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Air Quality Assessment

Capella House, Worthing

Air Quality Assessment

Project: CAPELLA HOUSE, WORTHING

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1. EXECUTIVE SUMMARY

- 1.1 Cass Allen has been instructed by Architectus to assess the potential air quality effects associated with a proposed residential development at the Capella House car park in Worthing, West Sussex. The assessment was carried out with regard to relevant local and national planning policy and guidance.
- 1.2 The site is not located within an Air Quality Management Area (AQMA), indicating that air quality in the vicinity is generally acceptable. Pollutant concentrations at the site are primarily influenced by vehicle emissions along the A24 Broadwater Road, the adjacent Railway Approach and the local road network.
- 1.3 Potential construction phase dust soiling and particulate matter (PM: PM₁₀) health effects were assessed qualitatively, resulting in Medium and Low Risk levels being identified, respectively, 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 the potential exposure of future residents to elevated concentrations of nitrogen dioxide (NO₂) and PM (PM₁₀ and PM_{2.5}) was also undertaken and 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 are anticipated as a result of vehicle trips associated with the development, with no requirement for additional assessment or 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 Architectus to assess the potential air quality effects associated with a proposed residential development at Capella House car park in Worthing, Sussex. The assessment has been carried out with regard to relevant local and national planning guidance.
- 2.2 The aim of the assessment is to consider air quality conditions, and their potential to influence the development in terms of its design, scale and layout, taking into account the following aspects:
- Dust and PM 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.
- 2.3 Subsequently, where required, appropriate measures are identified to minimise the impacts.
- 2.4 This report contains technical terminology; a glossary of terms can be found at www.cassallen.co.uk/glossary.

3. PROJECT DESCRIPTION AND SITE CONTEXT

- 3.1 The proposal is to develop the site into 32 apartments over six storeys with undercroft parking.
- 3.2 The site is not located within an AQMA, indicating that air quality in the vicinity is generally good. The site is currently an open air, asphalt surface, privately-owned car park in a mixed-use area, with the capacity for 28 parked cars. Parking is currently for the exclusive use of those working in the adjacent offices within Station House and Capella House. The development proposes to reduce the number of parking spaces to 20.
- 3.3 The site is bounded to the north by Worthing Railway Station (Southern Railway), to the south by Railway Approach and to the east by a Morrisons HGV Delivery point, beyond which lies the A24 Broadwater Road, which have the potential to contribute to pollutant concentrations at the site. Industrial, office and residential properties surround the site, which have the potential to be affected by emissions associated with both the construction and operational phases of the development.
- 3.4 The site location is shown in Figure 1.

Figure 1 Site Location and Surrounding Area



4. LEGISLATION AND PLANNING POLICY

Air Quality Legislation

- 4.1 The wider air quality legislation underpinning national, regional and local planning policy, is summarised in Appendix 1.
- 4.2 The National AQOs and Air Quality Standards Regulations limit and target values for the UK are summarised in the Air Quality Strategy. These limits, for ten key air pollutants, are based on both European Union directives and World Health Organization (WHO) guidelines. They are periodically updated, informed by the latest scientific evidence, to protect public health, vegetation and ecosystems. The Local Air Quality Management (LAQM) regime requires local authorities to regularly evaluate the air quality in their areas based on these AQOs.
- 4.3 As a regional pollutant, many sources of PM_{2.5} are beyond local authority control therefore, it does not form part of the LAQM regime. However, long-term (2040) targets for ambient PM_{2.5} concentrations are set in 'The Environmental Targets (Fine Particulate Matter) (England) Regulations' (2023), and an interim (2028) target is published in the 'Environmental Improvement Plan' (2023). PM_{2.5} is a key air pollutant for health impacts, and local authorities must monitor progress towards meeting these reduced levels.
- 4.4 The National AQOs for the pollutants most associated with vehicle emissions, and therefore applicable to this assessment, are detailed in Table 1.

Table 1 UK National Air Quality Objectives

Pollutant	Objective	Averaging Period
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

- 4.5 The above AQOs are typically applied 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 where relevant provisions concerning health and safety at work apply.

National Policy

- 4.6 Outline guidance for the assessment of air quality affecting new developments is given in the 'National Planning Policy Framework' (NPPF) (December 2024; as amended February 2025). Relevant sections in this case are included in Appendix 1.

Local Policy

- 4.7 The Worthing Borough Council (WBC) Local Plan 2020 - 2036 (Adopted 28th March 2023) informs planning decisions in the area and includes the following policies relevant to air quality:

SP3 HEALTHY COMMUNITIES

- a) *New development must be designed to achieve healthy, inclusive and safe places, which enable and support healthy lifestyles and address health and well-being needs in Worthing. In order to maximise opportunities to promote healthy lifestyles, where appropriate, new development must:...*
- v. *improve environmental sustainability resilience and reduce contributors to poor health and mitigating their risks, such as those associated with... poor air quality to reduce inequalities and address climate justice...*

DM15 - SUSTAINABLE TRANSPORT & ACTIVE TRAVEL

...

- vii) *ensure new development contributes to the mitigation of air pollution, particularly in Air Quality Management Areas. New development should be located and designed to incorporate facilities for electric vehicle charging points, thereby extending the current network...*

DM22 – POLLUTION

- a) *Development should not contribute to, be put at risk from, or be adversely affected by unacceptable levels of... air... pollution.... Where possible development should help to improve local environmental conditions.*
- b) *New development in Worthing will be located in areas most suitable to the use of that development to avoid unacceptable risks from all sources of pollution.*
- c) *Mitigation measures will need to be implemented for developments that could increase levels of pollution, taking into account any cumulative impact. Mitigation should avoid, minimise and offset the impact of development and take opportunities to improve local environmental conditions. Where there are significant levels of increased pollution that cannot be mitigated development will be refused.*
- d) *Where appropriate, air quality... assessments will be required to support planning applications. These should be undertaken in accordance with the most up to date guidance and have regard to any relevant action plans. Any new development in the Worthing Air Quality Management Area must be consistent with the Air Quality Action Plan. Where any identified harm to any of these factors cannot be adequately mitigated, planning permission will be refused.*

4.8 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 PM impacts at existing receptors;
- Construction phase plant and vehicle emissions impacts at existing receptors;
- Operational phase vehicle emissions exposure at proposed receptors; and
- Operational phase vehicle emissions impacts at existing receptors.

5. ASSESSMENT METHODOLOGY

5.1 The scope and methodology for this assessment has been determined with regard to:

- Defra 'LAQM Technical Guidance' (August 2022) (LAQM.TG22);
- Environmental Protection UK (EPUK) & Institute of Air Quality Management (IAQM), 'Land Use Planning & Development Control: Planning for Air Quality' (January 2017) (LUPDC); and
- Sussex Air Quality Partnership (SAQP) 'Air Quality and Emissions Mitigation Guidance for Sussex' (2021).

5.2 Reference has also been made to other relevant technical guidance, where applicable.

Construction Phase

5.3 The assessment of potential air quality impacts during the construction phase has focused on the generation and dispersion of dust and PM₁₀, following 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: consider impacts to sensitive human and ecological receptors within 250m or 50m of the site boundary, respectively (indicated on Figure 2), and 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 wind rose for nearby Shoreham 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).

5.4 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.

5.5 A review of the Multi-Agency Geographic Information for the Countryside (MAGIC) website did not identify any statutory designated ecological sites within the relevant screening distances, and therefore these have been excluded from the construction phase assessment.

Operational Phase

- 5.6 Concentrations of NO₂, PM₁₀ and PM_{2.5} have been considered in the operational phase assessment as road traffic is a major source of these pollutants and their concentrations are often close to, or in exceedance of, the relevant AQOs in urban locations.

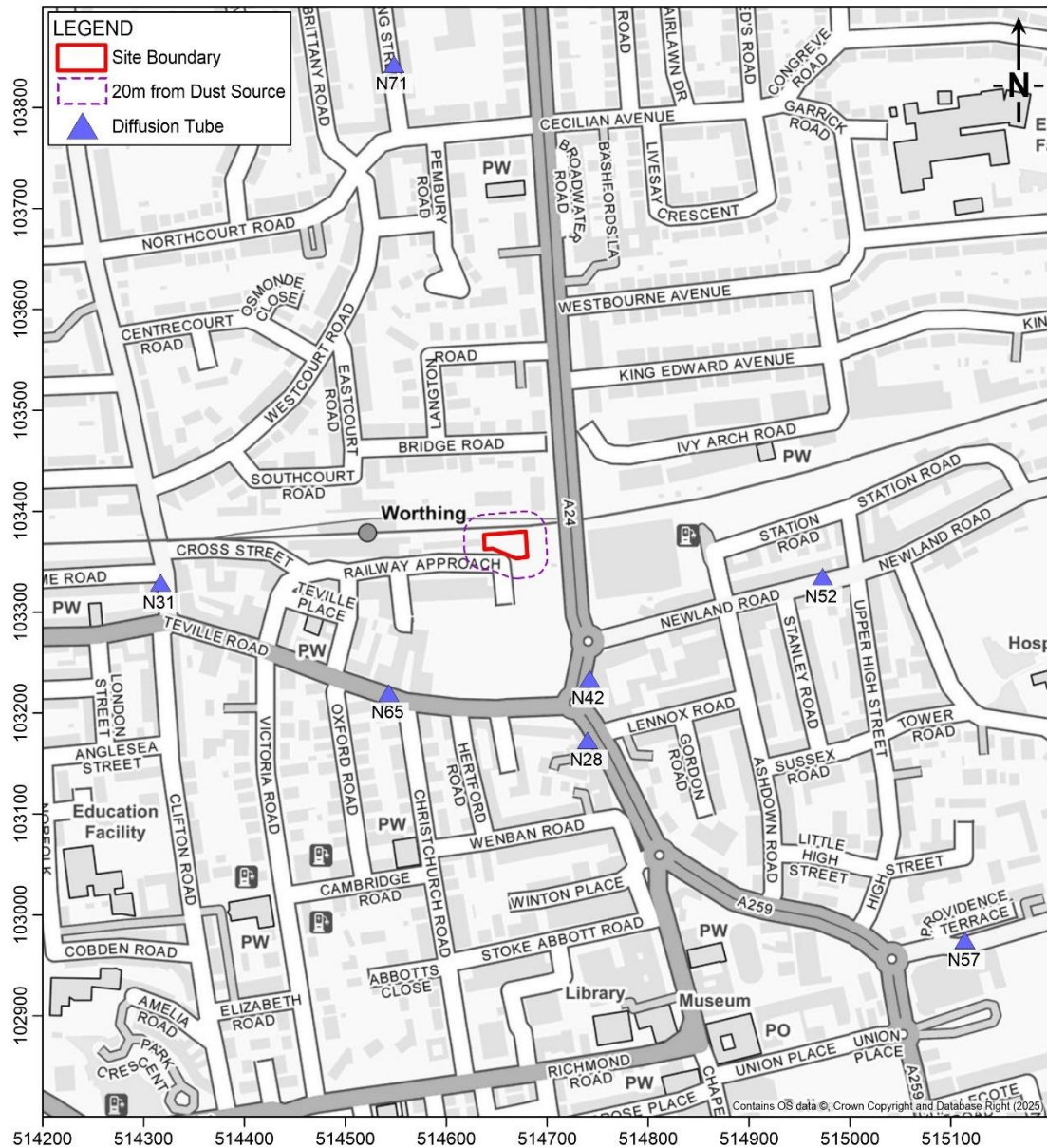
Air Quality Impacts

- 5.7 The LUPDC guidance indicates the magnitude of change in traffic flows that is potentially significant, and therefore likely to require further assessment, as follows:
- 5.8 For roads distant from an AQMA:
- Light Duty Vehicle (LDV) flows of >500 Annual Average Daily Traffic (AADT); and/or
 - Heavy Duty Vehicle (HDV) flows of >100 AADT.
- 5.9 The development has therefore been screened against these criteria. Where these thresholds are not exceeded, a detailed assessment of air quality impacts is not normally required, and the resulting effect can be considered 'not significant'.

Site Suitability

- 5.10 The development also has the potential to expose future users to elevated pollutant concentrations. Recently recorded pollutant concentrations in the locality have been compared to the relevant AQOs to determine likely conditions at the site and its suitability for the proposed residential use.
- 5.11 Additionally, Defra's 'PM_{2.5} Targets: Interim Planning Guidance' (October 2024), prompts developers to consider:
1. *How has exposure to PM_{2.5} been considered when selecting the development site?*
 2. *What actions and/or mitigations have been considered to reduce PM_{2.5} exposure for development users and nearby receptors (houses, hospitals, schools etc.) and to reduce emissions of PM_{2.5} and its precursors?*
- 5.12 Accordingly, these aspects are also considered in the operational phase assessment.
- 5.13 The development is not considered to meet any of the SAQP Air Quality Guidance criteria for requiring a detailed assessment of exposure or impacts, and thus, a high-level appraisal is presented below.

Figure 2 Study Area



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 Adur District & Worthing Borough Councils (ADWBCs) and Defra. Monitoring locations are indicated on Figure 2.

Table 2 ADWBC Monitored Concentrations Across Study Area – NO₂

ID	Location	Type	Distance to site (m)	Monitored Annual Mean (µg/m ³)				
				2019	2020	2021	2022	2023
N28	Chapel Road / Teville Road	Roadside	190	27.2	17.3	17.3	17.6	16.0
N31	South Farm Road, Roundabout	Kerbside	320	25.8	20.8	20.2	20.6	20.3
N42	Norfolk House, 122 Chapel Road	Roadside	135	24.2	18.1	17.3	19.5	17.6
N52	Newland Road, outside 63	Kerbside	295	22.4	24.0	19.2	17.3	19.3
N57	Lyndhurst Road	Roadside	575	23.4	23.9	20.8	20.7	19.5
N65	Teville Road (opposite Unleashed)	Kerbside	170	27.5	26.5	23.6	24.0	20.4
N71	King Street	Roadside	475	-	-	11.7	11.8	11.5

Note: Data obtained from ADWBC Air Quality Annual Status Report (ASR) (2024). 2020 / 2021 results are likely to be atypical due to COVID-19 travel restrictions.

- 6.2 As indicated in Table 2 above, NO₂ concentrations in the vicinity of the site were ‘well below’ (defined by the IAQM as less than 75% of) the relevant AQOs during the five most recent monitoring years, 2019-2023. Further to this, the general trend shows air quality conditions in the area improving over time, and this is illustrated in Figure A.2 of the ADWBC ASR.

Table 3 2025 Background Annual Mean Concentrations Across Study Area (µg/m³)

NO _x	NO ₂	PM ₁₀	PM _{2.5}
11.6 – 12.9	8.9 – 9.9	9.7 – 11.0	6.2 – 7.1

Note: Data obtained from <https://uk-air.defra.gov.uk/data/iaqm-background-home>. A range is given as the study area spans multiple grid squares.

- 6.3 No monitoring of PM₁₀ or PM_{2.5} is undertaken in the vicinity of the site. However, Defra-predicted background concentrations for the current year (2025) are also well below the relevant AQOs.
- 6.4 Further discussion regarding the implications of baseline conditions to the development is provided in Section 8.

7. CONSTRUCTION PHASE ASSESSMENT

7.1 The IAQM methodology has been used to assess the potential impact of dust and PM₁₀ 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 4 Step 2A – Dust Emission Magnitude for Construction Activities

Activity	Magnitude	Explanation
Demolition	N/A	Site is currently vacant
Earthworks	Small	Total site area <18,000m ² , <5 heavy earth-moving vehicles active at any one time
Construction	Medium	Total building volume 12,000m ³ - 75,000m ³
Trackout	Small	<20 outward HDV movements per day, surface material with low potential for dust release, no unpaved road

Table 5 Step 2B – Sensitivity of the Area

Potential Impact	Details	Construction Activity		
		Earthworks	Construction	Trackout
Dust Soiling: Amenity	>1 Medium sensitivity receptors within 20m of site	Medium	Medium	Medium
PM ₁₀ : Health	1-10 Medium sensitivity receptors within 20m of site and low background PM ₁₀ concentration	Low	Low	Low

Table 6 Step 2C – Summary of Impact Risks to Define Site-Specific Mitigation

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

7.3 It should be noted that the prevailing winds (as shown in Appendix 2) are south-westerly and northerly and thus, locations downwind of the site, to the north-east and south, are most at risk of construction dust impacts. As a robust case, the development is considered Medium Risk for dust soiling effects and Low Risk for PM₁₀ health effects, in the absence of mitigation. Following implementation of the recommended mitigation measures for the relevant activities' risk levels in Appendix 3, it is anticipated that 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 5.7 and therefore, significant residual effects are not anticipated.

8. OPERATIONAL PHASE ASSESSMENT

Site Suitability

- 8.1 As detailed in Section 6, monitored annual mean NO₂ concentrations at the closest diffusion tubes to the site (N42, N65 and N28) were well below the AQO across the last five monitoring years (2019-2023). These tubes are located along busy A-roads, where air pollutant emissions from passing vehicles are expected to be higher than at the site, which is set back from the A24 by >30m. As such, it is anticipated that NO₂ concentrations at the site would be lower still and not likely to exceed the annual mean AQO.
- 8.2 Regarding PM₁₀ and PM_{2.5}, Defra background concentrations (Table 3) are predicted to be well below the respective annual mean AQOs. Given that these pollutants are largely influenced by regional sources, and with a lack of significant sources close to the site, concentrations at the site are expected to be approaching background levels and any local contributions from road vehicle emissions are not likely to lead to exceedances.
- 8.3 With recently monitored local annual mean NO₂ concentrations below 60µg/m³, a breach of the hourly mean AQO for NO₂ is unlikely (as indicated in LAQM.TG22). Equally, exceedances of the 24-hour mean AQO for PM₁₀ are not anticipated, as Defra-predicted annual mean concentrations are below the 32µg/m³ proxy value.
- 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 residential use, with no requirement for additional mitigation.
- 8.5 In addition to the above, Defra guidance now requires consideration of how a development will reduce exposure to PM_{2.5}. In terms of selecting this development site, which is in an area where PM_{2.5} concentrations are expected to be well below the AQO and where there is no requirement to reduce exposure further, exposure to PM_{2.5} has been considered.

Vehicle Emissions Impacts

- 8.6 As the development will lead to a reduction in parking provision (28 spaces to 20 spaces) it is anticipated that the number of associated daily vehicle trips will also decrease. Therefore, the residual effect of the development's operational phase vehicle trip generation on existing sensitive receptors in the vicinity is expected to be not significant, and potentially beneficial, as such further assessment of operational impacts is not required, in line with LUPDC guidance.
- 8.7 Based on the nature of the development and baseline air quality conditions in the vicinity of the site, no significant operational phase air quality impacts are anticipated.
- 8.8 In addition to the above, Defra guidance now requires consideration of how a development will reduce emissions of PM_{2.5}. As outlined above, the reduction in daily vehicle trips to and from the site as a result of reduced parking spaces has the potential to reduce PM_{2.5} exhaust emissions.

9. CONCLUSIONS

- 9.1 Cass Allen was instructed by Architectus to assess the potential air quality effects associated with a proposed residential development at the Capella House car park in Worthing, West Sussex. The assessment was carried out with regard to relevant local and national planning policy and guidance.
- 9.2 Potential construction phase dust soiling and PM₁₀ health effects were assessed qualitatively, resulting in Medium and Low Risk levels being identified, respectively, in the absence of mitigation. Suitable best practice mitigation measures have been recommended, and no significant residual air quality impacts are expected.
- 9.3 It is not anticipated that the development would expose future residents 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 further assessment or additional mitigation measures.
- 9.4 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 and Policy

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 NO₂, 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.

Policy

National

NPPF sections relevant to air quality are stated below for planning policy context:

110. ...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.

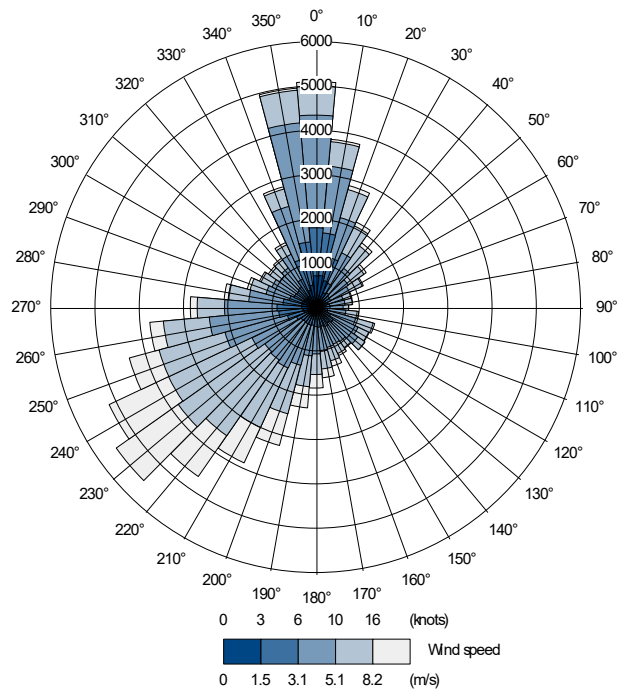
187. Planning policies and decisions should contribute to and enhance the natural and local environment by: ... preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of ... air ... pollution. Development should, wherever possible, help to improve local environmental conditions such as air ... quality.

198. 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.

199. 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.

201. 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.

Appendix 2 Wind Rose for Shoreham (2015-2024)



Appendix 3 Recommended Construction Phase Mitigation

Highly Recommended Mitigation Measures for Medium-Risk Sites

Communications

- Develop and implement a stakeholder communications plan that includes community engagement before work commences onsite.
- 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 PM₁₀ 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 when asked.
- Record any exceptional incidents that cause dust and/or air emissions, either on or offsite should be recorded, 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 by the person accountable for air quality and dust issues onsite 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 locations with the Local Authority. Where possible commence baseline monitoring at least three months before work commences onsite or, if it 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 possible.
- Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles onsite.
- 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 reused onsite. If they are being reused onsite 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.

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 onsite 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.



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