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Noise | Vibration | Air Quality

Air Quality Assessment

Former Friends' School Fields, Mount Pleasant Road, Saffron Walden

Air Quality Assessment

Project: FORMER FRIENDS' SCHOOL FIELDS, MOUNT PLEASANT ROAD, SAFFRON WALDEN

Report reference: RP02-23493-R0

Client:
CHASE NEW HOMES
JASMINE HOUSE
8 PARKWAY
WELWYN GARDEN CITY
HERTFORDSHIRE
AL8 6HG

Our details:
CASS ALLEN ASSOCIATES LTD
BEDFORD I-LAB
BEDFORD
MK44 3RZ

Document control:

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Cass Allen
01234 834 862
[redacted]

cass allen

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1.1 Cass Allen was instructed by Chase New Homes to assess the potential air quality impact of a proposed residential-led development at the former Friends' School fields, south of Mount Pleasant Road, Saffron Walden in Essex.

1.2 The appraisal was carried out in accordance with relevant local and national planning policy and guidance.

1.3 Emissions of construction phase dust and particulate matter (PM_{10}) were assessed in accordance with Institute of Air Quality Management (IAQM) guidance. A robust High Risk of dust soiling effects and Low Risk of PM_{10} health effects have been identified, in the absence of mitigation. Suitable best practice mitigation measures have been recommended and no significant residual air quality impacts are expected.

1.4 An appraisal of potential operational phase impacts upon nitrogen dioxide (NO_2) and particulate matter (PM_{10} and $PM_{2.5}$) was also undertaken with regard to Department for Environment, Food and Rural Affairs (Defra), and Environmental Protection UK (EPUK) & IAQM guidance. The results indicate that pollutant concentrations across the site are expected to be below the relevant Air Quality Objectives (AQOs) when operational. Furthermore, no significant impacts on local air quality as a result of development-generated traffic are anticipated, with no requirement for additional mitigation.

1.5 In summary, it is our view that the site is suitable for the development in terms of air quality and that there are no air quality constraints with respect to planning consent.

2. INTRODUCTION

2.1 Cass Allen has been instructed by Chase New Homes to assess the potential air quality impact of a proposed residential-led development at the former Friends' School fields, south of Mount Pleasant Road, Saffron Walden in Essex.

2.2 The appraisal has been carried out in accordance with relevant local and national planning guidance.

2.3 The aims of the appraisal were to consider potential impacts on local air quality, resulting from:

- Dust and particulate matter emissions generated by construction phase activities;
- Exhaust emissions from construction plant and traffic;
- The exposure of new sensitive receptors to elevated pollutant concentrations; and
- Emissions from traffic generated by the operation of the development.

2.4 Subsequently, where required, appropriate measures have been identified to minimise the impacts.

2.5 This report contains technical terminology; a glossary of terms can be found at [redacted]

Cass Allen
01234 834 862
[redacted]

3. PROJECT DESCRIPTION AND SITE CONTEXT

3.1 The site is currently vacant, previously belonging to the former Friends' School immediately west, which is currently undergoing redevelopment (planning reference: UTT/22/1040/PINS). The site is located within the existing built-up area of Saffron Walden, south of Mount Pleasant Road and is surrounded by residential properties, which have the potential to be affected by emissions associated with the development.

3.2 The site location is shown in Figure 1.

Figure 1 Site Location and Surrounding Area

3.3 The proposal is to develop the site into residential properties with an area at the south of the site allocated for a club house and sport pitches.

3.4 With respect to air quality, there are currently no Air Quality Management Areas (AQMAs) within Uttlesford District as Saffron Walden AQMA, which was located immediately north of the site, was revoked on 19 March 2024. This indicates that the local air quality, which is primarily influenced by vehicle emissions along the local road network, is generally good with a low risk of health impacts.

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4. PLANNING POLICY

Air Quality Legislation

4.1 The wider air quality legislation which underpins national, regional and local planning policy, is summarised in Appendix 1.

4.2 Within the UK Air Quality Strategy (2007), standards and objectives are set for nine key air pollutants to protect health, vegetation and ecosystems. These were revised in the Air Quality Standards Regulations 2010 to include a reduced target for $PM_{2.5}$. The national AQOs for the pollutants most associated with vehicle emissions, and therefore applicable to this appraisal, are detailed in Table 1.

Table 1 UK National Air Quality Objectives

Pollutant	Objective	Measured As
Protection of Human Health		
Nitrogen Dioxide (NO_2)	40µg/m^3	Annual mean
	200µg/m^3 not to be exceeded more than 18 times per year	1-hour mean
Particulate Matter (PM_{10})	40µg/m^3	Annual mean
	50µg/m^3 not to be exceeded more than 35 times per year	24-hour mean
Particulate Matter ($PM_{2.5}$)	20µg/m^3	Annual mean

4.3 The 'human health' AQOs are normally only applicable where there is 'relevant exposure', i.e. where members of the public are likely to be present for the relevant averaging periods, or regularly exposed, and not in workplaces.

4.4 Outline guidance for the assessment of air quality affecting new developments is given in the National Planning Policy Framework (NPPF) (2023). Relevant sections in this case are highlighted below:

> *109. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health.*
>
> *180. Planning policies and decisions should contribute to and enhance the natural and local environment by … preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of … air or noise pollution.*

191. 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.

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

194. 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.

Local Policy

4.5 Policy ENV 13 of the adopted Uttlesford Local Plan (January 2005) has relevance to this assessment, stating:

Policy ENV13 – Exposure to Poor Air Quality

Development that would involve users being exposed on an extended long-term basis to poor air quality outdoors near ground level will not be permitted…

4.6 Policy GEN4 also relates to air quality and states:

Policy GEN4 – Good Neighbourliness

Development and uses, whether they involve the installation of plant and machinery or not, will not be permitted where:…

b) …dust,… fumes,… exposure to other pollutants… would cause material disturbance or nuisance to occupiers of surrounding properties.

4.7 Within the emerging Draft Local Plan (Regulation 18), Core Policy 43 is particularly relevant:

Core Policy 43: Air Quality

Development will not be permitted where it might lead to significant adverse effects on health, the environment or amenity from emissions to air. Applicants must have regard to relevant UDC Air Quality Technical Guidance and are required to undertake an appropriate air quality assessment and to demonstrate that: …

iii. development has regard to relevant UDC Air Quality Technical Guidance…

v. development will not lead to an increase in emissions, degradation of air quality of increase in exposure to pollutants at or above the health-based air quality objective

vi. any impacts on the proposed use from existing poor air quality are appropriately mitigated, and

vii. the development promotes sustainable transport measures and use of low emissions vehicles in order to reduce air quality impacts of vehicles.

Applicants shall, where appropriate prepare and submit with their application, a relevant assessment, taking into account guidance current at the time of application.

Where development proposals would be subject to unacceptable air quality standards or would have an unacceptable impact on air quality standards they will be refused.

Where emissions from the proposed development approach EU Limit values or national objectives the applicant will need to assess the impact on local air quality by undertaking an appropriate air quality assessment. The assessment shall have regard to guidance current at the time of the application to show that the national objectives will still be achieved.

4.8 Other relevant policies are listed in the UDC 'Air Quality Technical Planning Guidance', June 2018 (AQTPG).

4.9 To address the requirements of the national and local policies, the following key air quality matters have been considered:

- Construction phase fugitive emissions of dust and particulate matter at nearby existing receptors;
- Construction phase plant and vehicle emissions at existing receptors;
- Vehicle emissions exposing proposed receptors to elevated pollutant concentrations; and
- Emissions from traffic generated by the operation of the development at existing human and ecological receptors.

5. ASSESSMENT METHODOLOGY

5.1 The scope and methodology for this appraisal has been determined with regard to Defra 'Local Air Quality Technical Guidance', August 2022 (TG22), EPUK & IAQM 'Land Use Planning & Development Control: Planning for Air Quality', January 2017 (LUPDC) and the AQTPG. Specific reference has also been made to other relevant technical guidance, where applicable.

Construction Phase

5.2 The assessment of potential air quality impacts during the construction phase has focused on the generation and dispersion of dust and PM_{10}, with regard to the IAQM 'Guidance on the Assessment of Dust from Demolition and Construction' (January 2024) methodology, summarised as follows:

- Step 1 – screen the need for an assessment: impacts to sensitive human and ecological receptors should be considered where they are located within 250m or 50m of the site boundary, respectively (as shown on Figure 2). These receptors should also be considered if they are within 50m of a route used by construction vehicles, up to 250m from the site entrance.
- Step 2A – estimate the dust emission magnitude for each of the main construction activities – demolition, earthworks, general construction, and trackout.
- Step 2B – determine the sensitivity of the receiving environment, through consideration of factors such as meteorological conditions, the number of nearby receptors, their proximity and their sensitivity. Other factors to consider are detailed in Box 9 of the guidance. A ten-year wind rose for nearby Stansted Airport meteorological station is included in Appendix 2.
- Step 2C – define the risk of impacts.
- Step 3 – identify site-specific mitigation requirements (in addition to basic project controls).

5.3 In addition, exhaust emissions from construction vehicles and plant may impact local air quality. The potential for significant effects resulting from these emissions has also been considered with reference to screening and significance criteria in LUPDC, as detailed below.

Operational Phase

5.4 With regard to existing sensitive receptors, anticipated development-generated vehicle trips have been compared to recognised screening criteria to evaluate the potential for significant impacts.

5.5 LUPDC indicates that a change in Light Duty Vehicle (LDV - cars and small vans <3.5t gross vehicle weight) flows of 500 Annual Average Daily Traffic (AADT) and/or Heavy Duty Vehicle (HDV - goods vehicles + buses >3.5t gross vehicle weight) flows of 100 AADT or more is potentially significant, and likely to require further assessment. This also applies to a change in LDV flows of 100 AADT and/or HDV flows of 25 AADT or more on routes through or close to an AQMA. Where these thresholds are not exceeded, a detailed assessment of air quality impacts is not normally required, and the resulting effect normally be considered to be 'not significant'.

5.6 The project's Transport Consultant (Paul Basham Associates) has indicated that the development is expected to generate a traffic flow of approximately 386 AADT LDVs; therefore, no significant impacts are anticipated at existing receptors and these are not considered further in the assessment.

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6. BASELINE CONDITIONS

6.1 Air quality conditions in the vicinity of the site have been reviewed to provide a baseline for consideration. The collected data are included in the tables below and were obtained from UDC and Defra. Monitoring locations are indicated on Figure 2.

Table 2 Monitored Concentrations across the Study Area– NO_2

ID	Location	Type	Distance to site (m)	Monitored Annual Mean (µg/m³)				
				2018	2019	2020	2021	2022
UTT3	London Road, Saffron Walden	Roadside	526.6	21.2	19.6	11.5	12.5	15.3
SC005	St Thomas More Primary School	Kerbside	34.1	-	-	-	-	10.8
SC007	Katherine Semar CP School	Kerbside	397.0	-	-	-	-	10.3
UT028	London Road	Roadside	461.6	33.4	31.2	24.8	25.0	25.5
UT029	Debden Road	Roadside	439.8	20.5	20.1	15.9	15.1	16.3
UT030	Friends School	Kerbside	200.5	27.2	25.0	19.6	19.7	19.4
UT031	Mount Pleasant Road	Roadside	8.0	19.8	20.7	15.2	15.8	16.2
UT032	Borough Lane	Roadside	458.0	15.2	15.0	11.5	11.1	11.2
UT047, UT048, UT049	Thaxted Road (co-located w/ UTT3)	Roadside	526.5	-	-	-	13.4	14.5
UT050	South Road	Roadside	379.5	-	-	-	11.2	11.3

Note: Data obtained from UDC Air Quality Annual Status Report (2023). Results from 2020 and 2021 are likely to be atypical due to COVID-19 travel restrictions.

Table 3 Monitored Concentrations across the Study Area – PM_{10} and $PM_{2.5}$

ID	Location	Type	Distance to site (m)	Pollutant	Monitored Annual Mean (µg/m³)				
					2018	2019	2020	2021	2022
UTT3	London Road, Saffron Walden	Roadside	526.6	PM_{10}	25.5	24.7	27.1	28.1	30.9
				$PM_{2.5}$	-	13.8	15.1	14.4	17.2

Note: Data obtained from UDC Air Quality Annual Status Report (2023). Results from 2020 and 2021 are likely to be atypical due to COVID-19 travel restrictions.

Table 4 Defra Mapped Background Concentrations across the Study Area – 2024

NO_x	NO_2	PM_{10}	$PM_{2.5}$
8.2 - 12.5	6.5 - 9.5	14.0 - 15.7	8.8 - 9.0

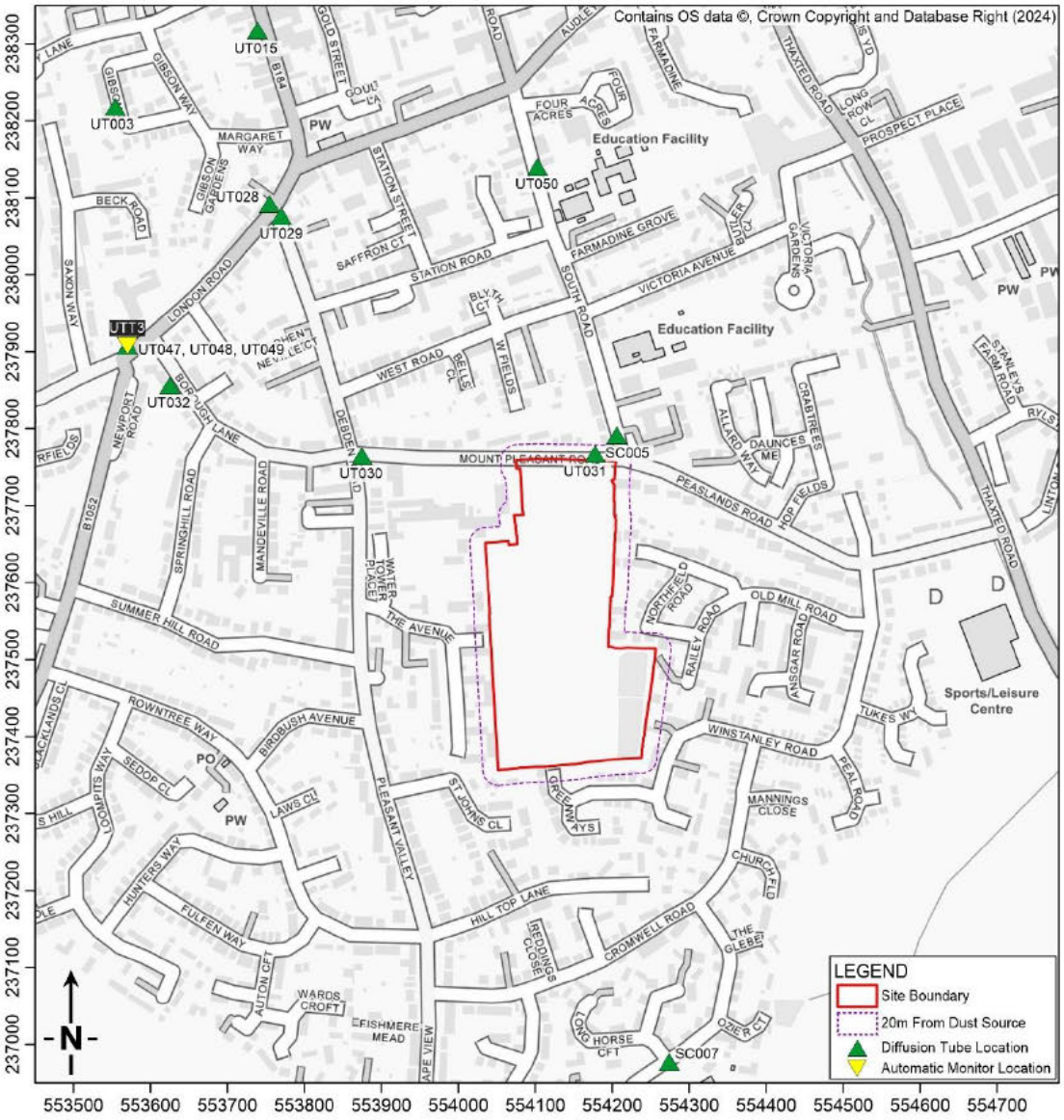
Note: Data obtained from https://uk-air.defra.gov.uk/data/laqm-background-home.

6.2 As indicated in Table 2 above, NO_2 concentrations in the vicinity of the site were below the AQO during the five most recent monitoring years, 2018-2022. Furthermore, according to UDC: *During 2023 nitrogen dioxide was monitored at 75 sites using diffusion tubes. No exceedances of the Annual Mean objective were found for the seventh year running and the previous Air Quality Management Area in Saffron Walden was revoked in March 2024.*

6.3 As shown in Table 3, concentrations of PM_{10} and $PM_{2.5}$ were also below their respective AQOs at automatic monitor UTT3 during the most recent monitoring years, 2018-2022. Given the monitor's roadside location within the town centre, measured concentrations are expected to be higher than at the site, which is in a location primarily influenced by background sources. As such, proposed receptors are not expected to experience pollutant concentrations significantly higher than the 2024 background values presented in Table 4, which are well below (defined by the IAQM as less than 75% of) their respective AQOs.

6.4 Further discussion regarding baseline conditions at the site is included in Section 8.

Figure 2 Study Area



7. CONSTRUCTION PHASE ASSESSMENT

7.1 The IAQM methodology has been used to assess the potential impact of dust and PM_{10} arising from on-site activities. As indicated within the guidance, the use of professional judgment is necessary, due to the diverse range of projects that are subject to dust impact assessment, meaning that it is not possible to be prescriptive as to how to assess the impacts.

7.2 As sensitive receptors were identified within the relevant IAQM screening distances, the assessment progressed to Step 2, which has been summarised in the tables below.

Table 5 Step 2A – Dust Emission Magnitude for Construction Activities

Activity	Magnitude	Explanation
Demolition	N/A	Site currently vacant.
Earthworks	Medium	Total site area 18,000m² – 110,000m², 5 – 10 heavy earth moving vehicles assumed active at any one time.
Construction	Medium	Total building volume to be constructed 12,000m³ – 75,000m².
Trackout	Large	Unpaved road length >100m.

Table 6 Step 2B – Sensitivity of the Area

Potential Impact	Details	Construction Activity		
		Earthworks	Construction	Trackout
Dust Soiling	>10 high sensitivity receptors within 20m of site	High	High	High
Human Health	>10 high sensitivity receptors within 20m of site; low background PM_{10} concentration	Low	Low	Low

Table 7 Step 2C – Summary of Impact Risks to Define Site-Specific Mitigation

Potential Impact	Construction Activity		
	Earthworks	Construction	Trackout
Dust Soiling	Medium Risk	Medium Risk	High Risk
Human Health	Low Risk	Low Risk	Low Risk

7.3 Overall, as a worst case, the development is considered to be 'High Risk' for dust soiling effects and 'Low Risk' for PM_{10} health effects, in the absence of mitigation. Following implementation of the recommended applicable mitigation measures for the relevant activities' risk levels in Appendix 3, the residual effect of the construction phase will be not significant.

7.4 With regard to construction traffic, the construction phase flows are not expected to exceed the criteria detailed in paragraph 5.4 and therefore, significant residual effects are not anticipated.

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8. OPERATIONAL PHASE APPRAISAL

Site Suitability

8.1 As detailed in Section 6, there have been no exceedances of the 40µg/m^3 annual mean AQO for NO_2 in the locality for the past seven years. Consequently, the AQMA previously adjacent to the site was revoked in March 2024 and the closest diffusion tubes – UT031 and SC005 – have recorded notably low NO_2 concentrations during the most recent monitoring years. Furthermore, the majority of proposed dwellings within the development will be set back from Mount Pleasant Road, further minimising their exposure to any emissions from vehicles along this minor road. As such, is anticipated that pollutant concentrations at the site will be approaching background levels, and therefore, well below the relevant AQOs.

8.2 This aligns with the results of the Air Quality Assessment undertaken by RSK Environment Ltd (reference: 444326/AQ/02 (00)) for the Friends' School site immediately west, which concluded: *annual mean or short-term NO_2 and PM_{10} AQS exceedances are not anticipated at the proposed development site and therefore, it is considered that ambient air quality would not significantly affect future site users.* Additionally, the revocation of the Saffron Walden AQMA and the reduction in monitored concentrations suggests that air quality in the vicinity has improved since this assessment was undertaken.

8.3 As annual mean NO_2 concentrations are expected to be less than 60µg/m^3, exceedances of the 1-hour mean AQO are also not anticipated, in accordance with TG22. Equally, exceedances of the 24-hour mean AQO for PM_{10} are not anticipated, in line with TG22.

8.4 Accordingly, the development is not expected to expose future occupants to unacceptable air quality and the site is considered suitable for the proposed use, with no requirement for additional mitigation.

Air Quality Impacts

8.5 As outlined in paragraph 5.6, based on Paul Basham Associates' predicted traffic flow of 386 AADT LDVs, it is not anticipated that the relevant LUPDC guidance screening thresholds detailed in paragraph 5.4 would be exceeded by the development. Therefore, the residual effect of the development's operational phase vehicle trip generation on existing sensitive receptors is expected to be 'not significant', and further assessment of operational impacts is not required.

8.6 Based on the scale of the development and baseline air quality conditions, no significant operational phase air quality impacts are anticipated.

9. CONCLUSIONS

9.1 Cass Allen was instructed by Chase New Homes to assess the potential air quality impact of a proposed residential-led development at the former Friends' School fields, south of Mount Pleasant Road, Saffron Walden in Essex.

9.2 The appraisal was carried out in accordance with relevant local and national planning policy and guidance.

9.3 Emissions of construction phase dust and PM_{10} were assessed in accordance with IAQM guidance. A robust High Risk of dust soiling effects and Low Risk of PM_{10} health effects have been identified, in the absence of mitigation. Suitable best practice mitigation measures have been recommended and no significant residual air quality impacts are expected.

9.4 It is not anticipated that the development would expose future users to pollutant concentrations exceeding, or close to, the relevant AQOs. Furthermore, construction and operational phase generated vehicle movements are not expected exceed the relevant EPUK & IAQM LUPDC guidance screening thresholds, and therefore, an overall 'not significant' effect is anticipated, with no requirement for additional mitigation measures.

9.5 In summary, it is our view that the site is suitable for the development in terms of air quality and that there are no air quality constraints with respect to planning consent.

Appendix 1 Air Quality Legislation

Defra and the Devolved Administrations (2007) - The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (Volumes 1 and 2):

The Air Quality Strategy provides a framework for reducing air pollution in the UK, with the aim of meeting the requirements of European Union (EU) legislation. This has been brought into UK law via the EU (Withdrawal) Act 2018 (as amended) and is referred to as 'retained EU law'.

The air quality standards set within the Air Quality Strategy are recommended by the Expert Panel on Air Quality Standards (EPAQS) and the World Health Organisation (WHO), based on current scientific knowledge regarding the effects of each pollutant on health and the environment.

The AQOs are medium-term policy-based targets set by the government, taking into account economic efficiency, practicability, feasibility and timescales. Whilst some of the AQOs correspond with the EPAQS / WHO limits, others have a margin of tolerance, by specifying a number of permitted exceedances of the standard over a given period.

Many of the AQOs in the Air Quality Strategy have been made statutory in England via The Air Quality (England) Regulations, 2000, The Air Quality (England) Amendment Regulations, 2002 and The Air Quality Standards (Amendment) Regulations, 2016 – Statutory Instrument 2016 No. 1184.

Environmental Protection Act (1990):

Section 79 of the Environmental Protection Act 1990 defines statutory nuisance relevant to dust and particles as:

> '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'; and
>
> 'Any accumulation or deposit which is prejudicial to health or a nuisance'.

Furthermore, Section 80 states 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. However, there are no statutory limit values for dust deposition above which 'nuisance' is deemed to exist and nuisance is a subjective concept, its perception being highly dependent upon the existing conditions and the change which has occurred.

Environment Act (2021):

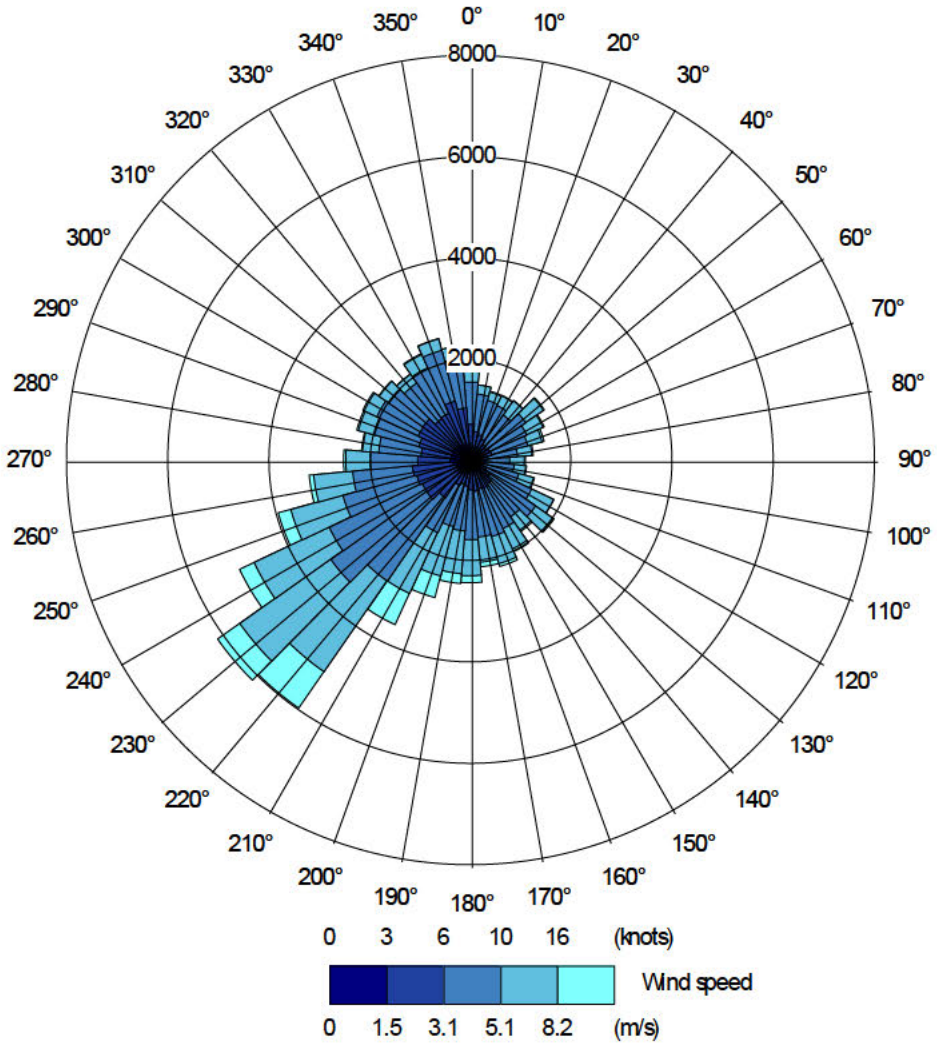
The Act mandates that local authorities review and document local air quality within their jurisdiction by way of staged appraisals and respond accordingly, with the aim of meeting the AQOs defined in the Regulations. There is a requirement for local authorities to identify relevant sources of emissions that are likely to be responsible for any failure to achieve the AQOs, or to identify relevant sources within neighbouring authorities' areas. Where the objective(s) are not likely to be achieved within the relevant period(s), the authority is required to designate an AQMA. For each AQMA the local authority is required to draw up an Air Quality Action Plan (AQAP) to secure improvements in air quality, in order to work towards achieving air quality standards in the future.

Defra (2019) Clean Air Strategy:

The UK Government's Clean Air Strategy sets out the comprehensive actions required to improve air quality, required from all parts of government and society.

The primary focus of previous iterations of the Clean Air Strategy has been NO_2, and its principal source – road traffic. The 2019 Strategy broadens the focus into other areas, including actions on clean growth and pollutant emissions from other sources such as industry, agriculture, and domestic wood-burning stoves.

Appendix 2 Wind Rose for Stansted (2014-2023)



Appendix 3 Recommended Construction Phase Mitigation

Highly Recommended Mitigation Measures for High-Risk Sites

Communications

- Develop and implement a stakeholder communications plan that includes community engagement before work commences on site.
- 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, where applicable.
- Develop and implement a Dust Management Plan (DMP), which may include measures to control other emissions, approved by the Local Authority. The level of detail will depend on the risk and should include as a minimum the highly recommended measures in this Appendix. Further, 'desirable' measures from IAQM guidance should be included as appropriate for the site. The DMP may include monitoring of dust deposition, dust flux, real-time PM_{10} continuous monitoring and/or visual inspections.

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 complaints log available to the Local Authority on request.
- Record any exceptional incidents that cause dust and/or air emissions, either on or off-site should be recorded, and the action taken to resolve the situation, in the logbook.
- Hold regular liaison meetings with other major / high risk construction sites within 500m of the site boundary, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised. It is important to understand the interactions of the off-site transport/deliveries which might be using the same strategic road network routes.

Monitoring

- Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to the local authority when asked. This should include regular dust soiling checks of surfaces such as street furniture, cars and windowsills within 100m of site boundary, with cleaning to be provided if necessary.
- 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 by the person accountable for air quality and dust issues on site 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 PM_{10} continuous monitoring locations with the Local Authority. Where possible commence baseline monitoring at least three months before work commences on site or, if at a large site, before work on a phase commences. Further guidance is provided by IAQM on monitoring during demolition, earthworks and construction.

Preparing and Maintaining the Site

- Plan the site layout so that machinery and dust causing activities are located away from receptors, as far as is practicable.
- Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on-site.
- Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period.
- Avoid site runoff of water or mud.
- Keep site fencing, barriers and scaffolding clean using wet methods.
- Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on-site. If they are being reused on-site cover as described below.

- Cover, seed or fence stockpiles to prevent wind whipping.

Operating Vehicle/Machinery and Sustainable Travel

- Ensure all vehicle operators switch off engines when stationary – no idling vehicles.
- Avoid the use of diesel- or petrol-powered generators and use mains electricity or battery powered equipment where practicable.
- Impose and signpost a maximum-speed-limit of 15 mph on surfaced and 10 mph on unsurfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the local authority, where appropriate).
- Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials.
- Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing).

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 is available on the site for effective dust/PM suppression/mitigation, using non-potable water where possible and appropriate.
- Use enclosed chutes/conveyors and covered skips.
- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.
- Ensure equipment is readily available on-site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.

Waste Management

- Avoid bonfires and burning of waste materials.

Measures Specific to Construction (Medium Risk)

- Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case make sure that that appropriate additional control measures are in place.

Measures Specific to Trackout (High Risk)

- Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use.
- Avoid dry sweeping of large areas.
- Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.
- Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable.
- Record all inspections of haul routes and any subsequent action in a site logbook.
- Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned.
- Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).
- Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits.
- Access gates to be located at least 10m from receptors, where possible.

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Noise | Vibration | Air Quality

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Cass Allen
01234 834 862