



**Development and Air
Quality SPD**

April 2021

1 Introduction

- 1.1** This Development and Air Quality Supplementary Planning Document (SPD) aims to reduce emissions and better manage the air quality impact of all proposed developments through directing development to sustainable locations within easy access to public transport and local services, the application of good design and sustainability principles, and where necessary the implementation of specific and appropriate mitigation measures either on-site or close by.
- 1.2** The planning system can play a key role in minimising air quality impacts, and as a result, air quality is an important material consideration in many planning decisions.
- 1.3** Taking measures to improve air quality will benefit the borough's residents, particularly in terms of their health and wellbeing. Through prevention and/or effective mitigation, it can also help achieve other benefits including reducing energy costs in homes and businesses, improving the physical environment and increasing the potential to reduce carbon emissions, in line with national and sub-regional targets.
- 1.4** In order to achieve this, a consistent approach is required, whereby significant adverse impacts on air quality are avoided. Where there is an unavoidable adverse impact, measures to lessen and compensate for the impacts are applied that are evidenced and demonstrable in terms of how they will mitigate the impact on air quality.
- 1.5** Adopted local planning policy on managing air quality in the borough is set out in Policy CP17 of the Wigan Local Plan Core Strategy and Policy EV1B of the Wigan Replacement Unitary Development Plan (UDP). This SPD provides guidance to applicants on how to satisfy the requirements of these policies and also informs the council on how to determine planning applications with regard to their impact on air quality. It also provides detailed guidance on how to assess the impacts that development may have on air quality and how these should be addressed, either as part of a simple or full air quality assessment.

2 Health impacts of air pollution

- 2.1 Poor air quality is the largest environmental risk to public health nationally, as long-term exposure to air pollution can cause chronic conditions such as cardiovascular and respiratory diseases as well as lung cancer, leading to reduced life expectancy. Just a few hours of exposure can irritate your eyes, nose and throat. Whilst we are still learning more about the health impacts of air pollution, there is growing evidence that longer term exposure can lead to dementia, reduced cognitive function and the development of heart and lung diseases.
- 2.2 A study by Centre for Cities has concluded that one in 23 deaths in Greater Manchester in 2017 were related to long term exposure to polluted air, and it is estimated that the health and social care costs of air pollution in England could reach £5.3 billion by 2035 unless action is taken.
- 2.3 The health impacts of air pollution are tragically demonstrated by the death of nine year old Ella Kissi-Debrah in South East London in 2013. Following an inquest into her death, it was concluded that an unlawful level of pollution detected at a monitoring station close to her home contributed to her fatal asthma attack.
- 2.4 Air pollution is a complex mix of particles and gases of both natural and human origin, with particulate matter and nitrogen dioxide (NO₂) generally being major components within urban areas. As shown in Figures 1 and 2, the principal sources of urban air pollution are housing, industry and road transport. There is currently no clear evidence of a safe level of exposure below which there is no risk of adverse health effects.

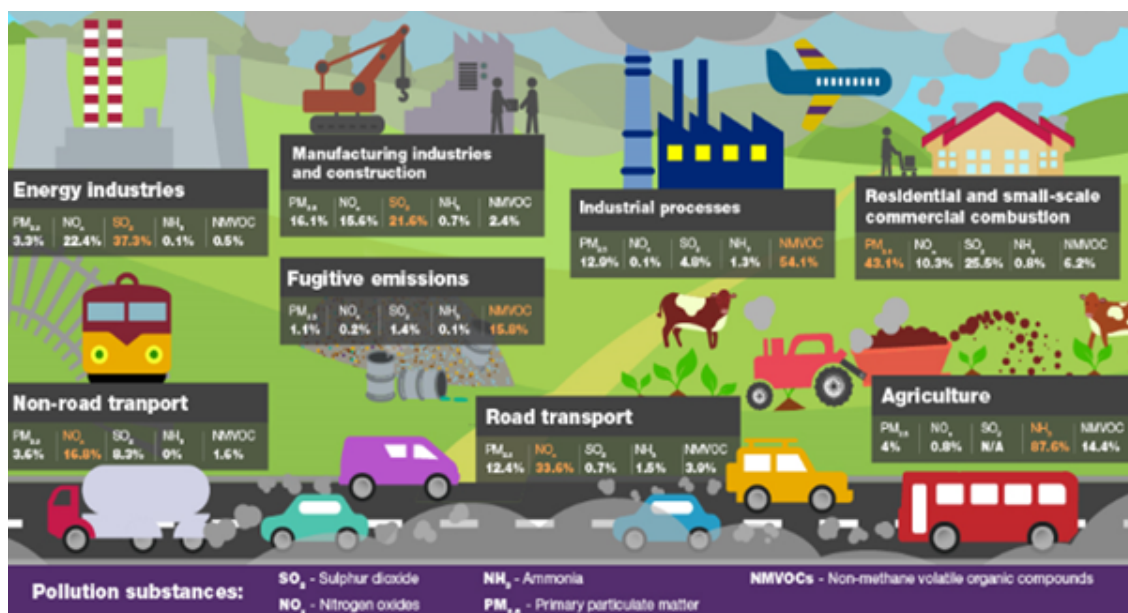


Figure 2.1: Sources of air pollution

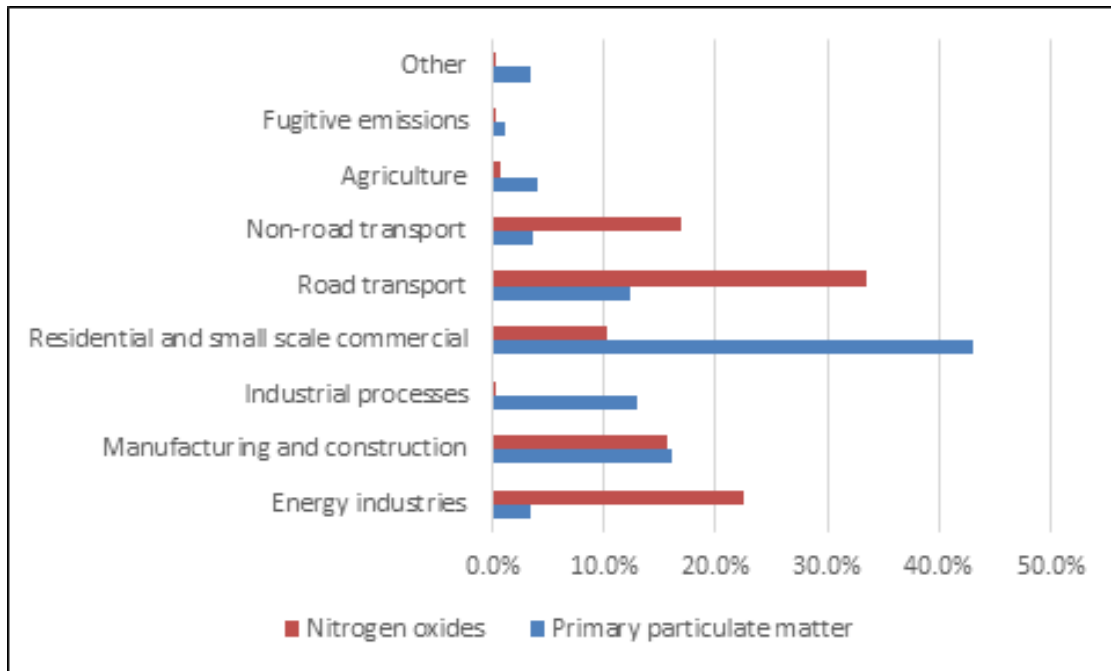


Figure 2.2: Sources of nitrogen oxides and primary particulate matter

3 Policy context and key studies

The national context

- 3.1** Clean air is a priority for Government as established in national planning policy and the national Clean Air Strategy (2019). Planning decisions are required to:
- Sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of AQMAs and Clean Air Zones, and the cumulative impacts from individual sites in local areas.
 - Ensure that any new development in AQMAs and Clean Air Zones is consistent with the local air quality action plan. For Wigan Borough, this is the [Greater Manchester Air Quality Action Plan](#) which has been prepared in partnership with Transport for Greater Manchester (TfGM), the Greater Manchester Combined Authority (GMCA) and all Greater Manchester districts.
- 3.2** National planning policy seeks opportunities to improve air quality or mitigate impacts, such as through traffic and travel management, and green infrastructure provision and enhancement. It also states that significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes.
- 3.3** The [Clean Air Strategy](#) sets out the comprehensive action required from all parts of government and society to reduce emissions of five of the most damaging air pollutants: fine particulate matter, ammonia, nitrogen oxides, sulphur dioxide and non-methane volatile organic compounds, as well as proposing tough new goals to cut public exposure to particulate matter pollution, as recommended by the World Health Organisation.

Sub-regional context

- 3.4** In addition to the Greater Manchester Air Quality Action Plan, a Greater Manchester [Clean Air Plan](#) is being prepared to tackle nitrogen dioxide (NO₂) exceedances. This proposes a package of quick and effective measures to reduce roadside NO₂ levels, including:
- The introduction of a Greater Manchester Clean Air Zone from 2022, within which the most polluting buses, coaches, HGVs, vans, taxis and private hire vehicles would pay a daily penalty to drive into or within.
 - A multi-million-pound funding package to support local businesses and sole traders to upgrade to cleaner vehicles.
 - Trebling the number of public charging points for electric vehicles.

Local context

- 3.5** As already covered, local planning policy on development and air quality is set out in Policy CP17 of the Wigan Local Plan Core Strategy and saved policy EV1B of the Wigan Replacement UDP. In order to help maintain, enhance and protect our environment for the benefit of people and wildlife, and make the borough a better place for people to live and businesses to locate and thrive, these both seek to manage air quality, particularly in our Air Quality Management Areas (AQMAs), by minimising the air pollution likely to arise from new development.
- 3.6** There are approximately 100 active roadside diffusion tubes distributed across the borough enabling ongoing and effective monitoring of nitrogen dioxide. This has identified Lane Head in Lowton, A49 Warrington Road in Marus Bridge, Saddle Junction and Southgate in Wigan, School Lane in Standish, and the A577/Market Street/Lily Lane junction in Hindley as particularly sensitive areas for air quality in the borough. In 2018, these locations all recorded nitrogen oxide levels in excess of 40 µg/m³, which is the annual limit value set by the European Union, and contained within UK law in the form of The Air Quality Standards Regulations 2010.

4 Air quality management

- 4.1** The council expects applicants to manage the air quality impact of all proposed developments through developing in sustainable locations with good convenient access to public transport and local services, and the application of good design and sustainability principles. This approach should minimise the need to incorporate mitigation measures into schemes at additional costs.
- 4.2** This process, which will help to achieve sustainable and high quality development, is set out in Figure 4.1.

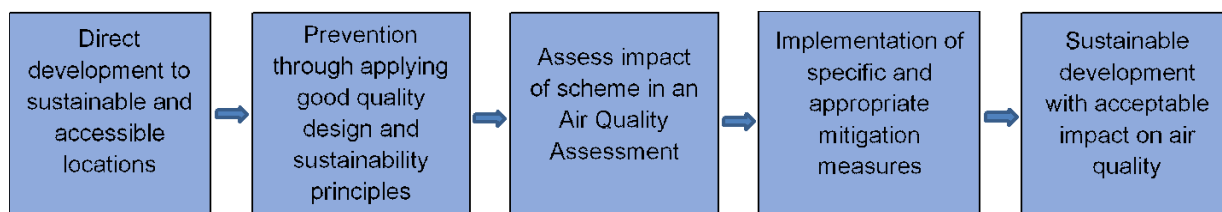
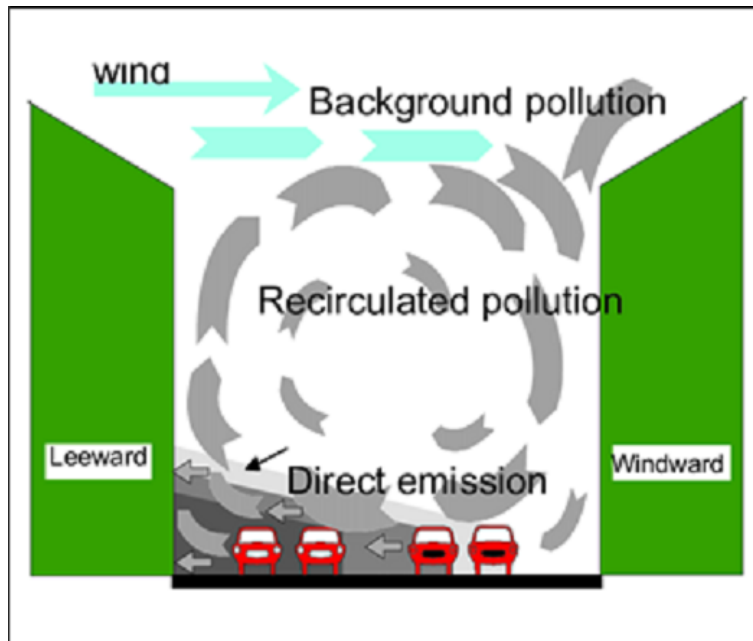


Figure 4.1: Process for achieving development with acceptable air quality impacts

- 4.3** The most effective means of managing air quality through development is to develop in sustainable and accessible locations. Developing permeable schemes in sustainable locations with good walking and cycling access to public transport and convenience provision such as shops, schools and health services facilitates modal shift and reduces dependency on car use, particularly for short trips. In addition to improving air quality, this aligns with overarching objectives of the council including improving the health and wellbeing of borough residents and reducing obesity.
- 4.4** Further to this, it is expected that developers incorporate the following key design and sustainability principles into their schemes, unless this is not practicable:
- Providing safe, direct and good quality walking and cycling connections from new homes to schools, shops, health facilities, public transport services, workplaces and other local amenities reducing the need to travel by car, encourage modal shift, and promote and facilitate healthier lifestyles.



- Ensuring that the air quality impacts on nearby sensitive receptors, including schools and hospitals, are given careful consideration at the design stage.
- Configuring buildings and laying out developments in a way that enables effective pollution dispersion and avoids the creation of 'street canyons', as shown in Figure 4.2.



- Incorporating street trees and landscaping where appropriate to provide adequate shading and filter emissions. The species of tree(s) used will need to be considered effectively to ensure that the filtering of emissions is optimised and to reduce the risk of the street canopy impeding effective pollution dispersion.



- Orientating buildings so they can effectively absorb solar energy to minimise the need to heat buildings using non-renewable sources.
- Minimising public exposure to pollution sources through effective design, for example by locating habitable rooms away from busy roads, and, for industrial and commercial premises, directing combustion generated pollutants through appropriately located vents or chimney stacks.

- Considering opportunities to improve the environmental performance of buildings, including applying [BREEAM standards](#). Applicable standards for air quality include the provision of low NOx space heating and hot water systems, air source heat pumps, renewable technologies, appropriate ventilation in buildings and adequate cycle storage.
- Considering a 'Fabric First' approach to building design to minimise the need for energy consumption through methods such as maximising air-tightness, using super-high insulation, optimising solar gain through the provision of openings and shading, optimising natural ventilation and using the thermal mass of the building fabric.
- Incorporating charging points for electric vehicles into residential developments and other developments which attract vehicles, in accordance with the thresholds set in Table 5.1.



- 4.5** Delivering sustainable development should be the key theme of any application, and environmental considerations, including those related to air quality, should be considered as early as possible, ideally prior to the submission of the planning application. To assist with this, it is strongly recommended that applicants use the council's pre-application advice service which will provide multi-disciplinary advice from planning, transport, and other relevant departments.
- 4.6** Applicants will be expected to demonstrate, through a design and access statement, that the application of these principles has been taken into account as part of proposals submitted as planning applications.
- 4.7** Incorporating these principles into new developments will play a critical role in reducing emissions and help to preserve air quality in the borough. Where Air Quality Assessments conclude that applying these principles will not adequately mitigate against air quality impacts, additional compensatory mitigation measures will be required, as set out in Section 8. Where these impacts cannot be satisfactorily mitigated, there will be a strong presumption against the granting of planning permission.

5 Charging points for electric vehicles

- 5.1** In November 2020, the UK Government laid out plans to phase out the sale of new petrol and diesel vehicles by 2030, in order to help achieve their overall objective of achieving net zero emissions nationally by 2050. The decline of diesel and petrol vehicles, and the associated increase in electric car ownership, should have a significant beneficial impact on air quality, particularly within urban areas. It is therefore vitally important that new developments are adequately equipped, and future proofed, to support the use of electric vehicles, notably through the provision of charging points.
- 5.2** All new charging points should have smart charging functionality. As defined by Government, smart charging points are communications enabled (able to send and receive messages) and able to respond automatically to remote signals by adjusting the electricity consumption flowing through the charging point. Through smart charging, the charging stations may monitor, manage, and restrict the use of charging devices to optimise energy consumption. For example, this would enable domestic charge points to be restricted to specified times to reduce electricity usage at peak times.
- 5.3** As such these are required on all residential developments and on other developments in line with the minimum requirements set out in Table 5.1, unless it is not practicable. When calculating the minimum number of charging points required for non-residential uses, calculations should be rounded to the nearest whole number. A minimum of 1 charging point will be required on all schemes, both residential and non-residential, with 5 or more parking spaces. Car parks associated with the uses set out in Table 5.1 will be required to comply with the set requirements even if the car park is located off-site.

Development type	Minimum number of charging points
Residential	
With in-curtilage parking e.g. driveway and/or garage	1 per dwelling
With designated off-street parking provision	1 per dwelling
With non-designated off-street parking provision	1 per 10 dwellings
With no off-street parking provision	1 per 10 dwellings ¹
Other uses	
General industrial and storage and distribution uses (B2, B8)	5% of total parking spaces
Residential institutions (C2 and C2A)	1.7% of total parking spaces
Retail uses, cafes and restaurants (Class E (a, b, c))	2.5% of total parking spaces
Local community uses (Classes E(f) and F2)	2.5% of total parking spaces
Sport centres and gymnasiums (Class E(d)); cinemas, theatres, other leisure facilities.	5% of total parking spaces
Medical or health services (Class E(e))	2.5% of total parking spaces
Office uses (Class E(g))	5% of total parking spaces
Learning and non-Residential Institutions (F1)	1.7% of total parking spaces

Development type	Minimum number of charging points
Commercial car parks ²	2.5% of total parking spaces

Table 5.1: Provision of smart charging points for electric vehicles

1 or through a financial contribution where direct provision is not feasible

2 This relates to permanent car parks available to the public on payment of a fee

- 5.4** As shown in Table 5.1, a higher proportion of charging points per parking spaces is required as part of new employment, hotel and leisure developments, as these are uses which are typically associated with longer stay parking, allowing sufficient time for drivers to charge their vehicle. Electric charging points will be expected to have a charging rate appropriate to the anticipated length of stay of drivers. For mixed use schemes with shared car parking provision e.g. schemes with a mix of retail and leisure uses, the appropriate number of charging points will need to be apportioned for each use, informed by parking standards and the transport assessment. The requirements in Table 5.1 also apply to proposed changes of use, as well as to new build developments. Where fully functioning smart charging points are already provided as part of the existing use, these can count towards the requirement of the proposed use. If the number of existing smart charging points exceeds the requirement of the new use, the removal of existing charging points will not be permitted.
- 5.5** Given the ban on the sale of new diesel and petrol car is planned to be introduced in 2030, the sufficient provision of smart charging points is a necessity. Consequently, developments which do not meet the requirements set in Table 5.1 will be refused, except in very exceptional circumstances, where the applicant can robustly justify that provision is not practicable on-site. In these exceptional circumstances, a financial contribution will be required, as set out in Section 8.

6 Thresholds for requiring an Air Quality Assessment

6.1 Table 6.1 outlines the type of assessment required when submitting a planning application for, or including, residential development.

Threshold		Assessment type
Minor development application: Fewer than 10 homes	<ul style="list-style-type: none"> • Outside an Air Quality Management Area (AQMA); and • No NO₂ tube within 500 metres of the site boundary above 40 µg/m³ as an annual average 	None
	<ul style="list-style-type: none"> • Within an AQMA; or • NO₂ tube within 500 metres of site boundary is above 40 µg/m³ as an annual average 	Simple Air Quality Assessment
Major development application: 10-49 homes	<ul style="list-style-type: none"> • Outside an Air Quality Management Area (AQMA); and • No NO₂ tube within 500 metres of the site boundary above 40 µg/m³ as an annual average 	Simple Air Quality Assessment
	<ul style="list-style-type: none"> • Within an AQMA; or • NO₂ tube within 500 metres of site boundary is above 40 µg/m³ as an annual average 	Full Air Quality Assessment
Large scale major development application: More than 50 homes		Full Air Quality Assessment

Table 6.1: Thresholds for residential development

6.2 Commercial proposals will require a full Air Quality Assessment where a Transport Assessment is required and/or where they are above the thresholds set in Table 6.2 below.

Land Use	Threshold
General industrial (B2)	> 4,000 sq. m
Storage and distribution (B8)	> 5,000 sq. m
Hotels (C1)	> 100 bedrooms
Residential institutions (C2 and C2a)	> 50 beds
	> 150 students
	> 400 residents

Land Use	Threshold
Food retail (E(a))	> 800 sq. m
Non-food retail (E(a))	> 1,000 sq. m
Restaurants and cafes (E(b))	> 2,500 sq. m
Financial and professional services (E(c))	> 2,500 sq. m
Sports centres, gymnasiums, cinemas, theatres, other leisure facilities	> 1,500 sq. m
Medical or health facilities (E(e))	> 1,000 sq. m
Drinking establishments	> 600 sq. m
Hot Food Takeaways	> 500 sq. m
Office development (E(g))	> 2,500 sq. m
Learning and non-Residential Institutions (F1)	> 1,000 sq. m
Uses with over 100 car parking spaces	All
Significant Combustion Processes	A NO _x emission rate in excess of 5mg/second

Table 6.2: Thresholds for commercial developments

- 6.3** Where a planning application for a development is submitted without the required air quality assessment, it will not be validated.
- 6.4** Where proposals form a phase or part of a wider scheme or site allocation, the air quality assessment will need to be based on the capacity of the whole site, with the required mitigation contribution being calculated on a pro-rata basis.

7 Air Quality Assessments

7.1 There are two types of Air Quality Assessment – a simple assessment and a full assessment. The thresholds setting out which assessment is needed to support proposed developments are set out in Tables 6.1 and 6.2 above. Air Quality Assessments should be submitted to the council as part of the planning application.

Simple assessment

7.2 Applicants are expected to complete the standard template set out in Appendix A when undertaking a simple assessment.

7.3 A simple assessment should use information about air quality that is already published - it does not need input from a specialist air quality consultant. It should identify the development's proximity to AQMAs, the results of the NO₂ diffusion tubes nearest to the proposal and sensitive receptors such as schools and explain why the development will not have a detrimental impact on air quality.

Full assessment

7.4 A full air quality assessment should be carried out by a competent and qualified consultant and must provide sufficient information to allow a decision to be made.

7.5 There are three basic steps in an assessment:

- **Existing baseline** - Assess the existing air quality in the study area, notably the concentrations of nitrogen dioxide, particulate matter and the other sources of air pollution set out in Figure 1.1.
- **Future baseline** - Predict the future air quality without the development, taking into account the contribution of committed development.
- **With development** - Predict the future air quality with the development in place, taking into account any mitigation measures proposed by the applicant both on-site and off-site.

7.6 As stated in Section 6, proposals which form a phase or part of a larger development or site allocation need to be assessed on the capacity of the whole site.

7.7 The report prepared detailing the results of the assessment should contain the following information, with detailed guidance set out in Appendix B:

- Relevant details of the proposed development.
- The policy context for the assessment.
- Description of the relevant air quality standards and objectives.
- The basis for determining significance of effects arising from the impacts.
- Details of the assessment methods.
- Model verification.
- Identification of sensitive locations.
- Description of baseline conditions
- Assessment of impacts
- Description of construction phase impacts
- Cumulative impacts and effects.
- Mitigation measures
- Summary of the assessment results
- Proposal mitigation statement, if applicable

8 Financial contributions for off-site mitigation

- 8.1** Financial contributions for off-site mitigation measures will only be acceptable in exceptional circumstances. Where an applicant can robustly justify and evidence that on-site mitigation is not feasible or possible, the council will seek a financial contribution from the applicant as compensation for the identified air quality impacts, through a planning obligation (Section 106 agreement).
- 8.2** For major developments, particularly those in areas where there is the cumulative impact from a number of developments or where a significant air quality impact is likely, a damage cost calculation may be required as part of the air quality assessment. Damage costs are an estimation of the economic impact caused by the increased emissions of nitrogen dioxide (NO₂) and particulates from the new development.
- 8.3** Guidance on calculating damage costs, including an online toolkit, is available from [DEFRA](#). Applicants are expected to follow this guidance to calculate the net present value of the change in air pollution from your scheme.
- 8.4** The final damage costs will then be used to determine a proportionate contribution towards additional mitigation off-site.

9 Viability

- 9.1** Developments will normally only be approved in principle where they do not have an unacceptable impact on air quality. Therefore, where an applicant can demonstrate that air quality measures are resulting in the scheme being unviable, the council will expect the applicant to reconsider the proposals to see if a viable scheme can be achieved that will not have an unacceptable impact on air quality. Otherwise, the council will have no option but to refuse planning permission.

10 Possible measures to minimise air quality impact

10.1 Further to directing development to accessible locations, and adopting good design and the sustainability principles set out in Section 4, this section identifies a range of measures that could be considered as part of schemes, either on-site or off-site, to minimise their impact on air quality. This is not an exhaustive list but should provide applicants and developers with some good examples to help enable the delivery of acceptable and sustainable developments. It is important that applicants / developers incorporate appropriate measures which address the findings of Air Quality Assessments.

- Traffic reduction and / or management measures.
- Implementation of a robust Travel Plan aimed at encouraging modal shift to low carbon sustainable travel modes.
- Enhancing walkability and cyclability with safe and attractive links between developments and local services, public transport and recreation.



- Provision of secure cycle storage and associated changing facilities



- Tree planting
- Provision of street trees within the proposal and/or on nearby road corridors where transport will be generated from the development.
- Approved green screens at sensitive receptors



- Measures to control dust emissions from demolition, earthworks and construction activities – see the council’s guidance on [Construction Environmental Management Plans \(CEMPs\)](#)
- For commercial developments, all commercial vehicles should comply with current or the most recent European Emission Standards from scheme opening, to be progressively maintained for the lifetime of the development.
- Fleet operations should provide a strategy for reducing emissions, including the uptake of low emission fuels and technologies such as ultra-low emission service vehicles.



- Vehicle maintenance, driver training and emissions testing regimes for fleets of cars, lorries or buses associated with a development.

Appendix A Simple Air Quality Assessment template

1. General description of the area:
2. Is the development proposal within an AQMA? Link to AQMA map
Yes / No
3. Do the NO_x readings of any diffusion monitoring tube within 500 metres of the proposal site exceed 35 µg/m³ within the last two years? Please provide details of these readings, information can be found at http://cleanairgm.com/data-hub/diffusion-tubes
Yes / No
Details:
4. Is any part of the proposal site (the red edge) within 150 metres of sensitive receptors such as schools or hospitals?
Yes / No
Details:
5. If 'Yes' is answered to Questions 2, 3 and/or 4 please explain why the development will not have an unacceptable impact on air quality, including details of any mitigation measures that have been proposed.

Appendix B Undertaking a Full Air Quality Assessment

The report detailing the results of the Full Air Quality Assessment should contain the following information, but not necessarily in this order:

1. Relevant details of the proposed development, including:

- Any on-site sources of pollution and an overview of the expected traffic changes or the changes in emissions from the site for a specified year, e.g. the opening year or year the project is completed if phased.
- The presence of an AQMA if applicable and any nearby sources that may affect the local air quality.
- The proposed location of any sensitive receptors in relation to these nearby sources.
- An introduction to the pollutants and sources to be assessed and, if appropriate, those that have been scoped out of further assessment.

2. The policy context for the assessment, summarising the national and local policies that should be considered.

3. A description of the relevant air quality standards and objectives.

4. The basis for determining significance of effects arising from the impact, setting out the descriptors used for describing the severity of impacts, together with the basis for determining the significance of the effects arising from air quality impacts.

5. Details of the assessment methods, including the model (and version number) and the input data used for the assessment and any assumptions that have been made, including:

- The emission data and their source, with details where non-standard data are used.
- Source of the meteorological data, with a description of how representative they are of the conditions in the vicinity of the proposed development.
- Baseline pollutant concentrations.
- Background pollutant concentrations.
- Choice of baseline year.
- Basis for NO_x:NO₂ calculations.

6. Model verification. This will normally be expected for modelling of road traffic emissions but is not practicable for point-source modelling. It will be important where predicted concentrations are close to the objective. If verification is not done, then some justification or explanation will be required. Full details of the verification should be provided in the assessment.

7. Identification of sensitive locations, where people are likely to be exposed for the appropriate averaging time (dependent on the air quality objective being assessed against) such as:

- Residential and other properties close to and within the proposed development.
- Roads significantly affected by the development, even if well away from the development site, and especially if within AQMAs.

8. Description of baseline conditions, setting out the findings of any site visit(s) and/or desktop investigations, noting sources that may affect local air quality. This should include details of the monitoring locations, the monitoring method, sampling period, data capture and any adjustments applied to the data, such as diffusion tube bias adjustment factors. Reference should also be made to the background maps produced by Defra, together with any adjustments of these mapped values to take account of local monitoring

(but only where the monitoring is at true background sites). Reference should also be made to the Defra maps showing sections of road where the limit value is exceeded, as these represent the 'official' exceedances of the limit value, as reported to the European Commission. These maps are only available (at the time of writing) for 2013 and not for any future years.

9. Assessment of impacts, including:

- The modelling results of the 'with development' scenario clearly set out in tables and, where appropriate, as concentration contours on maps of the study area.
- Comparisons between the 'with development' and 'no development' scenarios with any differences in concentrations clearly tabulated.
- Descriptions of the impacts at the individual receptors, taking into account the absolute concentrations in relation to the air quality objectives (See Appendix C for further guidance).

10. Description of construction phase impacts. These will relate primarily to dust emissions, which give rise to dust soiling and elevated PM10 concentrations, although construction plant and vehicles may need assessment. This assessment should follow the guidance set out by the IAQM.

11. Assessment of cumulative impacts and effects, taking into account other planned developments in the area that have been granted planning consent. The impact of these committed schemes should be assessed cumulatively with those of the application site, with their contribution accounted for in the 'future baseline', provided that their contributions can be quantified.

12. Mitigation measures. Where a significant effect is identified then the measures to be employed to avoid, reduce and, where appropriate, offset this effect should be set out. Even where the effect is judged to be insignificant, consideration should be given to the application of good design and good practice measures, as outlined in Chapter 4.

13. Summary of the assessment results, including:

- Impacts during the construction phase of the development, usually on dust soiling and PM10 concentrations.
- Impacts on existing receptors during operation, usually on concentrations of nitrogen dioxide, PM10 and PM2.5.
- Impacts of existing sources on new receptors, particularly where new receptors are being introduced into an area of high pollution.
- Any exceedances of the air quality objectives arising as a result of the development, or any worsening of a current breach (including the geographical extent).
- Whether the development will compromise or render inoperative the measures within an Air Quality Action Plan, where the development affects an AQMA.
- The significance of the effect of any impacts identified.
- Any apparent conflicts with planning policy.

14. Proposal mitigation statement, including:

- The calculated damage cost (Major proposals).
- Proposed mitigation/compensation measures.
- Estimated mitigation cost (Major proposals) that is equivalent to the value of the emissions calculation (appropriate to the type and size of development and local policy requirements).
- A proposed demolition/construction management plan.
- A brief project description and likely sources of dust emissions.
- Measures to be adopted to minimise dust emissions.
- Emergency measures to be adopted in the event of unforeseen circumstances.
- Incident logging and reporting procedures.

Appendix C Assessment of impacts

C.1 As part of step 9 of the full air quality assessment, there is a two stage process to be followed:

- A qualitative or quantitative description of the impacts on local air quality arising from the development, as set out in Table C1; and
- A judgement on the overall significance of the effects of any impacts.

Long term average Concentration at receptor in assessment year	% Change in concentration relative to Air Quality Assessment Level (AQAL)			
	1	2-5	6-10	>10
75% or less of AQAL	Negligible	Negligible	Slight	Moderate
76-94% of AQAL	Negligible	Slight	Moderate	Moderate
95-102% of AQAL	Slight	Moderate	Moderate	Substantial
103-109% of AQAL	Moderate	Moderate	Substantial	Substantial
110% or more of AQAL	Moderate	Substantial	Substantial	Substantial

Explanation

1. AQAL = Air Quality Assessment Level, which may be an air quality objective, EU limit or target value, or an Environment Agency 'Environmental Assessment Level (EAL)'.
2. The Table is intended to be used by rounding the change in percentage pollutant concentration to whole numbers, which then makes it clearer which cell the impact falls within. The user is encouraged to treat the numbers with recognition of their likely accuracy and not assume a false level of precision. Changes of 0%, i.e. less than 0.5%, will be described as Negligible.
3. The Table is only designed to be used with annual mean concentrations.
4. Descriptors for individual receptors only; the overall significance is determined using professional judgement (see Chapter 7). For example, a 'moderate' adverse impact at one receptor may not mean that the overall impact has a significant effect. Other factors need to be considered.
5. When defining the concentration as a percentage of the AQAL, use the 'without scheme' concentration where there is a decrease in pollutant concentration and the 'with scheme,' concentration for an increase.
6. The total concentration categories reflect the degree of potential harm by reference to the AQAL value. At exposure less than 75% of this value, i.e. well below, the degree of harm is likely to be small. As the exposure approaches and exceeds the AQAL, the degree of harm increases. This change naturally becomes more important when the result is an exposure that is approximately equal to, or greater than the AQAL.
7. It is unwise to ascribe too much accuracy to incremental changes or background concentrations, and this is especially important when total concentrations are close to the AQAL. For a given year in the future, it is impossible to define the new total concentration without recognising the inherent uncertainty, which is why there is a category that has a range around the AQAL, rather than being exactly equal to it.

Table C1: Impact descriptors for individual receptors, IAQM

