



# Air Quality Assessment

## Scout Moor II Further Environmental Information

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June 2026

Report

Scout Moor II Wind Farm

## **Air Quality Assessment**

For Cubico UK Development

20 May 2026

## Document Control

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## Executive Summary

The air quality impacts associated with the proposed wind farm development at Scout Moor have been assessed.

During the construction works, a range of best practice mitigation measures will be implemented to reduce dust emissions; appropriate measures have been set out in this report, to be included in a Construction Environment Management Plan for the works.

The proposed development will generate additional traffic on the local road network during the construction and operation phases, but the assessment has shown that there will be no significant effects at any existing, sensitive receptor.

Overall, the construction and operational air quality effects of the proposed development at Scout Moor are judged to be 'not significant'.

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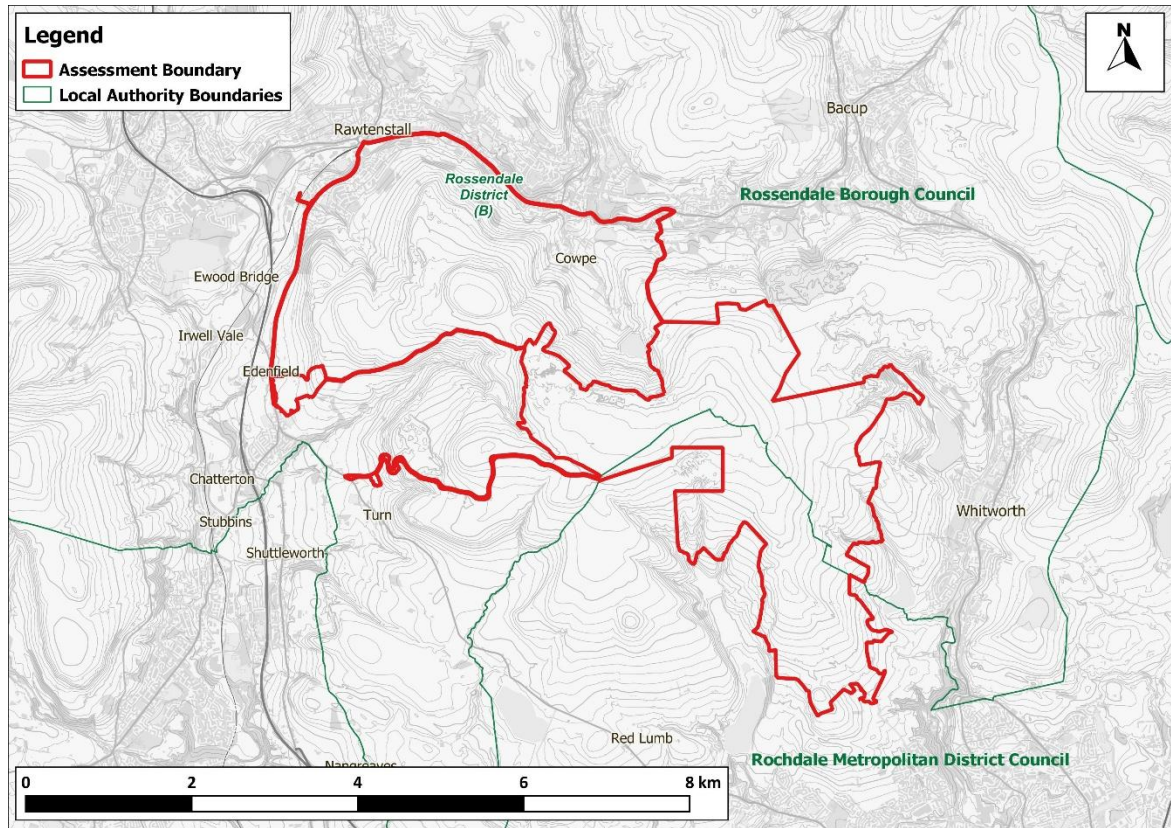
# 1 Introduction

## Project Introduction

- 1.1 This air quality assessment has been prepared by Air Quality Consultants Ltd | Part of the Logika Group on behalf of Cubico UK Development (Wind 1) Limited ('the Applicant' or 'Cubico'). It is submitted as part of Further Environmental Information in respect of the cross-boundary applications for full planning permission ('the Applications') relating to the construction and operation of a new onshore wind farm (to be known as 'Scout Moor II'), alongside a comprehensive moorland restoration scheme (the 'Proposed Development'), on land at Rooley Moor ('the Site').
- 1.2 The Site crosses the administrative boundaries of Rossendale Borough Council ('RBC') and Rochdale Metropolitan Borough Council ('RMBC') (collectively referred to as 'the Councils'). The Councils are the Local Planning Authorities ('LPA's') responsible for the determination of the Applications, which were originally submitted on 23 July 2025 and were validated by the Councils on 07 August 2025 (RBC ref. 2025/0267 and RMBC ref. 25/00680/FUL).
- 1.3 Following the completion of an extended period of statutory consultation on the Applications, the Applicant has evolved the Proposed Development to respond to comments received from statutory and non-statutory consultees, the public and other interested stakeholders and is hereby formally amending the Applications through the submission of Further Environmental Information ('FEI'). The FEI supersedes the information submitted in July 2025 ('the 2025 Submission') and will be subject to further statutory consultation by the Councils. A summary of the amendments to the Applications is set out in detail the Planning, Design and Access Statement (prepared by Turley), but in summary includes the reduction in turbine numbers from 'up to 17 turbines' to 'up to 12 turbines', alongside the relocation/repositioning of turbine positioning, access track layout and the layout and design of other associated infrastructure. No comments relating to Air Quality were received in relation to the 2025 Submission.

## Assessment Introduction

- 1.4 This report describes the potential air quality impacts associated with the proposed Scout Moor II Wind Farm, located adjacent to the existing Scout Moor Wind Farm site. The proposed development will comprise up to 12 wind turbines, each 180 m in height to tip above ground level. Associated infrastructure includes hard standing areas for erecting cranes at each turbine location, on-site access tracks and turning heads, an on-site substation and control building, underground 33kV electrical cables to connect the turbines to the on-site substation, underground 132kV electrical cables to connect the on-site substation to the Rossendale Bulk Supply Point (2no. route options proposed) and a temporary construction compound and laydown area. The lifetime of the Proposed Development would be time limited to 40 years from the date of final commissioning. The Site spans the administrative boundaries of RMBC and RBC (within the Greater Manchester Combined Authority (GMCA)).
- 1.5 The proposed development will generate additional traffic on local roads during the construction and operation phases, which may impact on air quality at existing residential properties along the affected road network. The main air pollutants of concern related to road traffic emissions are nitrogen dioxide (NO<sub>2</sub>) and fine particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>).
- 1.6 The location of the assessment boundary (the maximum extent of all the temporary and permanent works, i.e., including works such as grid connection infrastructure to the local Rossendale Bulk Supply Point), and Local Authority Boundaries are shown in Figure 1-1.



**Figure 1-1: Proposed Development Location**

Additional data sourced from third parties, including public sector information licensed under the Open Government Licence v3.0.

- 1.7 There is also the potential for the construction activities to impact upon sensitive receptors. The main pollutants of concern related to construction activities are dust and PM<sub>10</sub>.
- 1.8 This report has been prepared taking into account all relevant local and national guidance and regulations.

## 2 Policy Context

- 2.1 All European legislation referred to in this report is written into UK law and remains in place.

### Air Quality Strategy 2007

- 2.2 The Air Quality Strategy (Defra, 2007) published by the Department for Environment, Food, and Rural Affairs (Defra) and Devolved Administrations, provides the policy framework for air quality management and assessment in the UK. It provides air quality standards and objectives for key air pollutants, which are designed to protect human health and the environment. It also sets out how the different sectors: industry, transport and local government, can contribute to achieving the air quality objectives. Local authorities are seen to play a particularly important role. The strategy describes the Local Air Quality Management (LAQM) regime that has been established, whereby every authority has to carry out regular reviews and assessments of air quality in its area to identify whether the objectives have been, or will be, achieved at relevant locations, by the applicable date. If this is not the case, the authority must declare an Air Quality Management Area (AQMA), and prepare an action plan which identifies appropriate measures that will be introduced in pursuit of the objectives.

### Air Quality Strategy 2023

- 2.3 The Air Quality Strategy: Framework for Local Authority Delivery 2023 (Defra, 2023a) sets out the strategic air quality framework for local authorities and other Air Quality Partners in England. It sets out their powers and responsibilities, and actions the government expects them to take. It does not replace other air quality guidance documents relevant to local authorities.

### Clean Air Strategy 2019

- 2.4 The Clean Air Strategy (Defra, 2019) sets out a wide range of actions by which the UK Government will seek to reduce pollutant emissions and improve air quality. Actions are targeted at four main sources of emissions: Transport, Domestic, Farming and Industry. At this stage, there is no straightforward way to take account of the expected future benefits to air quality within this assessment.

### Reducing Emissions from Road Transport: Road to Zero Strategy

- 2.5 The Office for Low Emission Vehicles (OLEV) and Department for Transport (DfT) published a Policy Paper (DfT, 2018) in July 2018 outlining how the government will support the transition to zero tailpipe emission road transport and reduce tailpipe emissions from conventional vehicles during the transition. This paper affirms the Government's pledge to end the sale of new conventional petrol and diesel cars and vans by 2040, and states that the Government expects the majority of new cars and vans sold to be 100% zero tailpipe emission and all new cars and vans to have significant zero tailpipe emission capability by this year, and that by 2050 almost every car and van should have zero tailpipe emissions. It states that the Government wants to see at least 50%, and as many as 70%, of new car sales, and up to 40% of new van sales, being ultra-low emission by 2030.
- 2.6 The paper sets out a number of measures by which Government will support this transition, but is clear that Government expects this transition to be industry and consumer led. The Government's 'Zero Emission Vehicle' (ZEV) mandate requires that 80% of new cars and 70% of new vans sold in Great Britain must be zero exhaust emission by 2030, increasing to 100% by 2035. If these ambitions are realised then road traffic-related NO<sub>x</sub> emissions can be expected to reduce significantly over the

coming decades, likely beyond the scale of reductions forecast in the tools utilised in carrying out this air quality assessment.

## Environment Act 2021

- 2.7 The UK's new legal framework for protection of the natural environment, the Environment Act (2021) passed into UK law in November 2021. The Act gives the Government the power to set long-term, legally binding environmental targets. It also establishes an Office for Environmental Protection (OEP), responsible for holding the Government to account and ensuring compliance with these targets.
- 2.8 The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 (SI 2023 No. 96) sets two new targets for future concentrations of PM<sub>2.5</sub>. These targets are described in Paragraph 3.4.

## Environmental Improvement Plan 2025

- 2.9 Defra published its 25 Year Environment Plan in 2018 (Defra, 2018a). The Environment Act (2021) requires Defra to review this Plan at least every five years. The Environmental Improvement Plan 2025 (Defra, 2023b) is the second iteration, building upon the first iteration in 2023. This outlines the progress made since 2018 and adds detail to the goals defined in the 2018 Plan and subsequent Environmental Improvement Plan 2023, including that of achieving clean air.
- 2.10 The Environmental Improvement Plan 2025 sets out the new air quality targets which have been set for concentrations of PM<sub>2.5</sub>. These targets, which are described in more detail in Paragraph 3.4, include the long-term targets in the Statutory Instrument described in Paragraph 2.8, and revised interim targets to be achieved by 2030.
- 2.11 The 2025 Plan outlines the role of local authorities in helping it meet both its targets and existing commitments. It also outlines the respective roles of industry, agricultural sectors, and the DfT in providing the coordinated action required to meet both its new, and pre-existing targets and commitments.

## Planning Policy

### National Policies

- 2.12 The National Planning Policy Framework (NPPF) (2024) sets out planning policy for England. It states that the purpose of the planning system is to contribute to the achievement of sustainable development, and that the planning system has three overarching objectives, one of which (Paragraph 8c) is an environmental objective:

*"to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy".*

- 2.13 To prevent unacceptable risks from air pollution, Paragraph 187 of the NPPF states that:

*"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 soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans".*

- 2.14 Paragraph 198 states:

*"Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development".*

2.15 More specifically on air quality, Paragraph 199 makes clear 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 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".*

2.16 The NPPF is supported by Planning Practice Guidance (PPG) (Ministry of Housing, Communities & Local Government, 2019), which includes guiding principles on how planning can take account of the impacts of new development on air quality. The PPG states that:

*"Defra carries out an annual national assessment of air quality using modelling and monitoring to determine compliance with Limit Values. It is important that the potential impact of new development on air quality is taken into account where the national assessment indicates that relevant limits have been exceeded or are near the limit, or where the need for emissions reductions has been identified".*

2.17 Regarding plan-making, the PPG states:

*"It is important to take into account air quality management areas, Clean Air Zones and other areas including sensitive habitats or designated sites of importance for biodiversity where there could be specific requirements or limitations on new development because of air quality".*

2.18 The role of the local authorities through the LAQM regime is covered, with the PPG stating that a local authority Air Quality Action Plan *"identifies measures that will be introduced in pursuit of the objectives and can have implications for planning"*. In addition, the PPG makes clear that *"Odour and dust can also be a planning concern, for example, because of the effect on local amenity"*.

2.19 Regarding the need for an air quality assessment, the PPG states that:

*"Whether 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 have an adverse effect on air quality in areas where it is already known to be poor, particularly if it could affect the implementation of air quality strategies and action plans and/or breach legal obligations (including those relating to the conservation of habitats and species). Air quality may also be a material consideration if the proposed development would be particularly sensitive to poor air quality in its vicinity".*

2.20 The PPG sets out the information that may be required in an air quality assessment, making clear that:

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

2.21 The PPG also provides guidance on options for mitigating air quality impacts, as well as examples of the types of measures to be considered. It makes clear that:

*"Mitigation options will need to be locationally specific, will depend on the proposed development and need to be proportionate to the likely impact. It is important that local planning authorities work with applicants to consider appropriate mitigation so as to ensure new development is appropriate for its location and unacceptable risks are prevented".*

## Local Policies

### GMCA

2.22 The Places for Everyone (PfE) Joint Development Plan 2022 to 2039 (Greater Manchester Combined Authority, 2024a) was adopted in March 2024 and covers the districts of Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford and Wigan. Within this Plan, there are two policies which are relevant to air quality.

2.23 Policy JP-S5: Clean Air states that:

*"A comprehensive range of measures will be taken to support improvements in air quality, focusing particularly on locations where people live, where children learn and play, where there are impacts on the green infrastructure network and where air quality targets are not being met, including:*

- 1. Locating and designing development, and focusing transport investment, so as to reduce reliance on forms of transport that generate air pollution;*
- 2. Determining planning applications having regard to the most recent development and planning control guidance published jointly by the Institute of Air Quality Management (IAQM) and Environmental Protection UK (EPUK), and the most recent IAQM Guidance on the Assessment of Dust from Demolition and Construction, or relevant successor guidance, including the requirement for developers to submit construction management plans as appropriate;*
- 3. Requiring applications for developments that could have an adverse impact on air quality to submit relevant air pollution data so that adverse impacts on air quality can be fully assessed and development only permitted where they are acceptable and/or suitable mitigation can be provided;*
- 4. Restricting developments that would generate significant point source pollution such as some types of industrial activity and energy generation;*
- 5. Significantly expanding the existing commercial network of electric vehicle charging points, both for public and private use, including as part of new developments;*
- 6. Implementing the Clean Air Plan and associated measures;*
- 7. Facilitating the more sustainable distribution of goods within the urban area, including through accommodating urban consolidation centres and urban distribution centres that use ultra-low-emission vehicles, and local delivery facilities to reduce repeat delivery attempts;*
- 8. Designing streets to avoid trapping air pollution at ground level, including through the appropriate location and scale of buildings and trees;*
- 9. Controlling traffic and parking within and around schools, early years sites and other locations that are particularly sensitive to air quality;*
- 10. Promoting actions that help remove pollutants from the air, such as enhancing the green infrastructure network and using innovative building materials that capture air pollutants; and*

*11. Development should be located in areas that maximise the use of sustainable travel modes and be designed to minimise exposure to high levels of air pollution, particularly for vulnerable users."*

2.24 Policy JP-C5: Streets for All, states that:

*"Streets will be designed and managed to make a significant positive contribution to the quality of place and support high levels of walking, cycling and public transport. Targeted improvements to the highway network will be supported through studies and scheme development, where they complement the aim of securing a significant increase in the proportion of trips made by walking, cycling and public transport (as set out in Policy JP-C6 'Walking and Cycling' and Policy JP-C3 'Public Transport')."*

We will seek to ensure:

*1. The design and management of streets will follow a Streets for All approach, including by...*

*...*

*k. Mitigating the impacts of air and noise pollution and carbon emissions from road transport;*

*..."*

#### RMBC

2.25 The RMBC Core Strategy (Rochdale Borough Council, 2016) was adopted in 2016 and contains three policies which relate to air quality; Policy G9, DM1 and DM2.

2.26 Policy G9 – Reducing the impact of pollution, contamination and land instability states:

*"We will reduce all forms of pollution, contamination and land instability in the borough, by:*

*a. Focusing on measures that reduce air pollution in Air Quality Management Areas, and other areas where pollution levels are unacceptable, particularly around motorways and main roads;*

*..."*

2.27 Policy DM1 – General development requirements states that:

*"All development proposals, including change of use of land and buildings, extensions and alterations, will be expected to demonstrate that they:*

*...*

*Do not have an adverse impact on health, through its impact or the effect of existing problems ,e.g. land contamination, or poor air quality;*

*..."*

2.28 Policy DM2 – Delivering planning contributions and infrastructure states:

*"For all types of development, including housing, we will seek contributions for any infrastructure or other measures necessary to mitigate any on site or off-site impacts from the development.*

*These contributions may cover, dependent on need:*

*...*

*Mitigation or compensation against environmental impacts e.g. noise, air quality (particularly in Air Quality Management Areas);*

*..."*

- 2.29 In December 2025, RMBC published their draft Local Plan (Rochdale Borough Council, 2025), which provides a more detailed set of local planning policies to complement the strategic policies within the GMCA PfE Plan. However, the draft Local Plan hasn't been subject to examination and is yet to be adopted, so limited weight should be applied to its policies for the purpose of decision making. Nonetheless, within this draft, there is one main policy of relevance for air quality:

*"Policy S5: Reducing the Impact of Pollution, Contamination and Land Instability*

*We will reduce all forms of pollution, contamination and land instability, by requiring that:*

- a. Development does not have impacts that lead to an unacceptable increase in air, water, soil, noise, light or other forms of pollution.*
- b. The impact of existing sources of pollution on new development is appropriately assessed and mitigated where required*
- c. Where an application is in or would affect an Air Quality Management Area (AQMA), the development must be designed to include appropriate mitigation measures.*
- d. Any risks from contaminated land or land instability, including development within former mining areas, are assessed and if necessary, incorporate appropriate mitigation measures to address them.*
- e. Any risk to surface water and ground water resources from the disturbance of contaminated land is identified and mitigated if necessary.*
- f. Any surface water run-off from development and associated roads is minimised, with the inclusion of appropriate design measures to prevent pollutants from entering the watercourse."*

- 2.30 'Policy DM1- General Development Requirements' also states that "All development proposals, including changes of use of land and buildings, extensions and alterations, will be expected to demonstrate that they:...
- d. Mitigate against any impacts due to noise, air, dust, light and odour pollution, traffic generation or inadequate access, where such mitigation is identified as being necessary...*
  - f. Do not have an adverse impact on health, through its impact or the effect of existing problems e.g. land contamination or poor air quality..."*

### RBC

- 2.31 The RBC Local Plan 2019-2036 (Rossendale Borough Council, 2021) was adopted on 15 December 2021, and within this there are two policies which refer to air quality. Strategic policy TR1: Strategic Transport refers to sustainable transport and states that RBC aim:

*"To enhance connectivity, support economic growth while improving air quality and tackling climate change"*

2.32 Policy ENV6 for environmental protection states:

*"Undertaking Air Quality Assessments to the satisfaction of the Council for proposals which have the potential to have a significant adverse impact on air quality...and implementing measures such as Travel Plans, dust suppression techniques and the incorporation of electric car charging points to both mitigate the effects of the development on air quality and to ensure that the users of the development are not significantly adversely affected by the air quality"*

## Air Quality Action Plans

### National Air Quality Plan

2.33 Defra has produced an Air Quality Plan to tackle roadside NO<sub>2</sub> concentrations in the UK (Defra, 2017); a supplement to the 2017 Plan (Defra, 2018b) was published in October 2018 and sets out the steps Government is taking in relation to a further 33 local authorities where shorter-term exceedances of the limit value were identified. Alongside a package of national measures, the 2017 Plan and the 2018 Supplement require those identified English Local Authorities (or the GLA in the case of London Authorities) to produce local action plans and/or feasibility studies. These plans and feasibility studies must have regard to measures to achieve the statutory limit values within the shortest possible time, which may include the implementation of a Clean Air Zone (CAZ). There is currently no straightforward way to take account of the effects of the 2017 Plan or 2018 Supplement in this assessment; however, consideration has been given to whether there is currently, or is likely to be in the future, a limit value exceedance in the vicinity of the proposed development. This assessment has principally been carried out in relation to the air quality objectives, rather than the limit values that are the focus of the Air Quality Plan.

### Local Air Quality Action Plan

#### RMBC

2.34 The GMCA has declared an AQMA for exceedances of the annual mean NO<sub>2</sub> objective which covers the 10 districts of Greater Manchester, including R MBC. RMBC has worked together with the GMCA and Transport for Greater Manchester to develop an Air Quality Action Plan (Greater Manchester Combined Authority, 2016). This mainly focuses on three "Key Performance Indicators (KPIs)" to help categorise improvement actions to improve air quality:

*"Reduce Traffic – for instance by encouraging modal shift from private vehicle use to public transport, cycling and walking.*

*Increase Efficiency – of traffic movement by reducing congestion and stop-start travel to achieve a smoother emission profile and overall lower emissions, which may be particularly significant at peak hours.*

*Improve Fleet – by incentivising the replacement of older, more polluting vehicles with newer, smaller, cleaner, lower-emission vehicles".*

#### RBC

2.35 In October 2025, RBC published an Air Quality Action Plan (Rossendale Borough Council, 2025) for the Grane Road AQMA, which was declared on 22<sup>nd</sup> December 2022 for exceedances of the annual mean NO<sub>2</sub> objective. None of the policies are especially relevant to this assessment, being general in nature.

### 3 Assessment Criteria

- 3.1 The Government has established a set of air quality standards and objectives to protect human health. The 'standards' are based on assessment of the effects of each pollutant on human health, including the effects on sensitive sub-groups. The 'objectives' set out the extent to which the Government expects the standards to be achieved *taking account of practical considerations*. The objectives for use by local authorities are prescribed within the Air Quality (England) Regulations (2000) and the Air Quality (England) (Amendment) Regulations (2002).
- 3.2 The UK-wide objectives for NO<sub>2</sub> and PM<sub>10</sub> were to have been achieved by 2005 and 2004 respectively, and continue to apply in all future years thereafter. Measurements across the UK have shown that the 1-hour mean NO<sub>2</sub> objective is unlikely to be exceeded at roadside locations where the annual mean concentration is below 60 µg/m<sup>3</sup> (Defra, 2025). Therefore, 1-hour NO<sub>2</sub> concentrations will only be considered if the annual mean concentration is above this level. Measurements have also shown that the 24-hour mean PM<sub>10</sub> objective could be exceeded at roadside locations where the annual mean concentration is above 32 µg/m<sup>3</sup> (Defra, 2025).
- 3.3 The objectives apply at locations where members of the public are likely to be regularly present and are likely to be exposed over the averaging period of the objective. Defra explains where these objectives will apply in its Local Air Quality Management Technical Guidance (Defra, 2025). The annual mean objectives for NO<sub>2</sub> and PM<sub>10</sub> are considered to apply at the façades of residential properties, schools, hospitals etc.; they do not apply at hotels. The 24-hour mean objective for PM<sub>10</sub> is considered to apply at the same locations as the annual mean objective, as well as in gardens of residential properties and at hotels. The 1-hour mean objective for NO<sub>2</sub> applies wherever members of the public might regularly spend 1-hour or more, including outdoor eating locations and pavements of busy shopping streets.
- 3.4 For PM<sub>2.5</sub>, the objective set by Defra for local authorities is to work toward reducing concentrations without setting any specific numerical value. In the absence of a numerical objective, it is convention to assess local air quality impacts against the limit value (see Paragraph 3.9), originally set at 25 µg/m<sup>3</sup> and currently set at 20 µg/m<sup>3</sup>.
- 3.5 Defra has also set two targets, and two new interim targets, for PM<sub>2.5</sub> concentrations in England. One target focuses on absolute concentrations, with the long-term target to achieve an annual mean PM<sub>2.5</sub> concentration of 10 µg/m<sup>3</sup> by the end of 2040 (referred to as the annual mean concentration target or AMCT). The second target relates to reducing overall population exposure to PM<sub>2.5</sub>. By the end of 2040, overall population exposure to PM<sub>2.5</sub> should be reduced by 35% compared with 2018 levels (referred to as the population exposure reduction target or PERT). The most recent interim targets published in the 2025 Environmental Improvement Plan (Defra, 2025a) aim to meet the AMCT 10 years early, by December 2030, with the interim PERT being a reduction of 30% by December 2030 (Table 3-1).

**Table 3-1: Environment Act PM<sub>2.5</sub> Targets**

| Metric | Target                                                             | Target year |
|--------|--------------------------------------------------------------------|-------------|
| AMCT   | Interim target: 10 µg/m <sup>3</sup>                               | 2030        |
|        | Legally binding target: 10 µg/m <sup>3</sup>                       | 2040        |
| PERT   | Interim target: 30% reduction in exposure compared to 2018         | 2030        |
|        | Legally binding target: 35% reduction in exposure compared to 2018 | 2040        |

3.6 In 2024 Defra published Interim Planning Guidance on the PM<sub>2.5</sub> targets (Defra, 2024). This states that:

*"The purpose of the targets is to improve air quality by reducing levels of PM<sub>2.5</sub> across the country, therefore improving public health. While achievement of the targets will be assessed at relevant monitoring sites, the targets apply to ambient (outdoor) air throughout England. Applicants and Local Planning Authorities should therefore consider the impact of developments on air quality in all ambient air, whether a monitor is present or not."*

3.7 In order to address the new targets it is not sufficient to assess solely whether a scheme is likely to lead to an exceedance of a legal limit. Instead, developments need to implement appropriate mitigation measures from the design stage, ensuring the minimum amount of pollution is emitted and that exposure is minimised.

3.8 Pending publication of the new guidance, Defra advises applicants to provide evidence that they have identified key sources of air pollution within the scheme and taken appropriate action to minimise emissions of PM<sub>2.5</sub> and its precursors as far as possible. More detailed assessment is expected for development closer to populations and/or having higher emissions. Defra has posed two questions to be used as prompts to support the interim assessment process:

*"How has exposure to PM<sub>2.5</sub> been considered when selecting the development site?; and*

*What actions and/or mitigations have been considered to reduce PM<sub>2.5</sub> exposure for development users and nearby receptors (houses, hospitals, schools etc.) and to reduce emissions of PM<sub>2.5</sub> and its precursors?"*

3.9 EU Directive 2008/50/EC (The European Parliament and the Council of the European Union, 2008) sets limit values for NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub>, and is implemented in UK law through the Air Quality Standards Regulations (2010)<sup>1</sup>. The limit values for NO<sub>2</sub> and PM<sub>10</sub> are the same numerical concentrations as the UK objectives, but achievement of the limit values is a national obligation rather than a local one and concentrations are reported to the nearest whole number. In the UK, only monitoring and modelling carried out by UK Central Government meets the specification required to assess compliance with the limit values. Central Government does not normally recognise local authority monitoring or local modelling studies when determining the likelihood of the limit values being exceeded, unless such studies have been audited and approved by Defra and DfT's Joint Air Quality Unit (JAQU).

3.10 The relevant air quality criteria for this assessment are provided in Table 3-2.

**Table 3-2: Air Quality Criteria for NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub>**

| Pollutant         | Time Period  | Value                                                              |
|-------------------|--------------|--------------------------------------------------------------------|
| NO <sub>2</sub>   | 1-hour Mean  | 200 µg/m <sup>3</sup> not to be exceeded more than 18 times a year |
|                   | Annual Mean  | 40 µg/m <sup>3</sup>                                               |
| PM <sub>10</sub>  | 24-hour Mean | 50 µg/m <sup>3</sup> not to be exceeded more than 35 times a year  |
|                   | Annual Mean  | 40 µg/m <sup>3</sup> <sup>a</sup>                                  |
| PM <sub>2.5</sub> | Annual Mean  | 20 µg/m <sup>3</sup> <sup>b</sup>                                  |

<sup>1</sup> As amended through The Air Quality Standards (Amendment) Regulations 2016 and The Environment (Miscellaneous Amendments) (EU Exit) Regulations 2020.

| Pollutant                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Time Period | Value |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------|
| <p><sup>a</sup> A proxy value of 32 µg/m<sup>3</sup> as an annual mean is used in this assessment to assess the likelihood of the 24-hour mean PM<sub>10</sub> objective being exceeded. Measurements have shown that, above this concentration, exceedances of the 24-hour mean PM<sub>10</sub> objective are possible (Defra, 2025).</p> <p><sup>b</sup> There is no numerical PM<sub>2.5</sub> objective for local authorities (see Paragraph 3.4). Convention is to assess against the UK limit value which is currently 20 µg/m<sup>3</sup>.</p> |             |       |

## Construction Dust Criteria

- 3.11 There are no formal assessment criteria for dust. In the absence of formal criteria, the approach developed by the Institute of Air Quality Management (IAQM)<sup>2</sup> (2024) has been used. Full details of this approach are provided in Appendix A1.

## Road Traffic Screening Criteria

- 3.12 Environmental Protection UK (EPUK) and the IAQM recommend a two-stage screening approach (Moorcroft and Barrowcliffe et al, 2017) to determine whether emissions from road traffic generated by a development have the potential for significant air quality impacts. The approach, as described in Appendix A2, first considers the size and parking provision of a development; if the development is residential and is for fewer than ten homes or covers less than 0.5 ha, or is non-residential and will provide less than 1,000 m<sup>2</sup> of floor space or cover a site area of less than 1 ha, and will provide ten or fewer parking spaces, then there is no need to progress to a detailed assessment.
- 3.13 The second stage then compares the changes in vehicle flows on local roads that a development will lead to against specified screening criteria. The screening thresholds (described in full in Appendix A2) inside an AQMA are a change in flows of more than 25 Heavy Duty Vehicles (HDVs) or 100 Light Duty Vehicles (LDVs) per day; outside of an AQMA the thresholds are 100 HDVs or 500 LDVs. Where these criteria are exceeded, a detailed assessment is likely to be required, although the guidance advises that *"the criteria provided are precautionary and should be treated as indicative"*, and *"it may be appropriate to amend them on the basis of professional judgement"*.

<sup>2</sup> The IAQM is the professional body for air quality practitioners in the UK.

## 4 Assessment Approach

### Existing Conditions

- 4.1 Existing sources of emissions and baseline air quality conditions within the study area have been defined using a number of approaches:
- industrial and waste management sources that may affect the area have been identified using Defra's Pollutant Release and Transfer Register (Defra, 2026b);
  - local sources have been identified through examination of the Council's Air Quality Review and Assessment reports;
  - information on existing air quality has been obtained by collating the results of monitoring carried out by the local authority. This covers both the study area and nearby sites, the latter being used to provide context for the assessment;
  - background concentrations have been defined using Defra's 2021-based background maps (Defra, 2026a). These cover the whole of the UK on a 1x1 km grid. The background annual mean nitrogen oxides and NO<sub>2</sub> maps have been calibrated against concurrent measurements<sup>3</sup>. The calibration factor has also been applied to future year backgrounds. Mapped background concentrations of PM<sub>10</sub> and PM<sub>2.5</sub> have not been adjusted; and
  - whether or not there are any exceedances of the annual mean limit value for NO<sub>2</sub> in the study area has been identified using the maps of roadside concentrations published by Defra (2020; 2026d). These are the maps used by the UK Government, together with the results from national Automatic Urban and Rural Network (AURN) monitoring sites that operate to the required data quality standards, to identify and report exceedances of the limit value. The national maps of roadside PM<sub>10</sub> and PM<sub>2.5</sub> concentrations (Defra, 2026d), which are available for the years up to 2024, show no exceedances of the limit values anywhere in the UK in 2024.

### Construction Dust Impacts

- 4.2 The construction dust assessment considers the potential for impacts within 250 m of the site boundary, or within 50 m of roads used by construction vehicles. The assessment methodology is that provided by IAQM (2024). This follows a sequence of steps. Step 1 is a basic screening stage, to determine whether the more detailed assessment provided in Step 2 is required. Step 2a determines the potential for dust to be raised from on-site works and by vehicles leaving the site. Step 2b defines the sensitivity of the area to any dust that may be raised. Step 2c combines the information from Steps 2a and 2b to determine the risk of dust impacts without appropriate mitigation. Step 3 uses this information to determine the appropriate level of mitigation required to ensure that there should be no significant impacts. Appendix A1 explains the approach in more detail.

### Road Traffic Impacts

- 4.3 The first step in considering the road traffic impacts of the proposed development has been to screen the development and its traffic generation against the criteria set out in the EPUK/IAQM guidance (Moorcroft and Barrowcliffe et al, 2017), as described in Paragraph 3.12 and detailed further in Appendix A2. Where impacts can be screened out there is no need to progress to a more detailed assessment.

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<sup>3</sup> <https://www.aqconsultants.co.uk/resources>

## Assessment of Significance

### Construction Dust Significance

- 4.4 Guidance from IAQM (2024) is that, with appropriate mitigation in place, the effects of construction dust will be 'not significant'. The assessment thus focuses on determining the appropriate level of mitigation so as to ensure that effects will normally be 'not significant'.

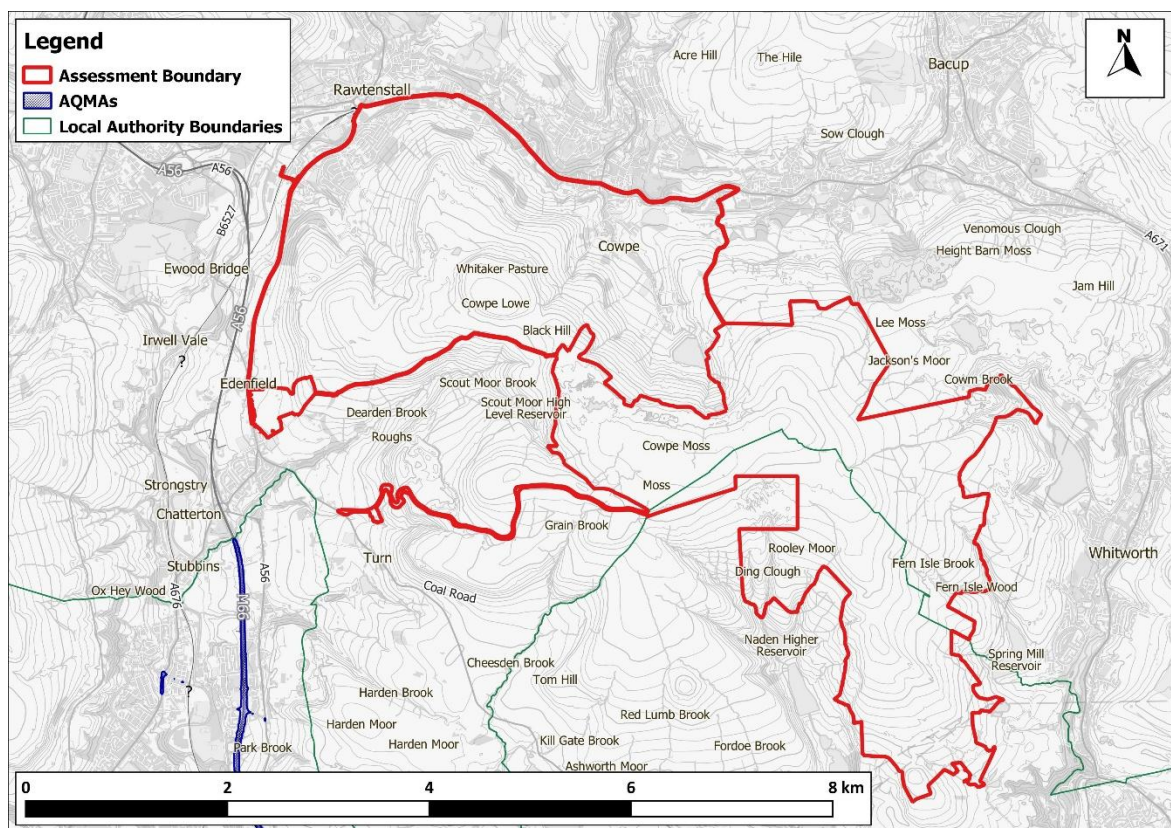
### Road Traffic Significance

- 4.5 There is no official guidance in the UK in relation to development control on how to assess the significance of air quality impacts. The approach developed jointly by EPUK and the IAQM (Moorcroft and Barrowcliffe et al, 2017) has therefore been used. The overall significance of the air quality impacts is determined using professional judgement; the experience of the consultants preparing the report is set out in Appendix A3. Full details of the EPUK/IAQM approach are provided in Appendix A2.

## 5 Baseline Conditions

### Relevant Features

- 5.1 The application site is located approximately 7.5 km northwest of Rochdale, and approximately 3 km southeast of Rawtenstall town centre. The application site is situated within the administrative boundaries of both RMBC and RBC. The site currently consists of, and is surrounded by, moorland within the South Pennines. In addition, there are existing Scout Moor I Wind Farm turbines within the site boundary. The Lee Quarry Site of Special Scientific Interest (SSSI) is located adjacent to the northeastern parcel of the site. However, this SSSI is designated for geological features; therefore, it will not be sensitive to air quality and does not require further consideration within this assessment.
- 5.2 The proposed development is located approximately 1 km from a section of the GMCA AQMA (on the M66), as highlighted in Figure 5-1



**Figure 5-1: Proposed Development Location and nearby AQMAs**

Additional data sourced from third parties, including public sector information licensed under the Open Government Licence v3.0.

### Industrial Sources

- 5.3 No significant industrial sources have been identified that are likely to affect the proposed development, in terms of air quality.

## Local Air Quality Monitoring

5.4 RMBC operates a number of automatic and diffusion monitoring sites across its administrative area, although none of these are in close proximity to the proposed development (the closest is approximately 3km from the site boundary) (Greater Manchester Combined Authority, 2024b). While RBC does not undertake any automatic monitoring, it does monitor concentrations of NO<sub>2</sub> at 20 locations across the Borough using diffusion tubes prepared and analysed by Socotec (using the 50% TEA in acetone method). These include 14 within 1.5 km of the proposed development, which are located in two former AQMAs (Rossendale AQMA 1 and 2), which were revoked in 2022. Annual mean results for the years 2019 to 2024 are summarised in Table 5-1. The monitoring locations are shown in Figure 5-2. The monitoring data have been taken from RBCs 2024 and 2025 Annual Status Report (Rossendale Borough Council, 2024), (Rossendale Boorugh Council, 2025).

**Table 5-1: Summary of Annual Mean NO<sub>2</sub> Monitoring (2019-2024) (µg/m<sup>3</sup>)**

| Site No. <sup>a</sup> | Site Type | Location                             | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 <sup>b</sup> |
|-----------------------|-----------|--------------------------------------|------|------|------|------|------|-------------------|
| 1                     | Kerbside  | Front of Casa Tapas Road Rawtenstall | 32.3 | 23.8 | 26.2 | 25.3 | 21.0 | -                 |
| 3                     | Kerbside  | 349 Manchester Road Haslingden       | 27.3 | 22.0 | 24.9 | 21.4 | 18.6 | -                 |
| 4                     | Kerbside  | Jobcentre 83 Bacup Road Rawtenstall  | 27.3 | 22.0 | 20.9 | 21.9 | 19.7 | -                 |
| 5                     | Kerbside  | 377 Manchester Road Haslingden       | 28.7 | 22.1 | 23.7 | 24.5 | 22.4 | -                 |
| 6                     | Kerbside  | 359 Manchester Road Haslingden       | 31.1 | 24.2 | 27.8 | 26.7 | 24.7 | -                 |
| 7 (2)                 | Kerbside  | 366-368 Manchester Road Haslingden   | 32.3 | 26.3 | 30.0 | 28.3 | 26.8 | 24.1              |
| 8                     | Kerbside  | 5-7 Rawtenstall Road Haslingden      | 25.6 | 20.4 | 20.2 | 19.9 | 16.8 | -                 |
| 9                     | Kerbside  | 363 Manchester Road Haslingden       | 31.6 | 25.3 | 26.9 | 28.2 | 24.3 | -                 |
| 11 (8)                | Kerbside  | 450 Bacup Road Waterfoot             | -    | -    | -    | 29.9 | 29.6 | 24.9              |
| 13 (1)                | Kerbside  | 30-32 Bacup Road Rawtenstall         | 32.2 | 28.4 | 32.7 | 31.2 | 30.6 | 25.3              |
| 14                    | Kerbside  | 24-26 Bacup Road Rawtenstall         | 31.9 | 26.2 | 29.3 | 30.9 | 30.5 | -                 |
| 15                    | Kerbside  | 22 Bacup Road Rawtenstall            | 32.2 | 28.8 | 31.8 | 30.8 | 24.2 | -                 |
| 16                    | Kerbside  | 2a Bacup Road Rawtenstall            | 26.6 | 24.7 | 24.1 | 24.8 | 21.9 | -                 |
| 17                    | Kerbside  | 1 Bacup Road Rawtenstall             | 34.7 | 28.6 | 29.6 | 29.9 | 27.7 | -                 |

**Legend**

- Assessment Boundary
- Rossendale BC Monitoring Locations

Map showing the Assessment Boundary and Monitoring Locations (DT1 through DT17) for Rossendale BC. The map includes a scale bar (0 to 2,000 m) and a north arrow. Two inset maps provide detailed views of specific areas:

- Inset 1 (Left):** Shows the area around DT3, DT5, DT6, DT7, DT8, and DT9, including roads like Sykeside Court, Laneside Road, and A56.
- Inset 2 (Right):** Shows the area around DT13, DT14, DT15, DT16, and DT17, including roads like Buller Street, Bacup Road, Longholme Road, and A681.

Additional data sourced from third parties, including public sector information licensed under the Open Government Licence v3.0.

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automatic monitor within the GMCA between 2019 and 2024 (Greater Manchester Combined Authority, 2024b).

## Exceedances of Limit Value

- 5.8 Defra has not identified any exceedances of the annual mean or 1-hour mean limit values in 2024 in RMBC's or RBC's area (Defra, 2025c). As such, there is not considered to be a risk of a limit value exceedance in the vicinity of the proposed development by the time that it is operational.
- 5.9 As discussed in Paragraph 2.33, Defra has produced an Air Quality Plan (Defra, 2017) to tackle roadside NO<sub>2</sub> concentrations in the UK. Within this Plan, RMBC is identified as having limit value exceedances in or beyond 2017, but not beyond 2020, thus the Plan does not require the authority to undertake any further action. However, a High Court judgement (Royal Courts of Justice, 2018) declared the Plan unlawful with regard to its application to the 45 local authority areas in which exceedances were projected beyond 2017, but not beyond 2020. The judgement required the 33 local authorities where exceedances were projected beyond 2018 to "develop and implement a plan designed to deliver compliance in the shortest time possible"; RMBC is not one of these authorities, having no projected exceedances beyond 2018, thus it is not required to produce a plan.

## Background Concentrations

- 5.10 Estimated background concentrations in the proposed development for 2024 (the most recent year of monitoring data) and 2030 (the expected opening year of the proposed development) are set out in Table 5-2 and are all well below the objectives. A range of values is presented as the study area covers multiple 1x1 km grid squares.

**Table 5-2: Estimated Annual Mean Background Pollutant Concentrations in 2024 and 2030 (µg/m<sup>3</sup>)**

| Year                                                                                                                                                                                                                           | NO <sub>2</sub> | PM <sub>10</sub> | PM <sub>2.5</sub>      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------|------------------------|
| 2024                                                                                                                                                                                                                           | 6.5 – 8.9       | 9.1 – 11.7       | 5.5 – 6.0              |
| 2030                                                                                                                                                                                                                           | 5.3 – 6.8       | 8.8 – 11.4       | 5.2 – 5.7              |
| <b>Objective</b>                                                                                                                                                                                                               | <b>40</b>       | <b>40</b>        | <b>20 <sup>a</sup></b> |
| <b>AMCT<sup>b</sup></b>                                                                                                                                                                                                        | -               | -                | <b>10</b>              |
| <p><sup>a</sup> The 20 µg/m<sup>3</sup> PM<sub>2.5</sub> objective, which was to be met by 2020, is not in Regulations and there is no requirement for local authorities to meet it.</p> <p><sup>b</sup> To be met by 2040</p> |                 |                  |                        |

## 6 Construction Phase Impact Assessment

### Construction Traffic

- 6.1 The construction works will result in temporary increases in traffic flows on the roads surrounding the proposed development. The construction flows will be temporary and thus won't have a significant lasting effect on local air quality. Peak AADT flows will be 85 HGVs and 79 LGVs, which are below the relevant screening criteria of 100 AADT for heavy vehicles and 500 AADT for light vehicles recommended by EPUK/IAQM guidance (Moorcroft and Barrowcliffe et al, 2017).
- 6.2 The Transport Assessment outlines that construction personnel and materials during the construction phase will access the site from the via the A56 and M65 corridors, using the B6527 and A680 to access the site. Therefore, no construction traffic will travel through an AQMA, and there will be no risk of air quality impacts within any existing nearby AQMAs.
- 6.3 It is, therefore, not considered necessary to assess the impacts of traffic emissions during the construction phase and it can be concluded that the proposed development will not have a significant impact on local roadside air quality as a result of construction traffic emissions.

### On-Site Exhaust Emissions

- 6.4 The IAQM guidance (IAQM, 2024) states:
- "Experience of assessing the exhaust emissions from on-site plant (also known as non-road mobile machinery or 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. For site plant and on-site traffic, consideration should be given to the number of plant/vehicles and their operating hours and locations to assess whether a significant effect is likely to occur".*
- 6.5 The proposed development covers a large area and the majority of the area, including construction laydown areas and the areas where site works will be taking place, is located more than 50m away from any sensitive receptors. Therefore, it is reasonable to conclude that the areas in which NRMM and site traffic will typically operate will be located over 50m from any sensitive properties. Furthermore, NRMM will be switched off when not in use, and will meet any necessary emission standard. It is judged that there is no risk of significant effects at existing receptors as a result of on-site machinery emissions.

### Construction Dust and Particulate Matter Emissions

#### Main Site

- 6.6 The construction works will give rise to a risk of dust impacts during demolition, earthworks and construction, as well as from trackout of dust and dirt by vehicles onto the public highway. Step 1 of the assessment procedure is to screen the need for a detailed assessment. There are no human health receptors within 250 m of the boundary of the main site, and 50 m from the edge of the roads used for trackout (as per the distances set out in the guidance - see Appendix A1), or any ecological receptors<sup>4</sup> sensitive to dust within 50 m of the boundary of the site, thus a detailed assessment is not

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<sup>4</sup> The Lee Quarry SSSI adjacent to the northeast of the site is designated for geological features; therefore, it will not be susceptible to air quality impacts via aerial or deposition pathways. As such, the SSSI does not require further consideration with respect to air quality.

required and it can be concluded that there are no significant effects associated with construction dust at existing receptors (IAQM, 2024).

6.7 Nonetheless, a range of relevant mitigation measures have been provided below which should be applied as part of best practice dust management at the site to minimise the risk of dust nuisance during the construction phase:

- Avoid site runoff of water or mud;
- 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 re-used on-site cover as described below;
- Cover, seed or fence stockpiles to prevent wind whipping;
- Ensure all vehicles switch off engines when stationary - no idling vehicles;
- 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;
- Avoid bonfires and burning of waste materials;
- Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable;
- Ensure vehicles entering and leaving sites 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); and
- 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.

### Construction Laydown Areas

6.8 One of the proposed construction laydown areas (off Scout Road) will be within 250 m of a sensitive receptor. However, this laydown area will be used to store turbine components and therefore will not be a source of construction dust emissions so does not require further consideration or implementation of additional mitigation measures.

### Grid Cable Route

6.9 There are a number of human health receptors located within 250m of the proposed cable route. However, the method of construction would result in minimal dust emissions; the works involve digging shallow trenches to install the cable and then infilling the trench and, where necessary, reseeding the trench area or resurfacing roads to Highway standards. The nature of the works is also highly transient (each section of trench would be excavated and filled over a period a couple of days before moving to a new area). Therefore, a detailed assessment is not required to identify suitable dust mitigation measures as the majority of dust mitigation measures recommended in the IAQM guidance would not be suitable or practical given the nature of these emissions.

6.10 Instead, the following best practice measures have been identified from the IAQM guidance which should be implemented during cable trenching works:

- Ensure all vehicles 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;
- 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;
- Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate systems;
- Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable;
- Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.

## 7 Operational Phase Impact Assessment

- 7.1 The proposed development is expected to generate a total of approximately 15 two-way operational trips (i.e. general maintenance, replacing parts etc) per turbine annually, totalling 180 two-way LDV movements per year; these trip rates are below the screening threshold of 500 LDVs per day recommended for use outside of an AQMA in the EPUK/IAQM guidance (Moorcroft and Barrowcliffe et al, 2017) (see Paragraph 3.13). The proposed development will also generate very few operational heavy vehicle trips.
- 7.2 As such, it is judged that the relevant screening thresholds will not be exceeded and there is no requirement for a detailed assessment of road traffic impacts at existing receptors; it can be concluded that the proposed development will not have a significant impact on local roadside air quality during operation.

## 8 Mitigation

### Good Design and Best Practice

- 8.1 The EPUK/IAQM guidance advises that good design and best practice measures should be considered, whether or not more specific mitigation is required.
- 8.2 The proposed development incorporates the following good design and best practice measures, which have been accounted for in the assessment as far as is possible:
- adoption of a Construction Environmental Management Plan (CEMP) (to be secured via planning condition) to minimise the environmental impacts of the construction works; and
  - a Construction Traffic Management Plan (to be secured via planning condition) will be adopted with measures including:
    - a detailed design process would be undertaken to minimise the volume of material to be imported to site to help reduce HGV numbers;
    - a Site worker transport and travel arrangement plan will be prepared, including transport modes to and from the worksite (including pick up and drop off times);
    - all materials delivery lorries (dry materials) should be sheeted to reduce dust and stop spillage on public roads;
    - specific training and disciplinary measures should be established to ensure the highest standards are maintained to prevent construction vehicles from carrying mud and debris onto the carriageway; and
    - wheel cleaning facilities may be established at the site entrance.

## 9 Achieving Compliance with the PM<sub>2.5</sub> Targets

- 9.1 The AMCT target is not applicable to the proposed development as there are no relevant receptors at the application site; the annual mean air quality objectives (and AMCT) only apply at locations where members of the public might regularly be exposed e.g. residential properties, schools, hospitals etc. Estimated annual mean background concentrations predicted across the site (see Table 5-2) demonstrate that 2024 annual mean PM<sub>2.5</sub> concentrations were below the AMCT.
- 9.2 Defra have set out in their Interim Planning Guidance (2024) two questions designed to consider whether a development supports the AMCT and PERT PM<sub>2.5</sub> targets. The first question is “How has exposure to PM<sub>2.5</sub> been considered when selecting the development site?”, whilst the second question is “What actions and/or mitigations have been considered to reduce PM<sub>2.5</sub> exposure for development users and nearby receptors (houses, hospitals, schools etc.) and to reduce emissions of PM<sub>2.5</sub> and its precursors?”. As discussed above, there is no relevant exposure to PM<sub>2.5</sub> at the proposed development and therefore the first question is not considered further.
- 9.3 However, as explained in Section 8, ways to minimise PM<sub>2.5</sub> emissions have been considered in the following ways:
- emissions during the construction phase will be managed through the use of relevant, best-practice mitigation measures and set out within the CEMP; and
  - construction traffic will be minimised through the implementation from the Construction Traffic Management Plan.
- 9.4 It is considered that the proposed development complies with the requirements to deliver achievement of the PERT by 2040 as appropriate action has been taken to minimise emissions of PM<sub>2.5</sub> and its precursors as far as is reasonably practicable.

## 10 Conclusions

- 10.1 The assessment has considered the impacts of the proposed development on local air quality in terms of dust and particulate matter emissions during construction and emissions from road traffic generated during the construction and operation phases of the proposed development.
- 10.2 The construction works have the potential to create dust. However, there are no sensitive receptors within the relevant screening distances. Therefore, a full construction dust assessment has been screened out and the impacts associated with construction dust can be concluded to be not significant. Nonetheless, appropriate best practice measures have been recommended for inclusion in the CEMP to minimise the risk of nuisance from construction dust.
- 10.3 The proposed development will generate traffic well below the EPUK/IAQM screening criteria during the construction and operation phases. Thus, the proposed development will have a negligible impact on air quality conditions at all existing receptors.
- 10.4 The overall construction and operational air quality effects of the proposed development are therefore judged to be 'not significant'.
- 10.5 Taking into account these conclusions, it is judged that the proposed development is consistent with Paragraph 198 of the NPPF, being appropriate for its location in terms of its effects on the local air quality environment. It is also consistent with Paragraph 199, as it will not affect compliance with relevant limit values or national objectives.
- 10.6 The proposed development is consistent with RBC Local Plan Policy TR1 and RMBC Core Strategy Policies DM1, DM2, and G9, as well as PfE Policies JP-S5 and JP-C5, as it will not have a significant adverse/detrimental effect on air quality and therefore are acceptable.
- 10.7 It is considered that the proposed development complies with the requirements to deliver achievement of the AMCT and PERT by 2040 as appropriate action has been taken to minimise emissions of PM<sub>2.5</sub> and its precursors as far as is reasonably practicable.

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## 12 Glossary

|                   |                                                                                                                                                                          |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AADT              | Annual Average Daily Traffic                                                                                                                                             |
| AMCT              | Annual Mean Concentration Target (for PM <sub>2.5</sub> )                                                                                                                |
| AQC               | Air Quality Consultants                                                                                                                                                  |
| AQMA              | Air Quality Management Area                                                                                                                                              |
| CAZ               | Clean Air Zone                                                                                                                                                           |
| CEMP              | Construction Environmental Management Plan                                                                                                                               |
| Defra             | Department for Environment, Food and Rural Affairs                                                                                                                       |
| DfT               | Department for Transport                                                                                                                                                 |
| EPUK              | Environmental Protection UK                                                                                                                                              |
| EU                | European Union                                                                                                                                                           |
| EV                | Electric Vehicle                                                                                                                                                         |
| Exceedance        | A period of time when the concentration of a pollutant is greater than the appropriate air quality objective. This applies to specified locations with relevant exposure |
| HDV               | Heavy Duty Vehicles (> 3.5 tonnes)                                                                                                                                       |
| HGV               | Heavy Goods Vehicle                                                                                                                                                      |
| HMSO              | His Majesty's Stationery Office                                                                                                                                          |
| IAQM              | Institute of Air Quality Management                                                                                                                                      |
| JAQU              | Joint Air Quality Unit                                                                                                                                                   |
| LAQM              | Local Air Quality Management                                                                                                                                             |
| LDV               | Light Duty Vehicles (<3.5 tonnes)                                                                                                                                        |
| LGV               | Light Goods Vehicle                                                                                                                                                      |
| µg/m <sup>3</sup> | Microgrammes per cubic metre                                                                                                                                             |
| MW                | Mega Watts                                                                                                                                                               |
| NO                | Nitric oxide                                                                                                                                                             |
| NO <sub>2</sub>   | Nitrogen dioxide                                                                                                                                                         |
| NO <sub>x</sub>   | Nitrogen oxides (taken to be NO <sub>2</sub> + NO)                                                                                                                       |
| NPPF              | National Planning Policy Framework                                                                                                                                       |
| NRMM              | Non-road Mobile Machinery                                                                                                                                                |

|                   |                                                                                                                                                                                                                                                                                                     |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OEP               | Office for Environmental Protection                                                                                                                                                                                                                                                                 |
| Objectives        | A nationally defined set of health-based concentrations for nine pollutants, seven of which are incorporated in Regulations, setting out the extent to which the standards should be achieved by a defined date. There are also vegetation-based objectives for sulphur dioxide and nitrogen oxides |
| OLEV              | Office for Low Emission Vehicles                                                                                                                                                                                                                                                                    |
| PERT              | Population Exposure Reduction Target (for PM <sub>2.5</sub> )                                                                                                                                                                                                                                       |
| PM <sub>10</sub>  | Small airborne particles, more specifically particulate matter less than 10 micrometres in aerodynamic diameter                                                                                                                                                                                     |
| PM <sub>2.5</sub> | Small airborne particles less than 2.5 micrometres in aerodynamic diameter                                                                                                                                                                                                                          |
| PPG               | Planning Practice Guidance                                                                                                                                                                                                                                                                          |
| Standards         | A nationally defined set of concentrations for nine pollutants <i>based on assessment of the effects of each pollutant on human health, including the effects on sensitive sub-groups.</i>                                                                                                          |
| TEA               | Triethanolamine – used to absorb nitrogen dioxide                                                                                                                                                                                                                                                   |

## 13 Appendices

# A1 Construction Dust Assessment Procedure

A1.1 The criteria developed by IAQM (2024), divide the activities on construction sites into four types to reflect their different potential impacts. These are:

- demolition;
- earthworks;
- construction; and
- trackout.

A1.2 The assessment procedure includes the four steps summarised below:

## STEP 1: Screen the Need for a Detailed Assessment

A1.3 An assessment is required where there is a human receptor within 250 m of the boundary of the site and/or within 50 m of the route(s) used by construction vehicles on the public highway, up to 250 m from the site entrance(s), or where there is an ecological receptor within 50 m of the boundary of the site and/or within 50 m of the route(s) used by construction vehicles on the public highway, up to 250 m from the site entrance(s).

A1.4 Where the need for a more detailed assessment is screened out, it can be concluded that the level of risk is negligible and that any effects will be 'not significant'. No mitigation measures beyond those required by legislation will be required.

## STEP 2: Assess the Risk of Dust Impacts

A1.5 A site is allocated to a risk category based on two factors:

- the scale and nature of the works, which determines the potential dust emission magnitude (Step 2A); and
- the sensitivity of the area to dust effects (Step 2B).

A1.6 These two factors are combined in Step 2C, which is to determine the risk of dust impacts with no mitigation applied. The risk categories assigned to the site may be different for each of the four potential sources of dust (demolition, earthworks, construction and trackout).

### Step 2A – Define the Potential Dust Emission Magnitude

A1.7 Dust emission magnitude is defined as either 'Small', 'Medium', or 'Large'. The IAQM guidance explains that this classification should be based on professional judgement, but provides the examples in Table A1-1.

**Table A1-1: Examples of How the Dust Emission Magnitude Class May be Defined**

| Class             | Examples                                                                                                                                                                               |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Demolition</b> |                                                                                                                                                                                        |
| Large             | Total building volume >75,000 m <sup>3</sup> , potentially dusty construction material (e.g. concrete), on site crushing and screening, demolition activities >12 m above ground level |

| Class                        | Examples                                                                                                                                                                                                                                             |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Medium                       | Total building volume 12,000 m <sup>3</sup> – 75,000 m <sup>3</sup> , potentially dusty construction material, demolition activities 6-12 m above ground level                                                                                       |
| Small                        | Total building volume <12,000 m <sup>3</sup> , construction material with low potential for dust release (e.g. metal cladding or timber), demolition activities <6 m above ground, demolition during wetter months                                   |
| <b>Earthworks</b>            |                                                                                                                                                                                                                                                      |
| Large                        | Total site area >110,000 m <sup>2</sup> , potentially dusty soil type (e.g. clay, which will be prone to suspension when dry to due small particle size), >10 heavy earth moving vehicles active at any one time, formation of bunds >6 m in height. |
| Medium                       | Total site area 18,000 m <sup>2</sup> – 110,000 m <sup>2</sup> , moderately dusty soil type (e.g. silt), 5-10 heavy earth moving vehicles active at any one time, formation of bunds 3 m – 6 m in height.                                            |
| Small                        | Total site area <18,000 m <sup>2</sup> , soil type with large grain size (e.g. sand), <5 heavy earth moving vehicles active at any one time, formation of bunds <3 m in height.                                                                      |
| <b>Construction</b>          |                                                                                                                                                                                                                                                      |
| Large                        | Total building volume >75,000 m <sup>3</sup> , on site concrete batching; sandblasting                                                                                                                                                               |
| Medium                       | Total building volume 12,000 m <sup>3</sup> – 75,000 m <sup>3</sup> , potentially dusty construction material (e.g. concrete), on site concrete batching                                                                                             |
| Small                        | Total building volume <12,000 m <sup>3</sup> , construction material with low potential for dust release (e.g. metal cladding or timber)                                                                                                             |
| <b>Trackout <sup>a</sup></b> |                                                                                                                                                                                                                                                      |
| Large                        | >50 HDV (>3.5t) outward movements in any one day, potentially dusty surface material (e.g. high clay content), unpaved road length >100 m                                                                                                            |
| Medium                       | 20-50 HDV (>3.5t) outward movements in any one day, moderately dusty surface material (e.g. high clay content), unpaved road length 50 m – 100 m                                                                                                     |
| Small                        | <20 HDV (>3.5t) outward movements in any one day, surface material with low potential for dust release, unpaved road length <50 m                                                                                                                    |

<sup>a</sup> These numbers are for vehicles that leave the site after moving over unpaved ground.

## Step 2B – Define the Sensitivity of the Area

A1.8 The sensitivity of the area is defined taking account of a number of factors:

- the specific sensitivities of receptors in the area;
- the proximity and number of those receptors;
- in the case of PM<sub>10</sub>, the local background concentration; and
- site-specific factors, such as whether there are natural shelters to reduce the risk of wind-blown dust.

A1.9 The first requirement is to determine the specific sensitivities of local receptors. The IAQM guidance recommends that this should be based on professional judgment, taking account of the principles in Table A1-2. These receptor sensitivities are then used in the matrices set out in Table A1-3, Table A1-4

and Table A1-5 to determine the sensitivity of the area. Finally, the sensitivity of the area is considered in relation to any other site-specific factors, such as the presence of natural shelters etc., and any required adjustments to the defined sensitivities are made.

### Step 2C – Define the Risk of Impacts

- A1.10 The dust emission magnitude determined at Step 2A is combined with the sensitivity of the area determined at Step 2B to determine the risk of impacts with no mitigation applied. The IAQM guidance provides the matrix in Table A1-6 as a method of assigning the level of risk for each activity.

### STEP 3: Determine Site-specific Mitigation Requirements

- A1.11 The IAQM guidance provides a suite of recommended and desirable mitigation measures which are organised according to whether the outcome of Step 2 indicates a low, medium, or high risk. The list provided in the IAQM guidance has been used as the basis for the requirements set out in the report.

### STEP 4: Determine Significant Effects

- A1.12 The IAQM guidance does not provide a method for assessing the significance of effects before mitigation, and advises that pre-mitigation significance should not be determined. With appropriate mitigation in place, the IAQM guidance is clear that the residual effect will normally be 'not significant'.
- A1.13 The IAQM guidance recognises that, even with a rigorous dust management plan in place, it is not possible to guarantee that the dust mitigation measures will be effective all of the time, for instance under adverse weather conditions. The local community may therefore experience occasional, short-term dust annoyance. The scale of this would not normally be considered sufficient to change the conclusion that the effects will be 'not significant'.

**Table A1-2: Principles to be Used When Defining Receptor Sensitivities**

| Class                                                                   | Principles                                                                                                                                                                                                                                                                                                                                                                                                            | Examples                                                                                                               |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| <b>Sensitivities of People to Dust Soiling Effects</b>                  |                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                        |
| High                                                                    | users can reasonably expect enjoyment of a high level of amenity; or the appearance, aesthetics or value of their property would be diminished by soiling; and the people or property would reasonably be expected to be present continuously, or at least regularly for extended periods, as part of the normal pattern of use of the land                                                                           | dwelling, museum and other culturally important collections, medium and long term car parks and car showrooms          |
| 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; or the appearance, aesthetics or value of their property could be diminished by soiling; or the people or property wouldn't reasonably be expected to be present here continuously or regularly for extended periods as part of the normal pattern of use of the land | parks and places of work                                                                                               |
| Low                                                                     | the enjoyment of amenity would not reasonably be expected; or there is property that would not reasonably be expected to be diminished in appearance, aesthetics or value by soiling; or there is transient exposure, where the people or property would reasonably be expected to be present only for limited periods of time as part of the normal pattern of use of the land                                       | playing fields, farmland (unless commercially-sensitive horticulture), footpaths, short term car parks and roads       |
| <b>Sensitivities of People to the Health Effects of PM<sub>10</sub></b> |                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                        |
| High                                                                    | locations where members of the public may be exposed for eight hours or more in a day                                                                                                                                                                                                                                                                                                                                 | residential properties, hospitals, schools and residential care homes                                                  |
| Medium                                                                  | locations where the people exposed are workers, and where individuals may be exposed for eight hours or more in a day.                                                                                                                                                                                                                                                                                                | may include office and shop workers, but will generally not include workers occupationally exposed to PM <sub>10</sub> |
| Low                                                                     | locations where human exposure is transient                                                                                                                                                                                                                                                                                                                                                                           | public footpaths, playing fields, parks and shopping streets                                                           |
| <b>Sensitivities of Receptors to Ecological Effects</b>                 |                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                        |
| High                                                                    | locations with an international or national designation and the designated features may be affected by dust soiling; or locations where there is a community of a particularly dust sensitive species                                                                                                                                                                                                                 | Special Areas of Conservation with dust sensitive features                                                             |
| Medium                                                                  | locations where there is a particularly important plant species, where its dust sensitivity is uncertain or unknown; or                                                                                                                                                                                                                                                                                               | Sites of Special Scientific Interest with dust sensitive features                                                      |

| Class | Principles                                                                                  | Examples                                           |
|-------|---------------------------------------------------------------------------------------------|----------------------------------------------------|
|       | locations with a national designation where the features may be affected by dust deposition |                                                    |
| Low   | locations with a local designation where the features may be affected by dust deposition    | Local Nature Reserves with dust sensitive features |

Table A1-3: Sensitivity of the Area to Dust Soiling Effects on People and Property<sup>5</sup>

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

Table A1-4: Sensitivity of the Area to Human Health Effects <sup>5</sup>

| Receptor Sensitivity | Annual Mean PM <sub>10</sub> | Number of Receptors | Distance from the Source (m) |        |        |        |
|----------------------|------------------------------|---------------------|------------------------------|--------|--------|--------|
|                      |                              |                     | <20                          | <50    | <100   | <250   |
| High                 | >32 µg/m <sup>3</sup>        | >100                | High                         | High   | High   | Medium |
|                      |                              | 10-100              | High                         | High   | Medium | Low    |
|                      |                              | 1-10                | High                         | Medium | Low    | Low    |
|                      | 28-32 µg/m <sup>3</sup>      | >100                | High                         | High   | Medium | Low    |
|                      |                              | 10-100              | High                         | Medium | Low    | Low    |
|                      |                              | 1-10                | High                         | Medium | Low    | Low    |
|                      | 24-28 µg/m <sup>3</sup>      | >100                | High                         | Medium | Low    | Low    |
|                      |                              | 10-100              | High                         | Medium | Low    | Low    |
|                      |                              | 1-10                | Medium                       | Low    | Low    | Low    |
|                      | <24 µg/m <sup>3</sup>        | >100                | Medium                       | Low    | Low    | Low    |
|                      |                              | 10-100              | Low                          | Low    | Low    | Low    |
|                      |                              | 1-10                | Low                          | Low    | Low    | Low    |
| Medium               | >32 µg/m <sup>3</sup>        | >10                 | High                         | Medium | Low    | Low    |

<sup>5</sup> For demolition, earthworks and construction, distances are taken either from the dust source or from the boundary of the site. For trackout, distances are measured from the sides of roads used by construction traffic. Without mitigation, trackout may occur from roads up to 250 m, as measured from the site exit. The impact declines with distance from the site, and it is only necessary to consider trackout impacts up to 50 m from the edge of the road.

| Receptor Sensitivity | Annual Mean PM <sub>10</sub> | Number of Receptors | Distance from the Source (m) |     |      |      |
|----------------------|------------------------------|---------------------|------------------------------|-----|------|------|
|                      |                              |                     | <20                          | <50 | <100 | <250 |
|                      | 28-32 µg/m <sup>3</sup>      | 1-10                | Medium                       | Low | Low  | Low  |
|                      |                              | >10                 | Medium                       | Low | Low  | Low  |
|                      | 24-28 µg/m <sup>3</sup>      | 1-10                | Low                          | Low | Low  | Low  |
|                      |                              | >10                 | Low                          | Low | Low  | Low  |
|                      | <24 µg/m <sup>3</sup>        | 1-10                | Low                          | Low | Low  | Low  |
|                      |                              | >10                 | Low                          | Low | Low  | Low  |
| Low                  | -                            | >1                  | Low                          | Low | Low  | Low  |

Table A1-5: Sensitivity of the Area to Ecological Effects <sup>5</sup>

| Receptor Sensitivity | Distance from the Source (m) |        |
|----------------------|------------------------------|--------|
|                      | <20                          | <50    |
| High                 | High                         | Medium |
| Medium               | Medium                       | Low    |
| Low                  | Low                          | Low    |

Table A1-6: Defining the Risk of Dust Impacts

| Sensitivity of the Area | Dust Emission Magnitude |             |             |
|-------------------------|-------------------------|-------------|-------------|
|                         | Large                   | Medium      | Small       |
| <b>Demolition</b>       |                         |             |             |
| High                    | High Risk               | Medium Risk | Medium Risk |
| Medium                  | High Risk               | Medium Risk | Low Risk    |
| Low                     | Medium Risk             | Low Risk    | Negligible  |
| <b>Earthworks</b>       |                         |             |             |
| High                    | High Risk               | Medium Risk | Low Risk    |
| Medium                  | Medium Risk             | Medium Risk | Low Risk    |
| Low                     | Low Risk                | Low Risk    | Negligible  |
| <b>Construction</b>     |                         |             |             |
| High                    | High Risk               | Medium Risk | Low Risk    |
| Medium                  | Medium Risk             | Medium Risk | Low Risk    |
| Low                     | Low Risk                | Low Risk    | Negligible  |
| <b>Trackout</b>         |                         |             |             |

| Sensitivity of the 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 |

## A2 EPUK & IAQM Planning for Air Quality Guidance

A2.1 The guidance issued by EPUK and IAQM (Moorcroft and Barrowcliffe et al, 2017) is comprehensive in its explanation of the place of air quality in the planning regime. Key sections of the guidance not already mentioned above are set out below.

### Air Quality as a Material Consideration

*“Any air quality issue that relates to land use and its development is capable of being a material planning consideration. The weight, however, given to air quality in making a planning application decision, in addition to the policies in the local plan, will depend on such factors as:*

- *the severity of the impacts on air quality;*
- *the air quality in the area surrounding the proposed development;*
- *the likely use of the development, i.e. the length of time people are likely to be exposed at that location; and*
- *the positive benefits provided through other material considerations”.*

### Recommended Best Practice

A2.2 The guidance goes into detail on how all development proposals can and should adopt good design principles that reduce emissions and contribute to better air quality management. It states:

*“The basic concept is that good practice to reduce emissions and exposure is incorporated into all developments at the outset, at a scale commensurate with the emissions”.*

A2.3 The guidance sets out a number of good practice principles that should be applied to all developments that:

- include 10 or more dwellings;
- where the number of dwellings is not known, residential development is carried out on a site of more than 0.5 ha;
- provide more than 1,000 m<sup>2</sup> of commercial floorspace;
- are carried out on land of 1 ha or more.

A2.4 The good practice principles are that:

- New developments should not contravene the Council's Air Quality Action Plan, or render any of the measures unworkable;
- Wherever possible, new developments should not create a new “street canyon”, as this inhibits pollution dispersion;
- Delivering sustainable development should be the key theme of any application;
- New development should be designed to minimise public exposure to pollution sources, e.g. by locating habitable rooms away from busy roads;

- The provision of at least 1 Electric Vehicle (EV) "rapid charge" point per 10 residential dwellings and/or 1000 m<sup>2</sup> of commercial floorspace. Where on-site parking is provided for residential dwellings, EV charging points for each parking space should be made available;
- Where development generates significant additional traffic, provision of a detailed travel plan (with provision to measure its implementation and effect) which sets out measures to encourage sustainable means of transport (public, cycling and walking) via subsidised or free-ticketing, improved links to bus stops, improved infrastructure and layouts to improve accessibility and safety;
- All gas-fired boilers to meet a minimum standard of <40 mgNO<sub>x</sub>/kWh;
- Where emissions are likely to impact on an AQMA, all gas-fired CHP plant to meet a minimum emissions standard of:
  - Spark ignition engine: 250 mgNO<sub>x</sub>/Nm<sup>3</sup>;
  - Compression ignition engine: 400 mgNO<sub>x</sub>/Nm<sup>3</sup>;
  - Gas turbine: 50 mgNO<sub>x</sub>/Nm<sup>3</sup>.
- A presumption should be to use natural gas-fired installations. Where biomass is proposed within an urban area it is to meet minimum emissions standards of 275 mgNO<sub>x</sub>/Nm<sup>3</sup> and 25 mgPM/Nm<sup>3</sup>.

A2.5 The guidance also outlines that offsetting emissions might be used as a mitigation measure for a proposed development. However, it states that:

*"It is important that obligations to include offsetting are proportional to the nature and scale of development proposed and the level of concern about air quality; such offsetting can be based on a quantification of the emissions associated with the development. These emissions can be assigned a value, based on the "damage cost approach" used by Defra, and then applied as an indicator of the level of offsetting required, or as a financial obligation on the developer. Unless some form of benchmarking is applied, it is impractical to include building emissions in this approach, but if the boiler and CHP emissions are consistent with the standards as described above then this is not essential".*

A2.6 The guidance offers a widely used approach for quantifying costs associated with pollutant emissions from transport. It also outlines the following typical measures that may be considered to offset emissions, stating that measures to offset emissions may also be applied as post assessment mitigation:

- Support and promotion of car clubs;
- Contributions to low emission vehicle refuelling infrastructure;
- Provision of incentives for the uptake of low emission vehicles;
- Financial support to low emission public transport options; and
- Improvements to cycling and walking infrastructures.

## Screening

### Impacts of the Local Area on the Development

*"There may be a requirement to carry out an air quality assessment for the impacts of the local area's emissions on the proposed development itself, to assess the exposure that residents or users might experience. This will need to be a matter of judgement and should take into account:*

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

### Impacts of the Development on the Local Area

A2.7 The guidance sets out two stages of screening criteria that can be used to identify whether a detailed air quality assessment is required, in terms of the impact of the development on the local area. The first stage is that you should proceed to the second stage if any of the following apply:

- 10 or more residential units or a site area of more than 0.5 ha residential use; and/or
- more than 1,000 m<sup>2</sup> of floor space for all other uses or a site area greater than 1 ha.

A2.8 Coupled with any of the following:

- the development has more than 10 parking spaces; and/or
- the development will have a centralised energy facility or other centralised combustion process.

A2.9 If the above do not apply then the development can be screened out as not requiring a detailed air quality assessment of the impact of the development on the local area. If they do apply then you proceed to stage 2, which sets out indicative criteria for requiring an air quality assessment. The stage 2 criteria relating to vehicle emissions are set out below:

- the development will lead to a change in LDV flows of more than 100 AADT within or adjacent to an AQMA or more than 500 AADT elsewhere;
- the development will lead to a change in HDV flows of more than 25 AADT within or adjacent to an AQMA or more than 100 AADT elsewhere;
- the development will lead to a realigning of roads (i.e. changing the proximity of receptors to traffic lanes) where the change is 5m or more and the road is within an AQMA;
- the development will introduce a new junction or remove an existing junction near to relevant receptors, and the junction will cause traffic to significantly change vehicle acceleration/deceleration, e.g. traffic lights or roundabouts;

- the development will introduce or change a bus station where bus flows will change by more than 25 AADT within or adjacent to an AQMA or more than 100 AADT elsewhere; and
- the development will have an underground car park with more than 100 movements per day (total in and out) with an extraction system that exhausts within 20 m of a relevant receptor.

A2.10 The criteria are more stringent where the traffic impacts may arise on roads where concentrations are close to the objective. The presence of an AQMA is taken to indicate the possibility of being close to the objective, but where whole authority AQMAs are present and it is known that the affected roads have concentrations below 90% of the objective, the less stringent criteria are likely to be more appropriate.

A2.11 On combustion processes (including standby emergency generators and shipping) where there is a risk of impacts at relevant receptors, the guidance states that:

*"Typically, any combustion plant where the single or combined NO<sub>x</sub> emission rate is less than 5 mg/sec is unlikely to give rise to impacts, provided that the emissions are released from a vent or stack in a location and at a height that provides adequate dispersion. As a guide, the 5 mg/s criterion equates to a 450 kW ultra-low NO<sub>x</sub> gas boiler or a 30kW CHP unit operating at <95mg/Nm<sup>3</sup>.*

*In situations where the emissions are released close to buildings with relevant receptors, or where the dispersion of the plume may be adversely affected by the size and/or height of adjacent buildings (including situations where the stack height is lower than the receptor) then consideration will need to be given to potential impacts at much lower emission rates.*

*Conversely, where existing nitrogen dioxide concentrations are low, and where the dispersion conditions are favourable, a much higher emission rate may be acceptable".*

A2.12 Should none of the above apply then the development can be screened out as not requiring a detailed air quality assessment of the impact of the development on the local area, provided that professional judgement is applied; the guidance importantly states the following:

*"The criteria provided are precautionary and should be treated as indicative. They are intended to function as a sensitive 'trigger' for initiating an assessment in cases where there is a possibility of significant effects arising on local air quality. This possibility will, self-evidently, not be realised in many cases. The criteria should not be applied rigidly; in some instances, it may be appropriate to amend them on the basis of professional judgement, bearing in mind that the objective is to identify situations where there is a possibility of a significant effect on local air quality".*

A2.13 Even if a development cannot be screened out, the guidance is clear that a detailed assessment is not necessarily required:

*"The use of a Simple Assessment may be appropriate, where it will clearly suffice for the purposes of reaching a conclusion on the significance of effects on local air quality. The principle underlying this guidance is 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. Similarly, it may be possible to conduct a quantitative assessment that does not require the use of a dispersion model run on a computer".*

A2.14 The guidance also outlines what the content of the air quality assessment should include, and this has been adhered to in the production of this report.

## Assessment of Significance

- A2.15 There is no official guidance in the UK in relation to development control on how to describe the nature of air quality impacts, nor how to assess their significance. The approach within the EPUK/IAQM guidance has, therefore, been used in this assessment. This approach involves a two stage process:
- a qualitative or quantitative description of the impacts on local air quality arising from the development; and
  - a judgement on the overall significance of the effects of any impacts.
- A2.16 The guidance recommends that the assessment of significance should be based on professional judgement, with the overall air quality impact of the development described as either 'significant' or 'not significant'. In drawing this conclusion, the following factors should be taken into account:
- the existing and future air quality in the absence of the development;
  - the extent of current and future population exposure to the impacts;
  - the influence and validity of any assumptions adopted when undertaking the prediction of impacts;
  - the potential for cumulative impacts and, in such circumstances, several impacts that are described as 'slight' individually could, taken together, be regarded as having a significant effect for the purposes of air quality management in an area, especially where it is proving difficult to reduce concentrations of a pollutant. Conversely, a 'moderate' or 'substantial' impact may not have a significant effect if it is confined to a very small area and where it is not obviously the cause of harm to human health; and
  - the judgement on significance relates to the consequences of the impacts; will they have an effect on human health that could be considered as significant? In the majority of cases, the impacts from an individual development will be insufficiently large to result in measurable changes in health outcomes that could be regarded as significant by health care professionals.
- A2.17 The guidance is clear that other factors may be relevant in individual cases. It also states that the effect on the residents of any new development where the air quality is such that an air quality objective is not met will be judged as significant. For people working at new developments in this situation, the same will not be true as occupational exposure standards are different, although any assessment may wish to draw attention to the undesirability of the exposure.
- A2.18 A judgement of the significance should be made by a competent professional who is suitably qualified. A summary of the professional experience of the staff contributing to this assessment is provided in Appendix A3.

## A3 Professional Experience

### Dr Jessica Muirhead, BSc (Hons), MSc, PhD, CSci, MEnvSci, MIAQM

- A3.1 Dr Muirhead is an Associate Director with AQC with over 18 years experience in Air Quality consultancy. Prior to joining AQC in 2024, she spent eleven years at AECOM leading the Air Quality Team's Urban Regeneration and Solar Farm work streams. She has been responsible for delivering numerous air quality assessments for planning applications and Development Consent Orders (DCOs) including Environmental Impact Assessments (EIAs) across London and the UK. She spent a year as Technical Advisor to the Greater London Authority delivering training workshops to the London Boroughs, reviewing referable planning applications and responding to queries on air quality positive and air quality neutral. Jess also has extensive experience providing technical peer reviews for a number of Planning Authorities in the UK, and for The Royal Commission for Al Ula in Saudi Arabia.

### Julia Burnell, MEnvSci (Hons) MEnvSc MIAQM

- A3.2 Miss Burnell is a Principal Consultant with AQC with over nine years' experience in the field of air quality. She has experience of undertaking a range of air quality assessments for power, transportation, and mixed-use development projects both in the UK and internationally. She is also experienced at preparing environmental permit applications for medium combustion plant/specified generator sites and has commissioned and maintained numerous ambient air quality monitoring surveys. Prior to her work with AQC, Julia completed an MEnvSci (Hons) in Environmental Science (four-year integrated master's). She is a Member of both the Institute of Air Quality Management and the Institution of Environmental Sciences.

### Faye Wilder, BSc (Hons) MSc

- A3.3 Miss Wilder is a Consultant with AQC and joined the company in 2023. During her BSc Geography degree at the University of Birmingham, she developed an interest in air quality, which continued into her MSc in Environmental Management at the University of Reading. Her master's thesis investigated personal air pollution exposure across microenvironments using wearable air pollution sensors, and how this varied from fixed air pollution monitoring stations.



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