wide strategy to set standards and objectives for major air pollutants. It was replaced by the *Air Quality Strategy for England, Scotland, Wales and Northern Ireland* in 2000 with an addendum in 2003, which tightened several of the objectives and introduced a new one for polycyclic aromatic hydrocarbons. A further major update came in 2007 with subsequent revisions in 2011, with new objectives for PM_{2.5}.

In April 2023 the UK Government published *Air Quality Strategy: Framework For Local Authority Delivery*, which supersedes the 2007 Strategy in respect of England only.

Like its predecessors, it sets out the *National Air Quality Objectives* (NAQOs). The NAQOs currently largely mirror the legally binding limit values in the Air Quality Standards Regulations 2010. However, they also incorporate the new legally binding PM_{2.5} targets as set out in the Environmental Targets (Fine Particulate Matter) (England) Regulations 2023.



2.2.2. National Planning Policy Framework (2024)

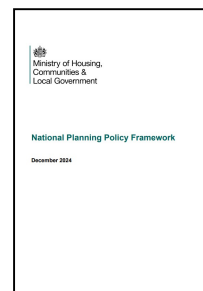
The National Planning Policy Framework (NPPF) is the main statement of planning policy in England. It was first published in March 2012 to consolidate fragmented national planning policy into a central framework with the 'presumption in favour of sustainable development' at its core. It has been regularly revised, with the latest version published in December 2024 and amended in February 2025 in response to proposed reforms to the planning system under the new government.

The NPPF sets out England's planning policies and guidance on their application. It guides local authorities in preparing Local Plans which, alongside the NPPF, form the basis for determining planning applications.

The NPPF states that *"the purpose of the planning system is to contribute to the achievement of sustainable development"* including the provision of homes, commercial development and supporting infrastructure in a sustainable manner. Sustainable development is framed around economic, social and environmental objectives. The NPPF supports a presumption in favour of sustainable development, unless adverse impacts would significantly and demonstrably outweigh the benefits.

With specific regard to air quality, the NPPF states that planning policies and decisions should prevent development from *"contributing to, being put at unacceptable risk from, or being adversely affected by"* unacceptable levels of pollution, and that development should, wherever possible, help improve local air quality.

The NPPF further requires planning policies and decisions to *"sustain and contribute towards compliance"* with relevant limit values and national objectives, taking account of AQMAs, Clean Air Zones and cumulative impacts. Opportunities to improve air quality or mitigate impacts should be identified, including through traffic and travel management and green infrastructure.



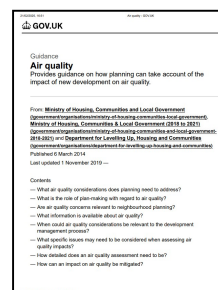
2.2.3. Planning Practice Guidance: Air Quality (2019)

Planning Practice Guidance (PPG) was launched as online guidance to support the NPPF, with the first Air Quality guidance published in March 2014. The guidance has since been revised, most recently in November 2019, and explains how planning should take account of the impact of new development on air quality.

The PPG notes that Defra undertakes an annual national assessment of air quality, using modelling and monitoring to determine compliance with Limit Values. It states that the potential impact of new development should be considered where this relevant limits have been exceeded, or are close to being exceeded.

In particular, concerns may arise where development could have an adverse effect in areas where air quality is already poor, especially where it could affect the implementation of air quality strategies or action plans, or risk breaching legal obligations.

With respect to Air Quality Assessments, the PPG states that assessments should be *"proportionate to the nature and scale of development proposed and the potential impacts"*, taking into account existing air quality, location, any air quality strategies or action plans, and the risk of breaching legal obligations.

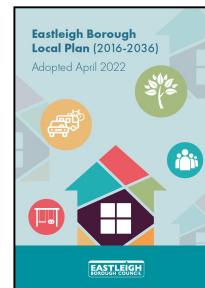


2.2.4. Eastleigh Borough Local Plan 2016-2036 (2022)

Eastleigh Borough Local Plan policy identifies air quality as a key environmental and transport-related issue, particularly in relation to road traffic and existing AQMAs.

Policy DM8 is the principal development management policy, requiring development to avoid unacceptable air pollution impacts and requiring air quality to be treated as a material consideration where proposals are within or adjacent to AQMAs, could give rise to a new AQMA, or could prejudice implementation of an Air Quality Action Plan.

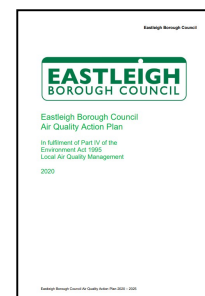
This is supported by strategic and development management transport policies requiring new development to minimise transport emissions, pollution and congestion, encourage sustainable modes of travel and provide appropriate mitigation where traffic impacts arise.



2.2.5. Eastleigh Borough Air Quality Action Plan 2020-2025 (2020)

Eastleigh Borough Council also have an Air Quality Action Plan which covers the period 2020-2025 and was prepared under the LAQM framework.

It remains useful in identifying local air quality priorities and borough-wide measures, although it predates the adoption of the Eastleigh Borough Local Plan 2016-2036 (2022) and reflects the former position of four declared AQMAs; with two having been revoked since.



2.3. Best Practice Guidance

Air quality guidance is principally shaped by the EPUK/IAQM guidance on planning and development control, which provides the main framework for determining when air quality assessments are required and how development-related impacts should be evaluated.

This is supported by more topic-specific guidance, including IAQM guidance on construction dust and Defra's Local Air Quality Management Technical Guidance, which provide accepted methodologies for assessing, interpreting and managing air quality effects.

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

Land-Use Planning & Development Control: Planning for Air Quality, jointly published by the IAQM and Environmental Protection UK (EPUK) in May 2015 and updated in January 2017, serves as a comprehensive guide for integrating air quality considerations into the planning system.

Specific guidance is given on undertaking an air quality assessment for planning, including how to assess both the impacts of existing air quality on a new development, or the impacts of new developments on air quality in their area. It also discusses how to determine the significance of the effects arising from such air quality impacts.



Guidance is also given on screening criteria for different types of assessment, the verification of air quality models, identification of appropriate receptors, and appropriate mitigation measures.

2.3.2. Local Air Quality Management Technical Guidance TG22 (2022)

The LAQM process is a framework under which local authorities are required to review and manage air quality in their areas. It is governed by Part IV of the *Environment Act 1995* and aims to ensure compliance with the NAQOs.

Local authorities are required to regularly review and assess air quality in their areas. If the review indicates that the NAQOs are being exceeded or are likely to be exceeded, local authorities must designate an AQMA. Once an AQMA has been designated, the local authority is required to develop and implement an Action Plan that outline measures to improve air quality, with continuing monitoring, evaluation and reporting required.

Although produced for local authorities tasked with managing air quality in their areas, TG22 provides detailed instructions on how to assess air quality using both monitoring data and modelling techniques, and evaluate whether air quality objectives are being met, and is therefore essential guidance for consideration of air quality impacts within the planning system.



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

Published in 2014 and most recently amended in 2024, the *IAQM Guidance on the Assessment of Dust from Demolition and Construction* provides a structured approach to assessing dust risks arising from demolition and construction, and implementing appropriate mitigation measures.

The guidance provides the framework for a qualitative risk assessment of three different dust impacts: disamenity dust soiling, human health due to increased PM exposure, and harm to ecological receptors.

The guidance divides activity on construction sites into four categories each of which are considered separately: demolition, earthworks, construction, and trackout. The likely magnitude of dust emission for each activity is combined with the sensitivity of the area to each type of impact to determine the risk level from each activity.

Based on the determined risk level, mitigation measures are recommended, which can be secured via condition as a Dust Management Plan or a broader Construction and Environmental Management Plan. The guidance is underpinned by the idea that if recommended mitigation is adopted, there will be no residual effects.



3. METHODOLOGIES

The assessment of air quality considers several different areas, which have their own methodologies stemming from the various guidance discussed in **Section 2.3**. In general, an assessment will consider:

1. Establishing the baseline conditions at the proposed development site. Evaluate recent local authority reporting, historic air quality data, background concentrations, nearby road traffic, and industrial emissions. If needed, local monitoring data can be used to verify a dispersion model for predicting onsite pollutant concentrations. See **Section 3.2**.
2. Constraints of existing air quality on the proposed development. This considers the suitability of the site for use by comparing pollutant concentrations at the site to relevant air quality objectives. Where local data indicates that concentrations may not be compliant, dispersion modelling can be used to predict pollutant concentrations. See **Section 3.3**.
3. Air quality impacts of the proposed development on local receptors. An impact assessment considers both emissions from increased traffic and the energy strategy. A dispersion model can be used to model the impact of these new sources if they meet a screening threshold. Impacts are assessed based on both the change caused by the proposed development *and* the pre-existing air quality at a receptor. It is then determined whether any impacts would be likely to lead to significant effects, i.e. to health. See **Section 3.4**.
4. Impacts from demolition and construction where such activity is required. The risk of dust impacts from the construction phase are assessed qualitatively in terms of their potential to cause effects in terms of disamenity, health or ecology.
5. Compliance with any local air quality policies where required, for example air quality neutrality, emissions benchmarking or damage cost analysis.
6. Consideration of ecological impacts if in proximity to a designated site. This is typically a screening assessment to identify risks of significant adverse effects on European designated sites (Special Protection Area, Special Area of Conservation, or Ramsar sites).

The main methodologies are discussed in the subsections below, along with a description of the methods used to identify receptors and the determination of effect significance.

3.1. Identification of Receptors

Land-Use Planning & Development Control: Planning for Air Quality (see **Section 2.3.1**) states that receptor locations should be chosen both within a proposed development (site suitability), as well as on roads significantly affected by it (impact assessment), even if distant to it, and particularly if within, AQMAs.

The guidance notes “These receptors will represent locations where people are likely to be exposed for the appropriate averaging time (dependent on the air quality objective being assessed against).”.

This is critical as it identifies that sensitivity to air quality is related to the time spent in a location. For example, annual mean objectives should be used to assess anywhere a person may be present for sustained periods over a year, for example dwellings.

Although users wouldn't be present for the appropriate averaging time, hospitals and schools would also be assessed against annual mean objectives, owing to the higher sensitivity of their users.

Offices and commercial uses would not usually be assessed against annual objectives, given that most users would be healthy adults who would spend less than 25% of the hours in a year there, however assessment against daily or hourly mean objectives would be necessary.

Similarly, hotels may not be assessed against annual mean objectives, however hostels, sheltered accommodation and student accommodation would be considered the same as dwellings, as residents could be expected to stay for several months.

3.2. Baseline Investigation

To determine the baseline conditions, the following is undertaken:

1. A review of recent Air Quality Annual Status Reports published by the local planning authority as submitted to Defra.
2. Determine the position of the proposed development site relative to nearby designated AQMAs.
3. A review of air quality monitoring data in the local authority area and in proximity to the proposed development site.
4. Determine predicted background concentrations at the proposed development site.
5. Assess local traffic sources in terms of their likely contribution to total pollutant concentrations.
6. A review of the Environment Agency's (EA) register of industrial sites under the EC Integrated Pollution Prevention and Control Directive (IPPC) to determine whether industrial sources of air pollution could be affecting the site.
7. A review of the list of registered Part A2 and Part B permitted premises under the PPC Regulations to determine whether any other sources of air pollution could be affecting the site.

3.3. Site Suitability

Land-Use Planning & Development Control: Planning for Air Quality states that whether an assessment of the impact of the local area on the proposed development is required is a matter of judgement, taking into account:

1. *"the background and future baseline air quality and whether this will be likely to approach or exceed the values set by air quality objectives;*
2. *the presence and location of Air Quality Management Areas as an indicator of local hotspots where the air quality objectives may be exceeded;*

3. *the presence of a heavily trafficked road, with emissions that could give rise to sufficiently high concentrations of pollutants (in particular NO₂), that would cause unacceptably high exposure for users of the new development; and*
4. *the presence of a source of odour and/or dust that may affect amenity for future occupants of the development.”*

The assessment of site suitability considers the results of the baseline assessment and any likely changes to air quality in the area in future in addition to the above factors.

If required, dispersion modelling can be used to predict air pollutant concentrations during the year of first use of the development. Dispersion modelling uses measured traffic flows, different emissions factors (the amount of pollutant emitted per vehicle-km, which vary by year, location and road type), and variation in regional background concentrations to predict pollutant concentrations at various receptor locations across the site.

3.4. Impact Assessment

Land-Use Planning & Development Control: Planning for Air Quality provides screening thresholds for determining when emissions from traffic and providing energy to buildings require detailed assessment, based on the number of predicted trips generated and the predicted emissions of any plant respectively.

When required, dispersion modelling is used to predict pollutant concentrations at nearby sensitive receptors for a ‘future baseline’ scenario and compare them to those for a ‘future with development’ scenario.

The change in pollutant concentration is then used alongside the prevailing long term concentration of the pollutant to determine an overall impact descriptor, which are reproduced in **Table 3.1** below.

Table 3.1: Pollutant Change Impact Descriptors

Average Annual Concentration, Relative to Objective	Change in Concentration, Relative to Objective			
	1%	2-5%	6-10%	>10%
<76%	Negligible	Negligible	Slight	Moderate
76-94%	Negligible	Slight	Moderate	Moderate
95-102%	Slight	Moderate	Moderate	Substantial
103-109%	Moderate	Moderate	Substantial	Substantial
>109%	Moderate	Substantial	Substantial	Substantial

3.4.1. Operational Phase Significance Criteria

Land-Use Planning & Development Control: Planning for Air Quality provides a framework to assess significance in air quality assessments, with paragraph 7.4 noting that the impact descriptor framework can be used as a starting point to make a judgement on significance of effect, but also that there will be other influences that might need to be accounted for. The descriptors are intended to be applied to individual

receptors. Whilst there may be 'slight', 'moderate' or 'substantial' impacts at one or more receptors, the overall effect may not necessarily be judged as being significant in some circumstances.

It goes on to state that any significance needs to be assessed using a certain amount of professional judgement, with paragraph 7.7 stating that judgement should take into account *"the existing and future air quality in the absence of the development; the extent of current and future population exposure to the impacts; and the influence and validity of any assumptions adopted when undertaking the prediction of impacts"*.

For example, for a large development, a major adverse impact on a single receptor might be considered insignificant; however, a minor impact to 100,000 receptors might be considered to be highly significant.

3.5. Construction Phase

The IAQM's *Guidance on the Assessment of Dust from Demolition and Construction* (see **Section 2.3.4**) outlines a qualitative risk assessment that considers any proposed activities and local sensitivity to evaluate the significance of construction related air quality impacts using a five-step methodology:

1. **Screening:** Determine whether a detailed assessment is required. If no sensitive receptors are located within defined distances of the site boundary or the haul routes to be used by construction traffic, further assessment is not necessary.
2. **Risk Assessment:** Assess the risk of dust impacts. The risk is assessed for each of four activities – demolition, earthworks, construction, and trackout; for three different types of receptor sensitivity – the sensitivity of people and property to dust soiling, the sensitivity of people to the health effects of PM₁₀, and the sensitivity of receptors to ecological effects. This involves:
 - a. Determining the dust emission magnitude based on the scale and nature of the works. This is categorised as Large, Medium or Small for each of the four activities described above.
 - b. Evaluating the sensitivity of the surrounding area. This is categorised as High, Medium or Low for each of the three types of sensitivity described above.
 - c. Combine these to assign a risk level (negligible, low, medium, or high) for each activity.
3. **Mitigation:** Identify appropriate, site-specific mitigation measures based on the risk established in Step 2. Local authority requirements and best practice measures should be incorporated where relevant.
4. **Residual Effects:** Evaluate the effectiveness of the proposed mitigation and determine the significance of any residual dust impacts.
5. **Reporting:** Present the assessment outcomes, including methodology, risk levels, proposed mitigation, and conclusions, within a dust assessment report.

3.5.1. Construction Phase Significance Criteria

The guidance is based on the principle that with effective site-specific mitigation, residual effects will usually be considered not significant. The purpose of the assessment is therefore to determine the mitigation measures required to reach such a conclusion, such measures should be secured through a suitably worded planning condition requiring a Construction Environmental Management Plan or Dust Management Plan prior to commencement.

4. BASELINE CONDITIONS

4.1. Air Quality Review and Assessment

Under Part IV of the Environment Act 1995, local authorities are required to review and assess air quality within their boundaries according to the prescribed LAQM framework (see **Section 2.3.3**). The findings of this review process are published in an Air Quality Annual Status Report (ASR).

LAQM requires local authorities to identify areas that fail to achieve compliance with the NAQOs. Where compliance is not achieved, local authorities must designate these areas as AQMAs and also prepare an Air Quality Action Plan (AQAP) identifying measures to achieve compliance. When reporting shows consistent compliance with the NAQOs, typically for a five-year period, an AQMA can be revoked.

The pollutants considered under LAQM are NO₂, PM₁₀, SO₂ (sulphur dioxide), benzene, 1,3-butadiene, CO (carbon monoxide) and lead. Benzene, 1,3-butadiene, CO and lead are retained in regulations but not normally reported unless local circumstances indicate a potential issue.

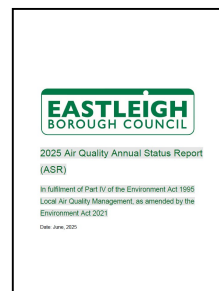
LAQM guidance states that SO₂ should still be reported on although in practice it is also now considered compliant across most of the UK. PM_{2.5} had no objective when the most recent guidance was published ('work towards reducing'). Therefore, the vast majority of AQMAs are declared for NO₂ and PM₁₀. Defra's active list on the UK-Air website currently lists 323 AQMAs for NO₂, 63 for PM₁₀ and 6 for SO₂.

Improvements in air quality in recent years have brought AQMAs back into compliance and led to revocations across the country. A shift in policy focus to the tightening legal objectives for PM_{2.5}, for which the annual mean objective is decreasing from 20 µg/m³ to 10 µg/m³ alongside a 35% exposure reduction target by 2040) means that this is becoming the primary pollutant of concern in most planning contexts.

The most recent publicly available Annual Status Report published by Eastleigh Borough Council was published in 2025 based on data collected through 2024. At the time of publication (June 2025), one of the council's four AQMAs (AQMA 2 - M3) was in the process of being revoked; since then both it and a further AQMA (Botley) have been added to Defra's revoked AQMA list. The eastern extent of AQMA No.1 encompasses Bishopstoke Road, from which the proposed development site is accessed.

The report concludes:

"Monitoring data collected from both passive and automatic sites across Eastleigh Borough during 2024 confirmed continued compliance with the annual mean national objective for NO₂ concentrations (40 µg/m³), with no exceedances recorded at any monitoring locations. The ongoing decreasing trend in NO₂ concentrations, observed at the majority of monitoring locations in recent years, persisted throughout 2024. This constant improvement has supported the revocation of AQMA No. 2 (M3), which will be discussed by the Cabinet during July 2025 meeting, and the potential for revoking additional AQMAs in upcoming years."



4.2. Pollutant Monitoring Data

Eastleigh Borough Council conducts air quality monitoring using three automatic continuous monitoring stations which monitor NO₂ (of which Site ID ES1 also monitors PM₁₀ and PM_{2.5}) as well as 55 passive diffusion tubes which monitor monthly average concentrations of NO₂.

4.2.1. NO₂

The most recent Annual Status Report published by the Council indicates that all 55 diffusion tubes and three automatic monitors (which are co-located with diffusion tube sites) were compliant with the annual objective for NO₂. Research indicates that a compliant annual mean NO₂ concentration is indicative of compliance with the hourly mean objective¹. The hourly mean objective was complied with at the three continuous monitoring locations.

Across all monitoring locations, which are situated mostly at kerbside and roadside locations on main roads, the highest annual average concentration in 2024 was 34.6 µg/m³ (OH2 Oakhill 2 (Bridge)). There has not been a recorded exceedance of the annual NO₂ objective at any monitoring location in the Borough since 2021, reflected in the revocation of several of its AQMAs.

4.2.2. PM₁₀

Site ID ES1 (Southampton Road) monitored an annual average concentration of 16.4 µg/m³ PM₁₀, achieving compliance with the annual objective of 40 µg/m³. There were two 24-hour periods monitored with an average above 50 µg/m³, well below the objective of 35.

4.2.3. PM_{2.5}

Site ID ES1 (Southampton Road) monitored an annual average concentration of 8.3 µg/m³ PM_{2.5}, achieving compliance with the annual objective of 20 µg/m³ and the emerging 2040 target of 10 µg/m³.

4.3. Background Concentrations

The total pollutant concentration at a receptor comprises both:

1. the contribution from explicit local emission sources such as roads and plant/industrial processes, and
2. those that are transported into an area by the wind from further away.

If all of the local sources are removed, all that remains is that which comes in from further away; this component is the background concentration. In many situations, the background concentration may represent a significant or dominant proportion of the total pollutant concentration.

Background concentrations are modelled estimates of long-term ambient pollutant concentrations away from specific local sources. Defra provide such estimates at 1 km² resolution for the whole of the UK on a year-by-year basis for the key pollutants NO₂, PM₁₀ and PM_{2.5}.

¹ Analysis of Relationship between 1-Hour and Annual Mean Nitrogen Dioxide at UK Roadside and Kerbside Monitoring Sites, Laxen and Marner, 2003.

The current version of the background maps (reference year 2021) contains estimates for NO_x, NO₂, PM₁₀ and PM_{2.5} for the period 2021 through to 2040.

The background maps also provide an estimated breakdown of the contributions of different sources of pollution. Predicted background concentrations at the proposed development site are presented in **Table 4.1** below.

Table 4.1: Background Pollutant Concentrations

Location (OS Grid Square centre)	Year	Pollutant	Predicted Background Concentration (µg/m ³)	Annual Objective (µg/m ³)
445500 119500	2026	NO ₂	12.13	40
		PM ₁₀	12.15	40
		PM _{2.5}	7.45	20

Background concentrations are well below the relevant annual mean objectives. A review of local emission sources has therefore been undertaken to determine whether additional uplift from local source contributions is likely to be significant.

4.4. Local Traffic Sources

Dutton itself is a dead-end road serving as access to various depots, railway uses, a small number of residential properties and the proposed development site. The more significant local sources are Twyford Road/Station Hill/Southampton Road to the southwest. Other roads in the vicinity are local residential streets.

The Department for Transport (DfT) maintains database of road traffic count points across Great Britain. The map covers every junction-to-junction link on the motorway and A-road network, plus a sample of minor road locations. The roads surrounding the proposed development site are well covered. A summary of the data from the nearest count points to the proposed development is presented in **Table 4.2** below.

Table 4.2: DfT Traffic Counts

Count Point ID/Road	Count Year	All Motor Vehicles	% HGV
8120 - Twyford Road	2025 - Estimated using AADF from previous year on this link	10,790	08%
6932 - Southampton Road	2025 - Estimated using AADF from previous year on this link	15,755	2.9%

The local road environment consists of a principal urban distributor road forming part of the A335 corridor between Eastleigh town centre and Junction 12 of the M3, with predominantly two-lane single carriageways passing through established residential areas and commercial frontages whilst also carrying commuter traffic. Local roads carry moderate through-traffic that would be considered within normal range given the road types. It would likely cause a small but measurable contribution to local long-term pollutant concentrations, particularly NO_x/NO₂ close to the carriageways.

However, particularly given the distances involved between the roads and the proposed development site and improving emissions factors, this road increment alone is unlikely to be the dominant component over the background, even more so in the case of PM₁₀ and PM_{2.5}, which are more regional/background driven.

4.5. Industrial Emissions

Both the Environment Agency's register of industrial sites under the EC Integrated Pollution Prevention and Control Directive (IPPC) and the Local Authority's list of registered Part A2 and Part B permitted premises under the Pollution, Prevention and Control Act 1999 and the Environmental Permitting (England and Wales) Regulations 2010 have shown that there are no sites within close proximity to the proposed development site that are likely to be affecting air pollutant concentrations at the site.

4.6. Evaluation

An assessment of baseline air quality at the proposed development site has been undertaken. Data sources used as evidence are presented in **Table 4.3** below.

Table 4.3: Baseline Data Sources

Dataset	Source	Year	Purpose
Defra Background Maps	Defra UK-Air Air Information Resource 2021	2026	Predicted background pollutant concentrations
Defra AQMA Mapping; List of revoked AQMAs	Defra UK-Air Air Information Resource 2021	Live	AQMA review
Air Quality Annual Status Report	Eastleigh Borough Council	Published 2025 based on 2024 data	Local monitoring data
Department for Transport Traffic Counts	Road Traffic Statistics Map	Predicted 2025	Local road source screening
EA permits	Environment Agency	Live	Industrial source screening
Local Part A2/B permits	Eastleigh Borough Council	Live	Screening of local regulated processes

A review of the latest Air Quality Annual Status Reports published by Eastleigh Borough Council indicates that there are two AQMAs remaining in the Borough following the revocation of its other two in the last year. Monitoring data indicates sustained compliance with current objectives across the Borough.

One of these AQMAs (AQMA No.1) encompasses part of Bishopstoke Road to the south of the proposed development site, although local monitoring indicates that air quality objectives are likely being met and that the AQMA may therefore be considered for revocation, should the statutory period of compliance be met.

Predicted background concentrations at the proposed development site are low. Local sources comprise nearby A- and B-roads around the proposed development. The roads carry typical traffic flows for suburban distributor routes. Given the distances from the roads to the proposed development site and improving emissions factors, it is unlikely that the road contribution could be a dominant component of local pollutant concentrations.

A review of registered industrial sites indicates that there are none nearby that could be materially contributing to air pollutant concentrations at the proposed development site.

The above is reflected in the most recent monitoring data, which indicates that pollutant concentrations at roadside locations near to the proposed development site and across the Borough are currently compliant with the NAQOs and are continuing to decline.

Based on the above evidence it is considered that air quality at the proposed development site is compliant with current objectives, and notwithstanding the introduction of any substantial new local sources is likely to remain so.

5. SCOPING

The Air Quality Planning Practice Guidance (PPG) states *"Assessments need to be proportionate to the nature and scale of development proposed and the potential impacts (taking into account existing air quality conditions), and because of this are likely to be locationally specific"*.

This approach is reiterated in the IAQM/EPUK guidance *Land-Use Planning & Development Control: Planning for Air Quality* which provides guidance on screening on whether an air quality assessment is required and what needs to be assessed.

5.1. Site Suitability

Land-Use Planning & Development Control: Planning for Air Quality suggests that whether an assessment of the impacts of the local area on the proposed development is required is a matter of judgement, but should take into account:

- *"the background and future baseline air quality and whether this will be likely to approach or exceed the values set by air quality objectives;*
- *the presence and location of Air Quality Management Areas as an indicator of local hotspots where the air quality objectives may be exceeded;*
- *the presence of a heavily trafficked road, with emissions that could give rise to sufficiently high concentrations of pollutants (in particular NO₂), that would cause unacceptably high exposure for users of the new development; and*
- *the presence of a source of odour and/or dust that may affect amenity for future occupants of the development."*

Section 4 of this report assesses the baseline air quality conditions at the proposed development site to be good by considering recent local authority reporting, Defra predicted background concentrations, local monitoring data and a review of industrial processes.

It is likely that pollutant concentrations at the proposed development site are compliant with all relevant objectives and likely to remain so, notwithstanding the introduction of significant new local sources.

As a result of the above, detailed dispersion modelling of the site is scoped out and it is considered that the proposed development is suitable for use without the need for mitigation.

5.2. Impact Assessment

To determine whether an assessment of the impacts of the proposed development on the local environment is required, *Land-Use Planning & Development Control: Planning for Air Quality* suggests a two-stage approach.

The first stage is intended to screen out smaller development and/or developments where impacts can be considered to have insignificant effects, stating that for residential developments of fewer than ten units, or other land uses with a floor space of less than 1,000 m² or a site area of less than 1 hectare, an impact

assessment is not required. Even above these thresholds, provision of ten or more parking spaces or a centralised energy process is required to move to the second screening stage.

The second stage relates to specific details regarding the proposed development, and gives specific triggers including the realigning of roads to be close to receptors, introducing new junctions and introducing underground parking. The two most common triggers are for vehicle trip generation and combustion processes relating to energy strategy:

- A change of more than 100 AADT LDV (cars and small vans <3.5 tonne) or 25 AADT HDV (goods vehicles and buses >3.5 tonne) on any road link within an AQMA.
- A change of more than 500 AADT LDV or 100 AADT HDV on any road link outside of an AQMA.
- Development having one or more substantial combustion processes, where there is risk of impacts at relevant receptors, noting that plant with a combined emission rate of <5 mg/s NO_x is unlikely to give rise to impacts if released at a height that provides adequate dispersion. The 5 mg/s emission rate is considered approximate to a 450 kW ultra low NO_x gas boiler.

The proposed development is accessed via Bishopstoke Road which forms part of Eastleigh AQMA No.1. Trip generation data for the planning application has been provided by Andrew Moseley Associates Transport Planning Consultancy, which confirms that the predicted vehicle trip generation as a consequence of the proposed development is lower than that for the current consented use of the site. The above criteria are therefore not met and the proposed development is predicted to result in fewer vehicles passing through the AQMA.

Detailed dispersion modelling can therefore be scoped out as neither trip generation or building emissions meet the IAQM criteria. Any air quality impacts are considered to be negligible and any effects not significant.

5.3. Site Specific Scoping Summary

Table 5.1: Site Specific Scoping Summary

Assessment Area		Scoping Comments	Detailed Modelling Required?
Site Suitability		Low background concentrations, compliant local monitoring data, no industrial sources	No
Impact Assessment	Traffic generation	Does not meet IAQM criteria for trip generation or combustion processes	No
	Energy strategy		
HRA/Ecological Air Quality		No high sensitivity habitats in proximity	No
Local Policy Assessment		None identified in Local Plan/AQAP	No

6. MITIGATION

6.1. Site Suitability

Air pollutant concentrations at the proposed development site are likely to be compliant with the National Air Quality Objectives at current and in the opening year of the proposed development and likely to continue improving, therefore mitigation to reduce the exposure of future occupiers is not required.

6.2. Impact Assessment

The proposed development will not give rise to significant air quality effects, therefore mitigation measures to reduce the impact of the proposed development are not required.

7. CONCLUSIONS & SUMMARY

An Air Quality Assessment has been undertaken for land at Dutton Lane, Eastleigh, in accordance with the IAQM/EPUK guidance *Land-Use Planning & Development Control: Planning for Air Quality (2017)*, addressing the suitability of the site for its proposed use and the impact it may have on local air quality during its use.

Baseline air quality at the proposed development has been assessed by reviewing local authority reporting, pollutant monitoring data, predicted background concentrations, local traffic sources and local industrial emissions. It is considered that air quality at the proposed development is likely compliant with all relevant objectives and notwithstanding any major new sources is likely to remain so. The site is therefore also considered suitable for use.

A detailed impact assessment has been scoped using the IAQM criteria, with neither trip generation nor combustion energy processes meeting the IAQM criteria. Any impacts on local air quality are therefore considered negligible and any effects not significant.

Based on the results of the assessments discussed above, which have all been carried out in accordance with the latest guidance, it is considered that the proposed development adheres to national, regional and local planning policy, and therefore that air quality concerns should not be a constraint on the proposed development.

Appendix 1

Glossary of Terms

Appendix 1: Glossary of Terms

National Air Quality Standard/National Air Quality Objective (NAQO): 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 an assessment of the effects of each pollutant on human health including the effects on sensitive subgroups.

Annual mean: The average of the concentrations measured for each pollutant for one year. In the case of the Air Quality Objectives, this is for a calendar year.

Air Quality Management Area (AQMA): An area that a local authority has designated for action, based upon predicted exceedances of Air Quality Objectives.

Concentration: The amount of a (polluting) substance in a volume (of air), typically expressed as a mass of pollutant per unit volume of air (for example, microgrammes per cubic metre, $\mu\text{g}/\text{m}^3$) or a volume of gaseous pollutant per unit volume of air (parts per million, ppm).

Exceedance: A period of time where the concentration of a pollutant is greater than the appropriate Air Quality Objective.

Nitrogen Oxides: Nitric oxide (NO) is mainly derived from road transport emissions and other combustion processes such as the electricity supply industry. NO is not considered to be harmful to health. However, once released into the atmosphere, NO is usually very rapidly oxidised to nitrogen dioxide (NO₂), which is harmful to health. NO₂ and NO are both oxides of nitrogen and together are referred to as nitrogen oxides (NO_x).

Particulate Matter: Fine Particles are composed of a wide range of materials arising from a variety of sources including combustion sources (mainly road traffic), and coarse particles, suspended soils and dust from construction work. Particles are measured in a number of different size fractions according to their mean aerodynamic diameter. Most monitoring is currently focused on PM₁₀ (less than 10 microns in diameter), but the finer fractions such as PM_{2.5} (less than 2.5 microns in diameter) is becoming of increasing interest in terms of health effects.

$\mu\text{g}/\text{m}^3$ microgrammes per cubic metre of air: A measure of concentration in terms of mass per unit volume. A concentration of 1 $\mu\text{g}/\text{m}^3$ means that one cubic metre of air contains one microgram (millionth of a gram) of pollutant.