GOV•UK

Guidance

Air quality

Provides guidance on how planning can take account of the impact of new development on air quality.

From: **Ministry of Housing, Communities and Local Government (/government/organisations/ministry-of-housing-communities-local-government)**, **Department for Levelling Up, Housing and Communities (/government/organisations/department-for-levelling-up-housing-and-communities)** and **Ministry of Housing, Communities & Local Government (2018 to 2021) (/government/organisations/ministry-of-housing-communities-and-local-government-2018-2021)**

Published 6 March 2014

Last updated 1 November 2019 —

Contents

— What air quality considerations does planning need to address?

— What is the role of plan-making with regard to air quality?

— Are air quality concerns relevant to neighbourhood planning?

— What information is available about air quality?

— When could air quality considerations be relevant to the development management process?

— What specific issues may need to be considered when assessing air quality impacts?

— How detailed does an air quality assessment need to be?

— How can an impact on air quality be mitigated?

1 November 2019: This guidance has been updated - see previous version (https://webarchive.nationalarchives.gov.uk/ukgwa/20190903135034/https://www.gov.uk/guidance/air-quality--3).

What air quality considerations does planning need to address?

The 2008 Ambient Air Quality Directive (https://eur-lex.europa.eu/eli/dir/2008/50/oj) sets legally binding limits for concentrations in outdoor air of major air pollutants that affect public health such as particulate matter (PM_{10} and $PM_{2.5}$) and nitrogen dioxide (NO_2).

The UK also has national emission reduction commitments for overall UK emissions of 5 damaging air pollutants:

- fine particulate matter ($PM_{2.5}$)
- ammonia (NH_3)
- nitrogen oxides (NO_x)
- sulphur dioxide (SO_2)
- non-methane volatile organic compounds (NMVOCs)

As well as having direct effects on public health, habitats and biodiversity, these pollutants can combine in the atmosphere to form ozone, a harmful air pollutant (and potent greenhouse gas) which can be transported great distances by weather systems. Odour and dust can also be a planning concern, for example, because of the effect on local amenity.

The Department for Environment, Food and Rural Affairs carries out an annual national assessment of air quality (https://uk-air.defra.gov.uk/air-pollution/) using modelling and monitoring to determine compliance with relevant Limit Values (https://environment.ec.europa.eu/topics/air_en). 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.

The local air quality management (LAQM) regime (https://laqm.defra.gov.uk/) requires every local authority to regularly review and assess air quality in their areas. Air quality is a devolved matter, and for England these reviews identify whether national objectives in the Air Quality (England) Regulations 2000 (https://www.legislation.gov.uk/uksi/2000/928/contents/made) have been, or will be, achieved by an applicable date.

If national objectives are not met, or at risk of not being met, the local authority concerned must declare an air quality management area (https://uk-

air.defra.gov.uk/aqma/) and prepare an air quality action plan. This identifies measures that will be introduced in pursuit of the objectives and can have implications for planning.

Air quality considerations may also be relevant to obligations and policies relating to the conservation of nationally and internationally important habitats and species. The Air Pollution Information System (https://www.apis.ac.uk/) and Natural England's 'Impact Risk Zones' tool (available on MAGIC (https://magic.defra.gov.uk/)) can help to determine the types of development proposal which can adversely affect these designated sites of special scientific interest and indicates when consultation with Natural England is required.

Paragraph: 001 Reference ID: 32-001-20191101

Revision date: 01 11 2019

What is the role of plan-making with regard to air quality?

All development plans can influence air quality in a number of ways, for example through what development is proposed and where, and the provision made for sustainable transport. Consideration of air quality issues at the plan-making stage can ensure a strategic approach to air quality and help secure net improvements in overall air quality where possible.

It is important to take into account air quality management areas (https://uk-air.defra.gov.uk/aqma/), clean air zones (https://www.gov.uk/government/publications/air-quality-clean-air-zone-framework-for-england) 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. Air quality is also an important consideration in habitats assessment, strategic environmental assessment and sustainability appraisal (https://www.gov.uk/guidance/strategic-environmental-assessment-and-sustainability-appraisal) which can be used to shape an appropriate strategy, including through establishing the 'baseline', appropriate objectives for the assessment of impacts and proposed monitoring.

Drawing on the review of air quality carried out for the local air quality management regime, plans may need to consider:

- what are the observed trends shown by recent air quality monitoring data and what would happen to these trends in light of proposed development and / or allocations;
- the impact of point sources of air pollution (pollution that originates from one place);

- the potential cumulative impact of a number of smaller developments on air quality as well as the effect of more substantial developments, including their implications for vehicle emissions;
- ways in which new development could be made appropriate in locations where air quality is or is likely to be a concern, and not give rise to unacceptable risks from pollution. This could, for example, entail identifying measures for offsetting the impact on air quality arising from new development including supporting measures in an air quality action plan or low emissions strategy where applicable; and
- opportunities to improve air quality or mitigate impacts, such as through traffic and travel management and green infrastructure provision and enhancement.

As part of the strategic environmental assessment or sustainability appraisal (https://www.gov.uk/guidance/strategic-environmental-assessment-and-sustainability-appraisal) of a plan, consideration will need to be given to potential trends in air quality in the presence and absence of development, as well as any impacts and mitigation / improvement opportunities arising from the plan's proposals.

Paragraph: 002 Reference ID: 32-002-20191101

Revision date: 01 11 2019

Are air quality concerns relevant to neighbourhood planning?

Air quality concerns can be relevant to neighbourhood planning (https://www.gov.uk/guidance/neighbourhood-planning--2), and it is important to consider whether air quality is an issue when drawing up a neighbourhood plan or considering a neighbourhood development order. The local planning and environmental health departments will be able to advise whether air quality is an issue that may need to be addressed in a neighbourhood area, and how this might affect potential policies and proposals that are being considered.

Paragraph: 003 Reference ID: 32-003-20191101

Revision date: 01 11 2019

What information is available about air quality?

In addition to the information on local air quality held by environmental health departments in local authorities, the Department for Environment, Food and Rural Affairs publishes information and there is a range of other

potential sources which can be drawn on, depending on the development and its proposed location.

Information published by Defra

- the UK Air Information Resource (UK-AIR) (https://uk-air.defra.gov.uk/), which contains information on historic and current air quality across the UK, including a GIS portal (https://uk-air.defra.gov.uk/data/gis-mapping) of Defra's national assessment against relevant Limit Values and air quality management areas;
- air quality management area records (https://uk-air.defra.gov.uk/aqma/) and modelled background pollution concentrations (https://uk-air.defra.gov.uk/data/pcm-data);
- the National Atmospheric Emissions Inventory (https://naei.beis.gov.uk/) for emissions of air pollution including maps at a 1km by 1km resolution for a wide range of pollutants;
- the Pollutant and Release Transfer Register (https://www.gov.uk/guidance/uk-pollutant-release-and-transfer-register-prtr-data-sets), which has links to emissions from installations permitted under the Environmental Permitting Regulations, which is useful for point sources;
- the Clean Air Strategy (https://www.gov.uk/government/publications/clean-air-strategy-2019) sets out actions for dealing with 5 major sources of air pollution. A detailed National Air Pollution Control Programme (https://www.gov.uk/government/publications/air-quality-uk-national-air-pollution-control-programme) was published by the Department for Environment, Food and Rural Affairs in April 2019.

Other sources of information

- the Environmental Pollution Incident dataset (https://www.data.gov.uk/dataset/c8625e18-c329-4032-b4c7-444b33af6780/environmental-pollution-incidents-category-1-and-2) published by the Environment Agency, which has information about pollution incidents and sites registered under the Environmental Permitting Regulations (https://environment.data.gov.uk/public-register/view/index);
- information about the impact of air quality on habitats and species (including critical loads and levels) held by the Air Pollution Information System (http://www.apis.ac.uk/). This has been developed in partnership by the UK conservation agencies and regulatory agencies and the Centre for Ecology and Hydrology;
- the sustainability appraisal or habitats assessment informing strategic planning policies and whether these required an Air Quality Assessment;

- recent environmental statements that may include updated baseline assessments.

Paragraph: 004 Reference ID: 32-004-20191101

Revision date: 01 11 2019

When could air quality considerations be relevant to the development management process?

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.

Where air quality is a relevant consideration the local planning authority may need to establish:

- the 'baseline' local air quality, including what would happen to air quality in the absence of the development;
- whether the proposed development could significantly change air quality during the construction and operational phases (and the consequences of this for public health and biodiversity); and
- whether occupiers or users of the development could experience poor living conditions or health due to poor air quality.

The steps a local planning authority might take in considering air quality are set out in this flow diagram.

Flowchart (https://assets.publishing.service.gov.uk/media/5daee79aed915d42a3e43a34/Air_Quality_flowchart.pdf)

PDF, 105 KB, 1 page

This file may not be suitable for users of assistive technology.

▶ Request an accessible format.

It is important that applicants engage early on with the local planning and environmental health departments (https://www.gov.uk/guidance/before-

submitting-an-application) to establish the need and scope of any assessment to support an application.

For large and complex industrial processes, the Environment Agency should also be able to help by identifying:

- if an environmental permit (https://www.gov.uk/topic/environmental-management/environmental-permits) is also required before the proposed development can start operating;
- if there are any significant air quality issues that may arise at the permitting stage (so there are 'no surprises'); and
- whether there are any special requirements that might affect the likelihood of getting planning permission (such as the height of chimneys).

Environment Agency guidance – Developments requiring planning permission and environmental permits (https://www.gov.uk/government/publications/developments-requiring-planning-permission-and-environmental-permits) – provides advice on aligning the planning and permitting processes to address these issues efficiently and aid faster decision making.

Paragraph: 005 Reference ID: 32-005-20191101

Revision date: 01 11 2019

What specific issues may need to be considered when assessing air quality impacts?

Considerations that may be relevant to determining a planning application include whether the development would:

- Lead to changes (including any potential reductions) in vehicle-related emissions in the immediate vicinity of the proposed development or further afield. This could be through the provision of electric vehicle charging infrastructure; altering the level of traffic congestion; significantly changing traffic volumes, vehicle speeds or both; or significantly altering the traffic composition on local roads. Other matters to consider include whether the proposal involves the development of a bus station, coach or lorry park; could add to turnover in a large car park; or involve construction sites that would generate large Heavy Goods Vehicle flows over a period of a year or more;
- Introduce new point sources of air pollution. This could include furnaces which require prior notification to local authorities; biomass boilers or biomass-fuelled Combined Heat and Power plant; centralised boilers or plant burning other fuels within or close to an air quality management

area or introduce relevant combustion within a Smoke Control Area (https://www.gov.uk/smoke-control-area-rules); or extraction systems (including chimneys) which require approval or permits under pollution control legislation;

- Expose people to harmful concentrations of air pollutants, including dust. This could be by building new homes, schools, workplaces or other development in places with poor air quality;
- Give rise to potentially unacceptable impacts (such as dust) during construction for nearby sensitive locations;
- Have a potential adverse effect on biodiversity, especially where it would affect sites designated for their biodiversity value.

Paragraph: 006 Reference ID: 32-006-20191101

Revision date: 01 11 2019

How detailed does an air quality assessment need to be?

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. The scope and content of supporting information is best discussed and agreed between the local planning authority and applicant before it is commissioned.

It is not necessary for air quality assessments that support planning applications to duplicate aspects of air quality assessments that will be done as part of non-planning control regimes, such as under Environmental Permitting Regulations. Air quality is a consideration in Environmental Impact Assessment (https://www.gov.uk/guidance/environmental-impact-assessment), if one is required, and also in a Habitats Regulations Appropriate Assessment (https://www.gov.uk/guidance/appropriate-assessment).

The following could form part of assessments:

- a description of baseline conditions and any air quality concerns affecting the area, and how these could change both with and without the proposed development;
- sensitive habitats (including designated sites of importance for biodiversity);
- the assessment methods to be adopted and any requirements for the verification of modelling air quality;

- the basis for assessing impacts and determining the significance of an impact;
- where relevant, the cumulative or in-combination effects arising from several developments;
- construction phase impacts;
- acceptable mitigation measures to reduce or remove adverse effects; and
- measures that could deliver improved air quality even when legally binding limits for concentrations of major air pollutants are not being breached.

Paragraph: 007 Reference ID: 32-007-20191101

Revision date: 01 11 2019

How can an impact on air quality be mitigated?

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. Planning conditions (https://www.gov.uk/guidance/use-of-planning-conditions) and obligations (https://www.gov.uk/guidance/planning-obligations) can be used to secure mitigation where the relevant tests are met.

Examples of mitigation include:

- maintaining adequate separation distances between sources of air pollution and receptors;
- using green infrastructure, in particular trees, where this can create a barrier or maintain separation between sources of pollution and receptors;
- appropriate means of filtration and ventilation;
- including infrastructure to promote modes of transport with a low impact on air quality (such as electric vehicle charging points);
- controlling dust and emissions from construction, operation and demolition; and
- contributing funding to measures, including those identified in air quality action plans and low emission strategies, designed to offset the impact on air quality arising from new development.

Paragraph: 008 Reference ID: 32-008-20191101

Revision date: 01 11 2019

Published 6 March 2014
Last updated 1 November 2019 + show all updates

All content is available under the Open Government Licence v3.0, except where otherwise stated

© Crown copyright