



Air Quality Screening Assessment

Land off Cronton Road, Widnes

Bellway Homes Limited (North West)

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Basis of Report

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Acronyms and Abbreviations

AADT	Annual Average Daily Traffic
AQMA	Air Quality Management Area
ASR	Annual Status Report
Defra	Department for Environment, Food and Rural Affairs
EPUK	Environmental Protection UK
EV	Electric Vehicle
HDV	Heavy Duty Vehicle
IAQM	Institute of Air Quality Management
KMBC	Knowsley Metropolitan Borough Council
LAQM	Local Air Quality Management
LAQM.TG(22)	Local Air Quality Management Technical Guidance (version 22)
LDV	Light Duty Vehicle
NO ₂	Nitrogen Dioxide
NRMM	Non-Road Mobile Machinery
NPPF	National Planning Policy Framework
PM ₁₀	Particulate matter with an aerodynamic diameter of less than 10 microns (µm), expressed in units of µg/m ³ .
PM _{2.5}	Particulate matter with an aerodynamic diameter of less than 2.5 microns (µm), expressed in units of µg/m ³ .



1.0 Introduction

SLR Consulting Ltd has been commissioned by Bellway Homes Ltd (North West) to undertake an air quality screening assessment to accompany an outline planning application for a proposed residential development on land off Cronton Road, Widnes.

The Proposed Development is situated to the north of Cronton Road (A5080) within the village of Cronton, to the north of Widnes. The land is currently of agricultural use, with existing residential dwellings located to the east and southeast. Further agricultural fields bound the immediate northern and western boundaries.

The proposals are for the construction of up to 120 residential dwellings, and associated infrastructure.

This report details the results of an air quality screening assessment undertaken to accompany the planning application for the proposed development. The report discusses the potential dust and particulate matter impacts associated with the construction phase, and the potential air quality impacts generated by the proposed development during its operation.



2.0 Legislation and Policy Context

2.1 Relevant Air Quality Legislation and Guidance

The air quality assessment has been undertaken in accordance with the following legislation and guidance:

- The Environment Act 1995, as amended 2021;
- Department of Environment, Food and Rural Affairs, The Air Quality Strategy for England, August 2023;
- The Air Quality Standards Regulations 2010;
- Department for Environment, Food and Rural Affairs, Local Air Quality Management Technical Guidance LAQM.TG(22), August 2022;
- Institute of Air Quality Management, Guidance on the Assessment of Dust from Demolition and Construction, January 2024;
- Ministry of Housing, Communities and Local Government, National Planning Policy Framework, Updated December 2024 with minor updates in February 2025; and
- Department for Communities and Local Government, Planning Practice Guidance: Air Quality, November 2019.

Further details of these documents are included in **Appendix A**.

2.2 Assessment Criteria

The relevant air quality objectives and limit values for this assessment are included within Table 1.

Table 1: Air Quality Objectives and Limit Values Relevant to the Assessment*			
Pollutant	Objective/Limit Value	Averaging Period	Obligation
Nitrogen Dioxide (NO ₂)	200µg/m ³ , not to be exceeded more than 18 times a year	1-hour mean	All local authorities
	40µg/m ³	Annual mean	All local authorities
Particulate Matter (PM ₁₀)	50µg/m ³ , not to be exceeded more than 35 times a year	24-hour mean	England, Wales and Northern Ireland
	40µg/m ³	Annual mean	England, Wales and Northern Ireland
Particulate Matter (PM _{2.5})	Limit Value of 20µg/m ³	Annual mean	England, Wales and Northern Ireland
	Limit Value of 10µg/m ³ , to be met by 2040**	Annual mean	England
*In accordance with the Air Quality Standards Regulations 2010			
**In accordance with the Environmental Targets (Fine Particulate Matter) (England) Regulations 2023			

Further details of where those objectives and limit values apply are detailed in **Appendix A**.



3.0 Assessment Methodology

3.1 Consultation and Scope of Assessment

The assessment methodology was sent to Helen Bradshawe, Senior Environmental Protection Officer at Knowsley Metropolitan Borough Council (KMBC), via email correspondence, on 1st December 2025.

Helen Bradshawe., replied via email on 4th December to state the proposed methodology was acceptable.

A summary of the consultation undertaken is provided in Table 2.

Table 2: Summary of Consultation		
Assessment Stage	Proposed Method	Response
Construction phase assessment to consider dust and particulate matter (PM ₁₀)	Qualitative assessment in accordance with Institute of Air Quality Management (IAQM) guidance.	No objection to methodology.
Operational phase assessment to consider nitrogen dioxide (NO ₂) and particulate matter	A qualitative screening assessment will be undertaken in accordance with Environmental Protection UK (EPUK)/IAQM guidance.	

3.2 Construction Phase Assessment

To assess the impacts associated with dust and particulate matter releases during the construction phase of the development, an assessment has been undertaken in accordance with guidance from the Institute of Air Quality Management (IAQM). Further details of the construction assessment methodology are provided in Appendix B.

The closest sensitive human receptors to where construction phase activities will take place are a mixture of education/sports and residential and are detailed in Table 3, overleaf. However, it should be noted that the assessment includes consideration of all sensitive receptors within 250m of the site boundary, in accordance with IAQM guidance.

Air quality impacts associated with construction vehicle emissions will be short lived and present only during the construction of the proposed development. Given the relatively small scale of development, the number of daily construction vehicle movements is likely to be small and would fall below the criteria in guidance for when detailed consideration is required. Therefore, any impacts are considered to be not significant and can be scoped out of the assessment.

At this stage it is not known if any generators or non-road mobile machinery (NRMM) will be utilised during the construction phase of the development. However, any emissions associated with such plant will likely be insignificant. IAQM guidance states that “*Experience of assessing the exhaust emissions from on-site plant (NRMM) and site traffic suggests that they are unlikely to make a significant impact on local air quality, and in the vast majority of cases they will not need to be quantitatively assessed*”. Therefore, any impacts are considered to be not significant, and can be scoped out of the assessment.



Table 3: Sensitive Receptors Considered in the Construction Phase Assessment

Receptor	Direction from the Site	Approximate Distance from the Site Boundary (m)
Existing residential dwellings off Houghton Croft	East	Directly adjacent
Existing residential dwellings off Wheatfield Road	East	Directly adjacent
Existing residential dwellings off Cronton Road	South	Directly adjacent
Existing residential dwelling off Cronton Road	South-west	Approximately 15m at closest point

The criteria used to assess the construction impact of the proposed development, and the associated significance of effects, at existing sensitive receptors are included in **Appendix B**.

3.3 Operational Phase Assessment

A qualitative screening assessment has been undertaken of the impacts of NO₂ and particulate matter, as these are the pollutants considered most likely to exceed the objectives and limit value.



4.0 Baseline Situation

4.1 Knowsley Metropolitan Borough Council Local Air Quality Management

The proposed development site is located within the administrative area of Knowsley Metropolitan Borough Council (KMBC), which is responsible for the management of local air quality.

There are currently no Air Quality Management Areas (AQMA) declared within KMBC. The closest AQMA to the proposed development is located 4.3km to the west in Liverpool, known as the Liverpool city-wide AQMA. It is therefore considered that the proposed development is not located in an area of known poor air quality.

Review of the 2025 KMBC Annual Status Report (ASR), indicates that KMBC do not currently undertake any air quality monitoring in close proximity to the proposed development site. The nearest roadside diffusion tube monitoring location to the proposed development is located approximately 2.8km to the northwest of the site (ref. H12a, H12b) and recorded an annual average NO₂ concentration of 24.6µg/m³ in 2024.

4.2 Background Air Pollutant Concentrations

As there are currently no representative background NO₂, PM₁₀ or PM_{2.5} monitoring locations in the vicinity of the proposed development site, background concentrations for these pollutants have been obtained from the 2021-based Defra default concentration maps for the appropriate grid square.

The background pollutant concentrations used in this assessment are detailed in Table 4.

Table 4: Background Air Pollutant Concentrations Obtained from the 2021-Based Defra Default Concentration Maps and Local Air Quality Monitoring Data			
Proposed Development Site Coordinates (x,y)	2025 Pollutant Concentrations (µg/m ³)		
	Nitrogen Dioxide (NO ₂)	Particulate Matter (PM ₁₀)	Particulate Matter (PM _{2.5})
349062, 388367	10.16	12.34	7.06

The results show that the background concentrations are well below the relevant objectives and limit value.



5.0 Impact Assessment

5.1 Construction Phase Assessment

Step 2 – Impact Assessment

In accordance with the IAQM guidance, the main activities to be considered during the construction phase of the proposed development are demolition, earthworks, construction and trackout.

Demolition is defined as the removal of an existing structure or structures. There are no demolition activities associated with the proposed development, and so this is not considered further within the assessment.

Earthworks covers the processes of soil-stripping, ground-levelling, excavation, and landscaping. Construction activities will focus on the proposed buildings and car parking areas.

Trackout is defined as the transport of dust and dirt by vehicles travelling from a construction site on to the public road network. This may occur through the spillage of dusty materials onto road surfaces or through the transportation of dirt by vehicles that have travelled over muddy ground on the site. This dust and dirt can then be deposited and resuspended by other vehicles.

Step 2A

Step 2A of the assessment defines the potential dust emission magnitude from earthworks, construction and trackout in the absence of site-specific mitigation.

Examples of the criteria for the dust emission classes are detailed in **Appendix B**. The results of this step are detailed in Table 5.

Step 2B

Step 2B of the construction phase dust assessment defines the sensitivity of the area, taking into account the significance criteria detailed in **Appendix B**, for earthworks, construction and trackout. The sensitivity of the area to each activity is assessed for potential dust soiling, human health effects and ecological effects (where applicable).

For earthworks and construction there are currently between 1 to 100 receptors within 20m of where these activities may take place, which is assumed to be the site boundary for the purposes of this assessment.

For trackout, there are between 1 to 100 receptors within 20m of where trackout may occur for a distance of up to 250m from the site entrance, assuming construction vehicles travel east along Cronton Road.

Step 2C

Step 2C of the construction phase dust assessment defines the risk of impacts from each activity, by combining the dust emission magnitude with the sensitivity of the surrounding area.

The risk of dust impacts from each activity, with no mitigation in place, has been assessed in accordance with the criteria detailed in **Appendix B**. The results of this step are detailed in Table 5.



Summary of Step 2

Table 5 details the results of Step 2 of the construction phase assessment for human receptors.

Table 5: Construction Phase Dust Assessment for Human and Ecological Receptors				
	Activity			
	Demolition	Earthworks	Construction	Trackout
Step 2A				
Dust Emission Magnitude	N/A	Medium ^a	Medium ^b	Medium ^c
Step 2B				
Human Receptors				
Sensitivity of Closest Human Receptors	N/A	High	High	High
Sensitivity of Area to Dust Soiling Effects	N/A	High	High	High
Sensitivity of Area to Human Health Effects	N/A	Low ^d	Low ^d	Low ^d
Step 2C				
Dust Risk: Dust Soiling	N/A	Medium Risk	Medium Risk	Medium Risk
Dust Risk: Human Health	N/A	Low Risk	Low Risk	Low Risk
a. Total site area estimated to be between 18,000 and 110,000m². b. Total building volume estimated to be between 12,000 and 75,000m³. c. Number of construction phase vehicles estimated to be between 20 – 50 movements per day. d. Background annual mean PM₁₀ concentration is taken from the LAQM Defra default concentration maps, for the appropriate grid square for 2025.				

Step 3 – Mitigation

During the construction phase, the implementation of effective mitigation measures will substantially reduce the potential for nuisance dust and particulate matter to be generated.

Step 2C of the assessment has identified that the risk of dust soiling and human health effects is not negligible for all activities and therefore site-specific mitigation will need to be implemented to ensure dust effects from these activities will be not significant.

Recommendations for Site-Specific Mitigation

Specific mitigation relating to dust control may be in the form of construction best practices or could include a dust management plan. Recommendations for mitigation within the IAQM guidance include:

- Revegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable;
- Protect surfaces and exposed material from winds until disturbed areas are sealed and stable;
- Dampen down exposed stored materials, which are to be stored as far from sensitive receptors as possible;



- Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place;
- Avoid activities that generate large amounts of dust during windy conditions;
- Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery;
- Avoid dry sweeping of large areas;
- 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;
- Ensure vehicles entering and leaving the site are covered to prevent escape of materials during transport;
- Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable);
- Minimise vehicle movements and limit vehicle speeds – the slower the vehicle speeds, the lower the dust generation;
- Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever the site size and layout permits; and
- Access gates to be located at least 10m from receptors, where possible.

All dust and air quality complaints should be recorded, and appropriate measures be taken to identify causes and reduce emissions in a timely manner. Exceptional incidents which cause dust emissions, and the action taken to resolve the situation, should be recorded in a logbook and made available to KMBC on request.

It is recognised that the final design solutions will be developed with the input of the Contractor to maximise construction efficiencies, to use modern construction techniques and sustainable materials and to incorporate the particular skills and experience offered by the appointed contractor.

Step 4 – Residual Effects

Step 4 of the construction phase dust assessment has been undertaken to determine the significance of the dust effects arising from earthworks, construction and trackout associated with the proposed development.

The implementation of effective mitigation measures during the construction phase, such as those detailed in Step 3, will substantially reduce the potential for nuisance dust and particulate matter to be generated and any residual impact should be **not significant**.

5.2 Operational Phase – Impact Assessment

Existing Sensitive Human Receptors

The development proposals comprise of the construction of up to 120 residential dwellings and associated infrastructure.

Background pollutant concentrations at the proposed development site (as detailed in Table 4) are predicted to be well below the relevant annual mean air quality objectives and limit value.



Guidance prepared by Environmental Protection UK (EPUK) and the IAQM¹ provides criteria for when a detailed air quality assessment may be required. The relevant criteria for a proposed development comprise:

- A change in Light Duty Vehicles (LDVs) of more than 500 AADT² (or 100 AADT within/adjacent to an AQMA);
- A change in Heavy Duty Vehicles (HDVs) of more than 100 AADT (or 25 AADT within/adjacent to an AQMA);
- The realignment of existing roads near to receptors, with a change of more than 5m when the road is within an AQMA;
- The introduction of a new junction, or removal of an existing junction, leading to a significant change in vehicle acceleration/deceleration (e.g., through the introduction of traffic lights or a roundabout) near to receptors.

Consultation was undertaken with Prime Transport Planning, the appointed transport consultant for the scheme, to ascertain the predicted number of vehicle movements that would be generated by the proposed development.

Prime Transport Planning forecast that the development will generate 667 AADT vehicle movements in total. However, these vehicles will distribute along the immediate road network with 77% travelling west when leaving the site access, and 23% travelling east. This equates to 514 AADT vehicles heading westbound and 153 AADT vehicles heading eastbound on Cronton Road.

Once vehicle distribution is taken into account, the number of vehicle movements only slightly exceeds the 500 AADT screening criteria for vehicles travelling westbound along Cronton Road from the site access. This route passes through mostly agricultural land with very few sensitive receptors. The number of vehicles travelling eastbound, which travels through the village of Cronton, falls below the criteria outlined above.

IAQM guidance states that “*exceeding a screening criterion.... does not automatically lead to the requirement for a Detailed Assessment*”. It goes on to state that any assessment “*should provide enough evidence that will lead to a sound conclusion on the presence, or otherwise, of a significant effect on local air quality. A Simple Assessment will be appropriate, if it can provide this evidence*”.

Given the above, in accordance with IAQM guidance, it is considered that a screening assessment is sufficient and that the impact of the development on air quality in the local area is considered to be not significant.

Proposed Sensitive Human Receptors

The current land uses surrounding the proposed development site have been reviewed. The site is bordered by existing residential dwellings to the east, with open agricultural land to the north, south and west.

Due to the low background concentrations in the vicinity of the site, as identified in Table 4, and the relatively small number of proposed dwellings, it is considered unlikely that the increase in pollution concentrations associated with vehicle movements would lead to any exceedances of the annual mean air quality objectives/limit value within the site.

¹ Moorcroft and Barrowcliffe *et al*, Land-use Planning and Development Control: Planning for Air Quality, Version 1.2, January 2017

² Annual Average Daily Traffic (AADT)



In summary, it is considered that there will be no significant air quality impacts on future residents of the proposed development site associated with the surrounding land uses.

Assessment of Significance for Human Receptors

The significance of the overall effects of the proposed development has been assessed in accordance with the EPUK/IAQM guidance. This assessment is based on professional judgement and details of the assessors' experience is included in **Appendix C**.

In accordance with the EPUK/IAQM guidance, the air quality effect of the proposed development is considered to be **not significant**.

Mitigation Strategies

The impact of the proposed development is predicted to be not significant. However, mitigation measures, which will assist in reducing any potential impact and general best practice measures in relation to air quality, could be implemented.

Electric Vehicle (EV) charging points are now standard for all new residential developments with associated car parking spaces³.

However, additional mitigation measures could include the use of low NO_x boilers and the implementation of a green travel plan.

³ The Building Regulations 2010, "Infrastructure for the Charging of Electric Vehicles" (2021)



6.0 Conclusions

6.1 Construction Phase

The construction phase assessment has been undertaken to determine the risk and significance of dust and particulate matter effects from earthworks, construction and trackout associated with the proposed development, in accordance with guidance published by the IAQM.

With site specific mitigation measures in place, the significance of dust and particulate matter effects from earthworks, construction and trackout is considered to be **'not significant'**.

6.2 Operational Phase

Existing Sensitive Receptors

A qualitative air quality screening assessment has been undertaken to consider the potential impact of the proposed development on the local air quality.

In accordance with the EPUK and IAQM document 'Land-Use Planning and Development Control: Planning for Air Quality', the impact can be described as **'not significant'**.

Proposed Sensitive Human Receptors

A qualitative air quality screening assessment has been undertaken to consider the potential impact of the current land uses surrounding the proposed development on the local air quality for future users of the site.

In accordance with the EPUK and IAQM document 'Land-Use Planning and Development Control: Planning for Air Quality', the impact can be described as **'not significant'**.

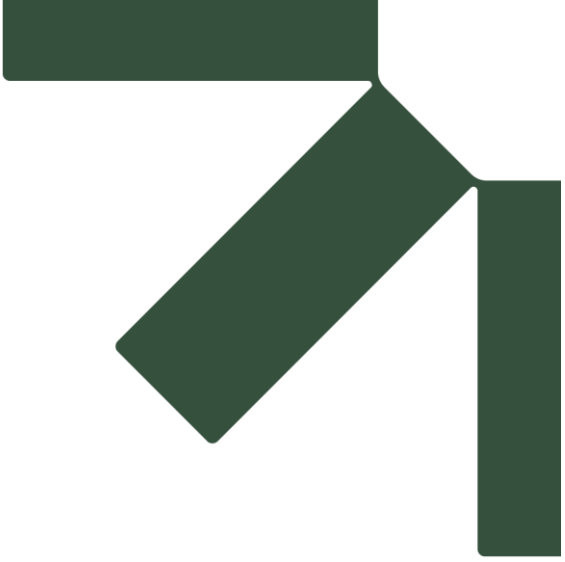
Recommendations for Mitigation

The impact of the proposed development is predicted to be not significant for the proposed development. However, based on professional judgement, it is considered that mitigation measures should, in any case, be employed where possible. Measures capable of improving local air quality to be included as part of the proposed development are described in Section 5.

6.3 Summary

The air quality screening assessment indicates that the proposed development, will not lead to an unacceptable risk from air pollution for existing sensitive receptors and will not lead to any breach of relevant national objectives as required by national policy. Therefore, there are no material reasons in relation to air quality why the proposed scheme should not proceed.





Appendix A Air Quality Legislation and Guidance

Air Quality Screening Assessment

Land off Cronton Road, Widnes

Bellway Homes Limited (North West)

SLR Project No.: 440.021314.00001

5 December 2025

A.1 National Air Quality Strategy

The Environment Act 1995 requires the UK government to prepare a national Air Quality Strategy. The first UK strategy was published in March 1997, setting out policies for the management of ambient air quality. This was subsequently updated in 2007⁴.

The 2007 strategy establishes the framework for air quality management in England, Scotland, Wales and Northern Ireland. Air quality standards and objectives are set out for eight pollutants which may potentially occur at levels that give cause for concern. The strategy also provides details of the role that local authorities are required to take in working towards improvements in air quality, known as the Local Air Quality Management (LAQM) regime.

Defra published an updated air quality strategy in April 2023, and updated in August 2023⁵. The revised strategy supersedes the 2007 strategy in England only and provides a framework to enable local authorities to make the best use of their powers and make improvements for their communities. It also includes guidance on the new fine particulate matter targets for England.

A.2 Air Quality Standards and Objectives

Air quality standards and objectives are set out in the strategy for the following pollutants: nitrogen dioxide (NO₂), sulphur dioxide (SO₂), carbon monoxide (CO), lead (Pb), fine particulate matter (PM₁₀), benzene (C₆H₆), 1, 3-butadiene (C₄H₆) and ozone (O₃).

Objectives for each pollutant, except O₃, were first given statutory status in the Air Quality Regulations 2000⁶ and Air Quality (Amendment) Regulations 2002⁷. These objectives are defined in the strategy as:

“the maximum ambient concentration not to be exceeded, either without exception or with a permitted number of exceedances, within a specified timescale.”

EU limit values, set out within the Ambient Air Quality Directive 2008/50/EC⁸ (i.e. the CAFE Directive), were transposed into UK legislation as The Air Quality Standards Regulations 2010. These are mostly the same as the air quality objectives in terms of concentrations; however, there are differences in determining how compliance is achieved. Although the UK is no longer part of the EU, no changes have yet been made to the objectives and limit values used in the management and assessment of air quality.

Whilst there is no specific objective for PM_{2.5} in England and Wales, a limit value of 20µg/m³ is referred to in the regulations, which has been adopted for use in this assessment (as recommended by the LAQM Helpdesk). An objective has been set for PM_{2.5} in Scotland since early 2016. The Environment Act 2021 sets out a requirement to establish a target objective for PM_{2.5}, and this has now been set through the Environmental Targets (Fine Particulate Matter) (England) Regulations 2023. Annual mean concentrations of PM_{2.5} must now meet a target of 10 µg/m³ across England by 2040.

Examples of where these objectives and limit values apply are detailed in the Defra LAQM

4 Department of Environment, Food and Rural Affairs, The Air Quality Strategy for England, Scotland, Wales and Northern Ireland. July 2007

5 Department of Environment, Food and Rural Affairs, Air quality strategy: framework for local authority delivery, August 2023

6 The Air Quality Regulations 2000. SI No 928

7 The Air Quality (Amendment) Regulations 2002

8 Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe



Technical Guidance document LAQM.TG(22)⁹ and are included in Table A1.

Table A1: Examples of Where the Air Quality Objectives Should Apply		
Averaging Period	Objectives Should Apply at:	Objectives Should Generally Not Apply at:
Annual mean	All locations where members of the public might be regularly exposed. Building façades of residential properties, schools, hospitals, care homes, etc.	Building facades of offices or other places of work where members of the public do not have regular access. Hotels, unless people live there as their permanent residence. Gardens of residential properties. Kerbside sites (as opposed to locations at the building façade), or any other location where public exposure is expected to be short term
24-hour mean and 8-hour mean	All locations where the annual mean objectives would apply, together with hotels. Gardens of residential properties ^a	Kerbside sites (as opposed to locations at the building façade), or any other location where public exposure is expected to be short term
1-hour mean	All locations where the annual mean and 24 and 8-hour objectives apply. Kerbside sites (e.g. pavements of busy shopping streets). Those parts of car parks and railway stations etc. which are not fully enclosed, where members of the public might reasonably be expected to spend one hour or more. Any outdoor locations to which the public might reasonably be expected to spend one hour or longer	Kerbside sites where public would not be expected to have regular access
15-minute mean	All locations where members of the public might reasonably be exposed for a period of 15 minutes or longer	
^a . Such locations should represent parts of the garden where relevant public exposure is likely, for example where there is seating or play areas. It is unlikely that relevant public exposure to pollutants would occur at the extremities of the garden boundary, or in front gardens, although local judgement should always be applied		

⁹ Department for Environment, Food and Rural Affairs, Local Air Quality Management Technical Guidance LAQM.TG(22), August 2022



A.3 Local Air Quality Management

LAQM legislation in the Environment Act 1995 requires local authorities to conduct the periodic review and assessments of air quality. These aim to identify all those areas where the objectives are being, or are likely to be, exceeded. Where exceedances are likely to occur, local authorities are required to declare an Air Quality Management Area (AQMA).

LAQM.TG(22) presents a streamlined approach for LAQM in England and Scotland; however, Northern Ireland is still considering changes to LAQM and therefore works according to the previous regimes.

Local authorities in England are required to produce Annual Status Reports (ASRs), and in Scotland and Wales, Annual Progress Reports (APRs). These replace all other reports which previously had to be submitted including Updating and Screening Assessments, Progress Reports and Detailed Assessments (which would be produced to assist with an AQMA declaration).

Local authorities now have the option of a fast-track AQMA declaration option. This allows more expert judgement to be used and removes the need for a Detailed Assessment where a local authority is confident of the outcome. Detailed Assessments should however still be used if there is any doubt.

As part of the UK Government's requirement to improve air quality, selected local authorities in England are also currently investigating the feasibility of setting up Clean Air Zones (CAZs). These are areas where targeted action and co-ordinated resources aim to improve air quality within an urban setting, in order to achieve compliance with the EU limit values within the shortest possible time.

The first CAZs were implemented in Bath in March 2021, and in Birmingham in June 2021. Since then CAZ's have also been declared in Bradford, Bristol, Portsmouth, Sheffield and Tyneside (Newcastle and Gateshead). In addition, the London Ultra Low Emission Zone (ULEZ) has now been expanded to incorporate all London Boroughs.

A.4 National Planning Policy Framework

The National Planning Policy Framework (NPPF)¹⁰, introduced in March 2012 and most recently updated in December 2024, with a minor text update in February 2025, requires that:

"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 AQMAs and CAZs, 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 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 AQMAs and CAZs is consistent with the local air quality action plan."

A.5 Planning Practice Guidance

A.1 The Planning Practice Guidance (PPG)¹¹, updated in November 2019, states that whether or

¹⁰ Ministry of Housing, Communities and Local Government, National Planning Policy Framework, December 2024

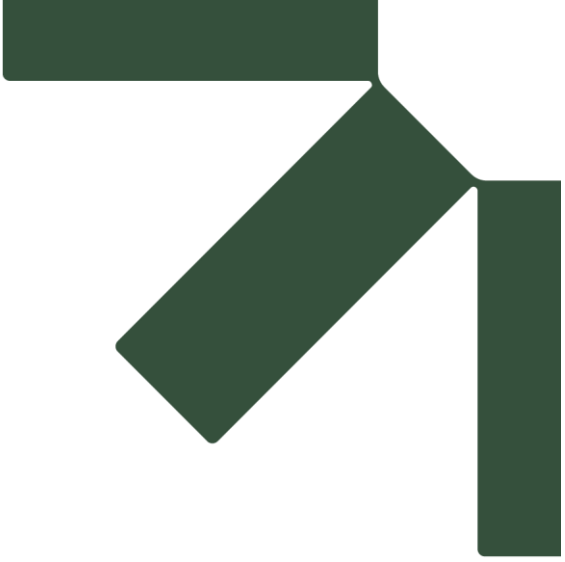
¹¹ Department for Communities and Local Government. Planning Practice Guidance: Air Quality, November 2019



not air quality is relevant to a planning decision will depend on the proposed development and its location. Concerns could arise if the development is likely to generate air quality impacts in an area where air quality is known to be poor. They could also arise where the development is likely to adversely impact upon the implementation of air quality strategies and action plans and/or, in particular, lead to a breach of EU legislation (including that applicable to wildlife).

- A.2 Where a proposed development is anticipated to give rise to concerns about air quality, an appropriate assessment needs to be carried out. Where the assessment concludes that the proposed development (including mitigation) will not lead to an unacceptable risk from air pollution, prevent sustained compliance with national objectives or fail to comply with the requirements of the Habitats Regulations, then the local authority should proceed to decision with appropriate planning conditions and/or obligations.





Appendix B Methodology for Construction Phase Assessment

Air Quality Screening Assessment

Land off Cronton Road, Widnes

Bellway Homes Limited (North West)

SLR Project No.: 440.021314.00001

5 December 2025

B.1 Institute of Air Quality Management Guidance

The methodology for the construction phase dust assessment is set out in guidance from the Institute of Air Quality Management (IAQM)¹².

Step 1

Step 1 is to screen the requirement for a more detailed assessment. The guidance states that an assessment will normally be required where there are existing sensitive human receptors within 250m of the site boundary and/or within 50m of the route(s) used by construction vehicles on the public highway, up to 250m from the site entrance(s).

With regards to ecological receptors, the guidance states that an assessment will normally be required where there are existing receptors within 50m of the site boundary and/or within 50m of the route(s) used by construction vehicles on the public highway, up to 250m from the site entrance(s).

Where any of these criteria are met, it is necessary to proceed to Step 2.

Step 2

Step 2 determines the potential risk of dust arising in sufficient quantities to cause annoyance and/or health or ecological impacts. The risk is related to:

- The activities being undertaken (demolition, number of vehicles and plant etc);
- The duration of these activities;
- The size of the site;
- The meteorological conditions (wind speed, direction and rainfall);
- The proximity of receptors to the activity;
- The adequacy of the mitigation measures applied to reduce or eliminate dust; and
- The sensitivity of receptors to dust.

The risk of dust impacts is determined using four risk categories: negligible, low, medium and high risk. A site is allocated to a risk category based upon the following two factors (known as Step 2A and Step 2B).

Step 2A assesses the scale and nature of the works which determines the potential dust emission magnitude as small, medium or large. Examples of how the magnitude may be defined are included in Table B1.

Table B1: Determining the Dust Emission Magnitude of Construction Phase Activities			
Activity	Dust Emission Class		
	Large	Medium	Small
Demolition	Total building volume >75,000m ³ ; Potentially dusty construction material (e.g. concrete); On-site crushing and screening;	Total building volume 12,000-75,000m ³ ; Potentially dusty construction material; Demolition activities 6-12m above ground level	Total building volume <12,000m ³ ; Construction material with low potential for dust release (e.g. metal cladding or timber), demolition activities

¹² Institute of Air Quality Management, Guidance on the Assessment of Dust from Demolition and Construction, January 2024



Table B1: Determining the Dust Emission Magnitude of Construction Phase Activities			
Activity	Dust Emission Class		
	Large	Medium	Small
	Demolition activities >12m above ground level		<6m above ground, demolition during wetter months
Earthworks	Total site area >110,000m ² ; Potentially dusty soil type (e.g. clay, which will be prone to suspension when dry due to small particle size); >10 heavy earth moving vehicles active at any one time; Formation of bunds >6m in height;	Total site area 18,000- 110,000m ² ; Moderately dusty soil type (e.g. silt); 5-10 heavy earth moving vehicles active at any one time; Formation of bunds 3- 6m in height;	Total site area <18,000m ² ; Soil type with large grain size (e.g. sand); <5 heavy earth moving vehicles active at any one time; Formation of bunds <4m in height;
Construction	Total building volume >75,000m ³ ; On-site concrete batching; Sandblasting	Total building volume 12,000-75,000m ³ ; Potentially dusty construction material (e.g. concrete); On-site concrete batching	Total building volume <12,000m ³ ; Construction material with a low potential for dust release (e.g. metal cladding or timber)
Trackout	>50 HDV (>3.5t) outward movements ^a in any one day ^b ; Potentially dusty surface material (e.g. high clay content); Unpaved road length >100m	20-50 HDV (>3.5t) outward movements ^a in any one day ^b ; Moderately dusty surface material (e.g. high clay content); Unpaved road length 50-100m	<20 HDV (>3.5t) outward movements ^a in any one day ^b ; Surface material with low potential for dust release; Unpaved road length <50m
a. A vehicle movement is a one way journey i.e. from A to B, and excludes the return journey b. HDV movements during a construction project may vary over its lifetime, and the number of movements is the maximum not the average			

Step 2B considers the sensitivity of the area to dust impacts which is defined as low, medium or high. The sensitivity categories for different types of receptors are described in Table B2.

Table B2: Sensitivity Categories for Dust Soiling, Human Health and Ecological Effects			
Sensitivity Category	Dust Soiling Effects	Health effects of PM10	Ecological Effects
High	Users can reasonably expect to enjoy a high level of amenity;	Locations where members of the public are exposed over a	Locations with an international or national designation and the



Table B2: Sensitivity Categories for Dust Soiling, Human Health and Ecological Effects

Sensitivity Category	Dust Soiling Effects	Health effects of PM₁₀	Ecological Effects
	Appearance, aesthetics or value of a property would be diminished; Examples include dwellings, museums and other culturally important collections, medium and long term car parks and car show rooms	period of time relevant to the air quality objective for PM ₁₀ ; Examples include residential properties, hospitals, schools, and residential care homes	designated features may be affected by dust soiling; Locations where there is a community of a particularly dust sensitive species; Examples include a Special Area of Conservation with dust sensitive features
Medium	Users would expect to enjoy a reasonable level of amenity, but would not reasonably expect to enjoy the same level of amenity as in their home; The appearance, aesthetics or value of their property could be diminished; People or property wouldn't reasonably be expected to be continuously present or regularly for extended periods of time; Examples include parks and places of work	Locations where people are exposed as workers and exposure is over a period of time relevant to the air quality objective for PM ₁₀ ; Examples include office and shop workers but will generally not include workers occupationally exposed to PM ₁₀	Locations where there is a particularly important plant species, where its dust sensitivity is uncertain or unknown; Locations with a national designation where the features may be affected by dust deposition; Examples include a Site of Special Scientific Interest with dust sensitive features
Low	Enjoyment of amenity would not reasonably be expected; Property would not be diminished in appearance, aesthetics or value; People or property would be expected to be present only for limited periods of time; Examples include playing fields, farmland (unless commercially-sensitive horticultural), footpaths, short term car parks and roads	Locations where human exposure is transient; Examples include public footpaths, playing fields, parks and shopping streets	Locations with a local designation where the features may be affected by dust deposition; Examples include a Local Nature Reserve with dust sensitive features



Based on the sensitivity of individual receptors, the overall sensitivity of the area to dust soiling, human health and ecological effects is then determined using the criteria detailed in Tables B3 to B5, respectively.

Table B3: Sensitivity of the Area to Dust Soiling Effects on People and Property^{ab}

Receptor Sensitivity	Number of Receptors	Distance from Source (m) ^c			
		<20m	<50m	<100m	<250m
High	>100	High	High	Medium	Low
	10-100	High	Medium	Low	Low
	1-10	Medium	Low	Low	Low
Medium	>1	Medium	Low	Low	Low
Low	>1	Low	Low	Low	Low

a. The sensitivity to the area should be derived for each of the four activities

b. Estimate the total number of receptors within the stated distance. Only the highest level of sensitivity from the table needs to be considered

c. For trackout, distances should be measured from the side of the roads used by construction traffic. Without site specific mitigation, trackout may occur for up to 500m from large sites, 200m from medium sites and 50m from small sites, measured from the site exit. The impact declines with distance from the site and it is only necessary to consider trackout impacts up to 50m from the edge of the road

Table B4: Sensitivity of the Area to Human Health Impacts^{ab}

Receptor Sensitivity	Annual Mean PM10 Concentration ^c	Number of Receptors ^d	Distance from Source (m) ^e			
			<20m	<50m	<100m	<250m
High	>32µg/m ³	>100	High	High	High	Medium
		10-100	High	High	Medium	Low
		1-10	High	Medium	Low	Low
	28-32µg/m ³	>100	High	High	Medium	Low
		10-100	High	Medium	Low	Low
		1-10	High	Medium	Low	Low



Table B4: Sensitivity of the Area to Human Health Impacts^{ab}

Receptor Sensitivity	Annual Mean PM10 Concentration ^c	Number of Receptors ^d	Distance from Source (m) ^e			
			<20m	<50m	<100m	<250m
	24-28µg/m ³	>100	High	Medium	Low	Low
		10-100	High	Medium	Low	Low
		1-10	Medium	Low	Low	Low
	<24µg/m ³	>100	Medium	Low	Low	Low
		10-100	Low	Low	Low	Low
		1-10	Low	Low	Low	Low
	>32µg/m ³	>10	High	Medium	Low	Low
		1-10	Medium	Low	Low	Low
	6.3.1 28-32µg/m ³	>10	Medium	Low	Low	Low
		1-10	Low	Low	Low	Low
Medium	24-28µg/m ³	>10	Low	Low	Low	Low
		1-10	Low	Low	Low	Low
	<24µg/m ³	>10	Low	Low	Low	Low
		1-10	Low	Low	Low	Low
		>10	Low	Low	Low	Low
		1-10	Low	Low	Low	Low
Low	-	>1	Low	Low	Low	Low

a. The sensitivity to the area should be derived for each of the four activities

b. Estimate the total number of receptors within the stated distance. Only the highest level of sensitivity from the table needs to be considered

c. Most straightforwardly taken from the national background maps, but should also take account of local sources. The values are based on 32µg/m³ being the annual mean concentration at which an exceedance of the 24-hour mean objective is likely in England, Wales and Northern Ireland. In Scotland, there is an annual mean objective of 18µg/m³

d. In the case of high sensitivity receptors with high occupancy (such as schools or hospitals) approximate the number of people likely to be present. In the case of residential dwellings, just include the number of properties

e. For trackout, distances should be measured from the side of the roads used by construction traffic



Table B5: Sensitivity of the Area to Ecological Impacts^{ab}		
Receptor Sensitivity	Distance from the Source (m)^c	
	<20	<50
High	High	Medium
Medium	Medium	Low
Low	Low	Low
a. The sensitivity to the area should be derived for each of the four activities b. Only the highest level of sensitivity from the table needs to be considered c. For trackout, distances should be measured from the side of the roads used by construction traffic		

These two factors are combined in Step 2C to determine the risk of dust impacts with no mitigation applied.

The risk of dust effects is determined for four types of construction phase activities, with each activity being considered separately. If a construction phase activity is not taking place on the site, then it does not need to be assessed. The four types of activities to be considered are:

- Demolition;
- Earthworks;
- Construction; and
- Trackout.

The risk of dust being generated by demolition activities at the site is determined using the criteria in Table B6.

Table B6: Risk of Dust Impacts for Demolition			
Sensitivity of Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Medium Risk
Medium	High Risk	Medium Risk	Low Risk
Low	Medium Risk	Low Risk	Negligible

The risk of dust being generated by earthworks and construction at the site is determined using the criteria in Table B7.



Table B7: Risk of Dust Impacts for Earthworks and Construction			
Sensitivity of Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible

The risk of dust being generated by trackout at the site is determined using the criteria in Table B8.

Table B8: Risk of Dust Impacts for Trackout			
Sensitivity of Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Low Risk	Negligible
Low	Low Risk	Low Risk	Negligible

Step 3

Step 3 of the assessment determines the site-specific mitigation required for each of the activities, based on the risk determined in Step 2. Mitigation measures are detailed in guidance published by the Greater London Authority¹³, recommended for use outside the capital by LAQM guidance, and the IAQM guidance document itself. Professional judgement should be used to determine the type and scale of mitigation measures required.

If the risk is classed as negligible, no mitigation measures beyond those required by legislation will be necessary.

Step 4

Step 4 assesses the residual effect, with mitigation measures in place, to determine whether or not these are significant.

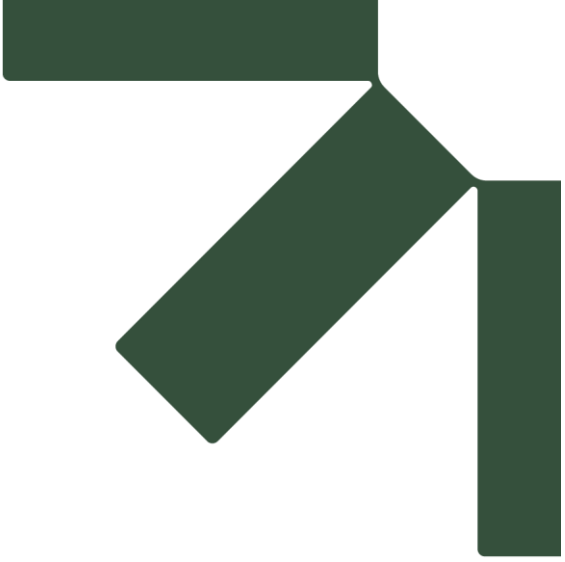
¹¹ Greater London Authority, The Control of Dust and Emissions from Construction and Demolition: Supplementary Planning Guidance, 2014



Professional Judgement

The IAQM guidance makes reference to the use of professional judgement when assessing the risks of dust and fine particulate matter from demolition and construction sites. Details of the experience of the personnel involved with the project are provided in **Appendix C**.





Appendix C Professional Experience of Assessors

Air Quality Screening Assessment

Land off Cronton Road, Widnes

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The assessment of air quality impacts, and the significance of the associated effects, takes into account the professional judgement of the assessor. Details of the experience of the personnel involved with the project are provided below:

Paul Threlfall

Associate Director (Air Quality)

BSc (Hons), MSc, MEnvSc, MIAQM

Paul joined Wardell Armstrong (now part of SLR) in October 2017 as an Air Quality Scientist, after completing his MSc Water, Energy and the Environment at Liverpool John Moores University. The majority of his work is carried out in support of planning applications and, therefore, he has experience of undertaking air quality assessments for a wide range of projects including residential developments, commercial developments, and mixed-use developments. Paul also has extensive experience of undertaking detailed air quality assessments for large industrial developments for both planning and permit applications.

Paul has a broad range of skills and knowledge of air quality modelling and monitoring through his involvement in air quality projects, both as individual commissions and as part of Environmental Impact Assessments (EIAs). Paul also has extensive knowledge and experience of undertaking odour assessments, ranging from qualitative desk-based assessments to more detailed odour dispersion modelling assessments using AERMOD, as well as extensive experience of undertaking odour 'sniff test' observations. Paul also has experience of acting as expert witness at planning inquiries in respect of odour.

Malcolm Walton

Technical Director

**BSc (Env Health) Dip (Acoustics & Noise
Control) MCIEH AMIOA**

Malcolm holds a Bachelor of Science degree in Environmental Health and the Diploma in Acoustics and Noise Control. Malcolm is a Member of the Chartered Institute of Environmental Health and an Associate Member of the Institute of Acoustics.

Malcolm joined Wardell Armstrong (now part of SLR) in September 2001 following 12 years working as an Environmental Health Officer in several local authorities, responsible for the enforcement of environmental legislation and, in particular, air pollution and noise nuisance. As a consultant, Malcolm has a further 24 years experience in the technical co-ordination of environmental appraisal of large schemes to UK and international standards. Malcolm regularly carries out and co-ordinates noise and air quality assessment work associated with planning



applications including EIA work and PPC permit application/compliance. He also regularly acts as expert witness in planning inquiries in respect of noise, air quality and odour.





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