



Planning for Air Quality

**A good practice guide for
Planners and Developers**

May 2013

PLANNING GUIDE FOR AIR QUALITY

1. Introduction

Everyone has a right to live, work and relax in a healthy environment which includes having good quality air to breathe. Air quality is a measure of how good our air is in terms of the pollution contained within it. Good air quality is an important factor in protecting people's health.

The Roger's Review of 2007 lists Air Quality as one of the top five issues of concern in the UK. It indicates that air quality is a high national political priority as it impacts on whole populations, particularly the young and elderly as well as those with pre-existing health conditions. Evidence suggests that poor air quality is a major cause of premature death in the UK with around 29,000 occurring annually.

Air pollution can arise from many sources and activities, including traffic and transport, industrial processes, energy generation, agriculture and waste storage & treatment. Within Cheltenham the primary local impacts are from road transport, with additional small contributions from domestic, commercial and industrial heating sources.

Cheltenham Borough Council is committed to improving air quality within its area through national and local planning policy and through compliance with requirements under Part IV of the Environment Act 1995. Cheltenham Borough Council declared the Borough as an Air Quality Management Area in November 2011 due to elevated levels of nitrogen dioxide at several locations in the town.

The planning system controls the development and use of land in the public interest. It plays an important role in determining the location of development which may give rise to pollution and in ensuring that other developments, as far as possible, are not affected by major existing, or potential sources of pollution.

Air quality is a material planning consideration in determining planning applications.

This document provides guidance on how air pollution and air quality issues will be dealt with through the planning system and what developers will be required to do in order to ensure good air quality is maintained. It has the following objectives;

- To set out the policy framework
- To ensure that air quality is considered appropriately in the decision making process
- To set out those development proposals which are likely to require an air quality assessment (AQA)
- To provide guidance on the contents of an AQA
- To set out the Council's approach to the use of planning conditions and Section 106 agreements or Community Infrastructure Levies (CILS) with respect to air quality

It is important to remember that Air Quality must be assessed prior to submission of a planning application. Early consultation with Cheltenham Borough Council is therefore recommended to avoid delay in the planning process.

2. Overview of National Air Quality Planning Policy

Up until the introduction of the National Planning Policy Framework (NPPF) in 2012, Planning Policy Statements (PPS's) set out the Government's core policies and principles on the most important aspects of land use planning. The majority of PPS's have now been replaced by the NPPF, however those that were relevant to air quality policy have been referred to below by way of background;

PPS1 – Delivering Sustainable Development

This planning policy statement set out objectives for the planning system regarding air quality. In particular, it stated that policies should take account of environmental issues such as air quality and pollution. PPS1 also contained guidance on general principles for pollution issues, which included:

- Significant adverse impacts on the environment should be avoided and alternative options should be pursued
- The polluter pays principle should be employed
- The causes and impacts of pollution should be addressed

PPS12 – Local Development Frameworks

This policy stated that land-use planning is integral to improving air quality and that local authorities should take the national air quality objectives into consideration in their preparation.

Planning Policy Guidance 13 – Transport

This guidance stated that local authorities should;

- Actively manage the pattern of urban growth
- Ensure that day to day facilities are in accessible locations for pedestrians and cyclists
- Ensure that housing, work and retail are in accessible locations for pedestrians, cyclists and public transport
- Use parking policies to promote sustainable travel choices
- Prioritise people over traffic, improving road space for pedestrians, cyclists and public transport

PPS23 – Planning and Pollution Control

This planning policy statement set out the importance of considering air quality at an early stage in the application process and gave guidance on what pollution issues should be considered when preparing local development documents and deciding individual planning applications.

In addition the following planning regulations and strategy are relevant to air quality in the planning context;

Town and County Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999

Certain types of development listed in the above regulations require an environmental impact assessment to be submitted, which may include an assessment on air quality and the impacts of the development in future air quality.

National Air Quality Strategy

The national air quality strategy sets out the objectives for air quality in the UK and describes the arrangements for securing clean air through a range of measures. The relevant planning processes are summarised and links are made to other national planning guidance.

THE NATIONAL PLANNING POLICY FRAMEWORK

The National Planning Policy Framework introduced in 2012 sets out the Government's planning policies for England and how these are expected to be applied by local planning authorities.

The National Planning Policy Framework must be taken into account in the preparation of local and neighbourhood plans, and is a material consideration in planning decisions. There are several paragraphs contained within the document which are relevant to air quality in a planning context and include the following;

Paragraph 109

This paragraph outlines the need for Planning Policy to prevent both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, **air**, water or noise pollution or land instability.

Paragraph 124

This paragraph states that Planning Policies should sustain compliance with and contribute towards EU limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and the cumulative impacts on air quality from individual sites in local areas. Planning decisions should ensure that any new development in Air Quality Management Areas is consistent with the local air quality action plan.

Paragraph 152

This paragraph states that Local planning authorities should seek opportunities to achieve each of the economic, social and environmental dimensions of sustainable development, and net gains across all three. Significant adverse impacts on any of these dimensions should be avoided and, wherever possible, alternative options which reduce or eliminate such impacts should be pursued. Where adverse impacts are unavoidable, measures to mitigate the impact should be considered. Where adequate mitigation measures are not possible, compensatory measures may be appropriate.

The National Planning Policy Framework also contains paragraphs specific to planning applications which are likely to have significant transport implications (and hence air quality impacts). The aims of the paragraphs are to;

- reduce car usage and increase use of public transport, walking and cycling;
- reduce traffic speeds and improved road safety and personal security particularly for pedestrians and cyclists
- improve and increase environmentally friendly delivery and freight movements, including home delivery services

Paragraph 32

All developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment.

Paragraph 34

Plans and decisions should ensure developments that generate significant movement are located where the need to travel will be minimised and the use of sustainable transport modes can be maximised.

Paragraph 35

Plans should protect and exploit opportunities for the use of sustainable transport modes.

Paragraph 36

All developments that generate significant amounts of movement should be required to submit a Travel Plan.

3. Overview of local Air Quality Planning Policy

Cheltenham Local Plan

Cheltenham Borough Council is in the process of developing a new Local Plan. This Plan will set out the strategic priorities for development of the area and cover housing, commercial, public and private development, including transport infrastructure, along with protection of the local environment.

Within the Local Plan there will be specific reference to air quality as a material planning consideration, details of the Council's policies on air quality and the measures that will need to be taken by developers to demonstrate the impact of their development on air quality together and any mitigation that may be required. It is intended that this guide will be referred to within any Council air quality policies. Proposed policies within the Local Plan will be subject to full public consultation and stakeholder engagement prior to adoption.

There are also a number of other local strategies and policies which refer to air quality and the promotion of sustainable development.

Sustainable Community Strategy

The results of the consultation confirmed that Cheltenham is regarded as a good place to live, and that the future should be about pushing the boundaries and improving standards. The consultation identified the following key issues where local people and groups want more coordinated and concerted action:

- Action to improve and protect Cheltenham's environmental quality.

We need to resolve the dilemma of providing adequate and affordable parking and access for our residents and visitors on the one hand, while working to reduce traffic flows through the town centre on the other hand. This will require a greater emphasis being placed on sustainable transport and more effective traffic management.

New developments will need to be supported by both new transport infrastructure and improvements to existing infrastructure with an emphasis on a shift from the private car to public transport, walking and cycling.

Local Transport Plan (LTP3) 2011-2026

The vision of Gloucestershire County Council is to 'Provide a safe and sustainable transport network within Gloucestershire'. Gloucestershire's Local Transport Plan 2011-2026 (LTP3) was adopted and came into effect on 1st April 2011.

[Policies to promote a Greener, Healthier Gloucestershire](#)

Policy P5e - Through the planning process, developers and scheme promoters will be required to undertake assessments to determine if their development or scheme will be subject to or create poor air quality or noise in excess of the thresholds as advised by Government and to commit to mitigating those effects.

Policy P5f - Travel plans will be required for new development in accordance with the thresholds in the Department for Transport's "Guidance on Transport Assessment". Where a development is deemed to require a travel plan, a legal agreement or a unilateral undertaking will be the mechanism used to secure the development of the travel plan and any contributions required to support its implementation.

Cheltenham has been included within the Central Severn Vale (Gloucester, Cheltenham and surrounds) (CSV) Strategy. This strategy comprises of 46 schemes to tackle the headline issues of;

- Traffic congestion at peak times
- Road maintenance
- Access to rail services
- Variable quality of bus services.

The full Central Severn Vale Transport Study is available to view at; www.gloucestershire.gov.uk/ltp3

4. The Council's approach

Air quality is a material consideration in determining planning applications in Cheltenham and will be considered according to policies stated in the Cheltenham Local Plan (ref: tbc). Cheltenham Borough Council considers that the planning system has a key role in protecting people from unacceptable health effects from air pollution and in providing adequate protection to the amenity value of land.

These considerations must, however, be balanced against other aims of the planning system such as to secure continuing economic growth and to provide adequate levels of housing. The aim is to have sustainable development in Cheltenham that achieves the best balance of social, economic and environmental considerations. However, with the considerable housing growth anticipated in the coming years, careful consideration of air quality at the planning stage is vital to prevent further deterioration of air quality in Cheltenham.

There are two types of development that are likely to raise issues regarding air quality. The first type is a polluting development. This refers to new developments, which give rise to significant additional emissions of air pollutants or otherwise cause air quality to get worse, e.g., a housing development with parking or a new supermarket that will increase the volume of traffic on the local road network.

The second type is a low polluting sensitive development. These developments do not give rise to significant additional emissions of air pollutants but may introduce additional people to areas subject to poor air quality or high levels of air pollution, e.g., a car free development located next to a busy road.

5. What the Developer needs to do

When an owner or developer is proposing to develop land, it will be necessary to contact the Council to discuss air quality issues before submitting a planning

application. Advice will be given on what should be submitted and early liaison will minimise costly delays and misunderstandings at a later stage in the development process.

Consideration of air quality will be relevant during both the construction and operational phases of a proposed development.

Where air quality is likely to be a significant issue and an air quality assessment is required, developers are advised to enter into early pre-application discussions with the Borough Council to agree the approach to be taken. If monitoring data is likely to be required, developers should be aware that this is likely to be acquired over a number of months. The Council routinely monitors and assesses air quality in the Borough as part of its statutory responsibility under Part IV of the Environment Act 1995. This information is available for developer's use, as are the results of recent reviews and historic annual data summaries (up to the previous calendar year) on the Council's website www.cheltenham.gov.uk.

Also, if a development is likely to generate significant additional traffic flow, air quality modelling will be required.

6. The need for an Air Quality Assessment

An air quality assessment (AQA) will be required where a significant change in air quality is possible as a result of a planned development. This change comprises both construction and operational air quality impacts in addition to new exposure. The criteria for determining whether or not an AQA is required for a particular development will be based upon such factors as size of the development, predicted traffic flows and its location relative to any Air Quality Management Area (AQMA) and areas of elevated pollution levels.

Cheltenham Borough Council has declared an AQMA which covers the whole Borough. This boundary was declared due to a number of specific locations within the Borough where poor air quality was recorded and national pollution limits exceeded. However it does not mean that the entire Borough suffers from poor air quality. A development within the AQMA does not necessarily mean that it will be affecting an area of pollution exceedance or it is being affected by excessive pollution. However, in general, the larger the size of development within the Borough and the nearer it is to an existing area of pollution exceedance, the more likely that an air quality assessment will be required.

It is also important to balance the requirements for an air quality assessment with all aspects of a development within an AQMA, such as socio-economic benefits, car travel impacts and the potential for reducing greenhouse emissions.

In all cases professional judgement by the relevant technical air quality officer will be required to determine whether or not a development proposal requires an air quality assessment. In this regard, all proposed development plans will be screened by the air quality officer and responses sent to the relevant planning officer at an early pre-application consultation phase. The list below, although not exhaustive, indicates those development proposals which are likely to require an air quality assessment;

- Proposals that will result in increased congestion, a change in either traffic volumes or a change in vehicle speed, or both on busy roads with greater than 10,000 vehicles per day.
- Proposals that will lead to a change in traffic volume of 1% Annual Average Daily Traffic (AADT)
- Proposals that would significantly alter the traffic composition in an area to a greater proportion of HGV's or buses?
- Proposals that are classed as a sensitive development e.g. healthcare, school and childcare and are near to areas of known elevated pollution levels.
- Proposals that include new car parking (>25 spaces).
- Proposals that include biomass boilers or biomass fuelled CHP plant.
- Proposals that by themselves are not likely to be significant but when considered in combination with other schemes may result in a significant increase in air pollution levels.
- Proposals that interfere with the air quality actions as set out in the Local Transport Plan or the Council's Air Quality Action Plan

If one or more of these criteria are met an air quality assessment is likely to be required and further guidance should be sought from the relevant technical officer.

Certain types of proposed development will automatically be required to consider air quality under the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999. The Council can offer an opinion on whether a full assessment is likely to be required. Some industrial developments will also require an Environmental Permit to operate.

For sensitive developments that will introduce people into the AQMA (e.g. schools, residential, care homes) the air quality assessment should evaluate the exposure to key pollutants. The key pollutant in Cheltenham is Nitrogen Dioxide (NO₂). For developments that may introduce significant emissions that are within the AQMA the assessment should calculate the effect of these emissions on ambient concentrations of key pollutants at relevant receptors (usually the façade of residential property) and propose suitable mitigation.

The table below illustrates the air quality screening process for applications:

Development Category	Development within the AQMA
Minor works	No action required
Small residential development	Consult EP&L team
Medium/large residential development (>100 dwellings or 10k m ² floor space)	Assessment required – consult EP&L team
Small industrial including biomass/CHP rated at >200kW	Assessment required – consult EP&L team
Major commercial development (e.g. superstore)	Assessment required – consult EP&L team
Industrial development requiring Environmental Permit registration	Assessment required – consult EP&L team

7. Content of an Air Quality Assessment

This guidance document does not set out a prescribed method for conducting an air quality assessment and the content of an assessment, since this will vary according to the type of development and latest recognised best practice. It is important that an appropriate methodology and datasets are agreed with the Council before an air quality assessment is undertaken. Current detailed guidance on conducting an air quality assessment is available in the EPUK publication '*Development Control: Planning for Air Quality (2010)*' and in the DEFRA *Technical Guidance LAQM. TG(09)*

The intent of an air quality assessment is to demonstrate the likely changes in air quality or exposure to air pollutants as a result of a proposed development. The planning authority has to use this information to decide the 'significance' of the air quality impacts and hence the priority that should be given to air quality concerns in determining the planning application.

The basis of the assessment should follow these three steps;

- Assess the existing air quality in the study area (existing baseline)
- Predict the future air quality without the development (future baseline)
- Predict the future air quality with the development in place (with development)

The council can assist with provision of data for the first step although it is expected that the developer will employ a recognised consultant to undertake detailed modelling of predicted traffic flow and emissions to enable future air quality to be predicted.

The air quality assessment report will normally be required to contain the following;

- Relevant details of the proposed development, traffic changes & emissions
- Policy Context
- Description of the relevant air quality standards and objectives
- Details of the assessment methods, model and data used
- Model verification
- Identification of sensitive local receptors, such as residential properties
- Description of baseline conditions
- Assessment of impacts
- Description of construction phase impacts
- Mitigation measures
- Summary of assessment results to include the following;
 - Impacts during construction phase
 - Impacts during operation
 - Any exceedance of the air quality objectives due to development
 - How the development will affect measures within any Air Quality Action Plan
 - Significance of the impacts identified
 - Any conflicts with planning policy

Prior to conducting an air quality assessment, agreement should be reached between the planning authority and the person undertaking the assessment, on the appropriate datasets and methods to be used. It may also be necessary to undertake a period of air quality monitoring as part of the assessment where new relevant exposure is possible and where there is currently no data.

8. Assessing an air quality assessment

Once an air quality assessment has been received by the local authority, it will be reviewed based on the following three criteria;

- Whether the assessment report contains all the information needed
- Whether an appropriate assessment has been undertaken, and
- Whether the conclusions are consistent with the assessment results

Where relevant expertise is not available within the local authority, then the need for an external peer review will be considered. At the conclusion of this process, the planning authority should be adequately informed as to the air quality impacts expected to arise from a particular development proposal together with the appropriate mitigation required to off-set any potential impacts.

Assessing Significance of Air Quality Impacts

The main requirement of an air quality assessment will be to describe significance in terms of the change in concentration of a specific pollutant and the absolute concentration after the change in relation to air quality guidelines. For many developments, especially those including residential accommodation, the significance of the following impacts should be described separately;

- Impacts of emissions related to the development on existing receptors
- Impacts of emissions from surrounding sources on new exposure being introduced within the development

The local planning authority will carry out its own evaluation of the significance of the air quality impacts of any new development that has required an air quality assessment to be carried out.

The EPUK Guidance (Development Control: Planning for Air Quality 2010) provides a flow chart which recommends the steps the Local Authority should take to assess the significance of a development proposal. The evaluation should also take into account how the impacts relate to the requirements of any local air quality policies. There are several factors to judge overall significance including;

- Number of properties affected by slight, moderate or major air quality impacts
- Where new exposure is being introduced, the number of people exposed to levels above the objective limit
- The magnitude of the changes and the descriptions of the impacts
- Whether or not an exceedance of an air quality limit is predicted to arise where none existed before or an exceedance area is substantially increased
- Whether or not the study area exceeds an air quality limit value and this exceedance is removed or the exceedance area is reduced
- Uncertainty
- The extent to which an air quality limit is exceeded

The exercise of professional judgement by both the organisation preparing the air quality assessment and the local authority, when they evaluate the findings, is an important part of the assessment of significance. At the conclusion of the process the appropriate officer will need to report the findings to the planning officer who will take all matters into account in making a recommendation for approval or refusal of the planning application and for any planning obligations or conditions.

9. Cumulative Impacts and Mitigation

Cumulative impacts on air quality can occur when developments are permitted which each have a relatively low polluting potential but which cumulatively result in a significant worsening of air quality. It is therefore important to ensure that the potential for cumulative impacts is properly addressed at a strategic level to avoid 'background creep' through adoption of guidance such as this good practice guide which will ensure a more rigorous approach is taken on air quality protection.

One approach to dealing with the cumulative impacts of small developments is through the preparation of a Low Emission Strategy which would be designed to increase the uptake of low emission fuels and technology in and around development sites. With such a Strategy in place, it would be possible to establish a low emission fund to support a variety of projects to which developers would contribute.

The types of measures proposed by developers to improve air quality will depend on the nature and scale of the development. Where the proposal is for a small number of new residential units, it would be reasonable to examine design and ventilation arrangements to reduce the impact of the external environment on occupants of the building. Where the proposed development is larger and the impact on air quality greater, then more measures should be considered, such as improvements in public transport and funding for traffic measures.

The presence of an AQMA should not halt all development but where development is permitted, the planning system should ensure that any air quality impacts are minimised as far as practicable so that developments become 'air quality neutral' or preferably 'air quality beneficial'

Example approaches to address AQ issues.

1. Redesign

- Car free development
- Reduced car parking provision
- Remove populated spaces away from busy roads
- Arrange site to separate polluting and sensitive uses
- Arrange site to centrally locate trip attractors
- Streetscape design to ensure that cars are not the dominant mode of travel
- Design in walking and cycling routes and/or upgrade existing routes and provision of facilities for walkers and cyclists
- Plan mixed-use developments where appropriate as well as provision of community facilities
- Consider Home Zones
- Consider impact on local road network
- Avoid creation of non-dispersive canyons
- Develop communal combined heat and power
- Solar water heating
- Improved building insulation (above current regulations)

2. Mitigation

- Provide car share scheme
- Travel planning – residential and commercial developments
- Welcome pack with information of public transport routes/times etc, walking and cycling routes

- Restricted speed

3. Offset – S106 agreements

- Financial contribution towards traffic management measures
- Financial contribution towards improvements in public transport (this could include increased frequency of service/extended hours/low emission vehicles etc)
- Financial incentives to encourage public transport use
- Financial contribution towards improvements in walking and cycling facilities

10. Planning Obligations and Conditions

In order to tackle the air quality impacts that may arise from a development, the Council may also use planning conditions or obligations (Section 106 agreements). Planning obligations can involve a financial contribution to either an Air Quality Action Plan or funding of a Low Emission Strategy or by means of unilateral undertakings such as;

- Measures during the construction of new development including dust control, site monitoring and plant emissions;
- The introduction of new or improved public transport;
- The provision of on and off site facilities for cycling and walking;
- The management of car parking;
- Traffic management;
- Road infrastructure;
- Green Travel Plans;
- Monitoring of air pollution.

Conditions or obligations should be reasonable in relation to both the scale of the development and its impacts. The basis for calculation of contributions to mitigation measures should be transparent. For example, the Council may adopt a standard charge for development schemes of 10 dwellings or more and commercial schemes greater than 500m².

Conditions to mitigate the impact of construction activities on site will also be required to prevent excessive dust and emissions during site development.

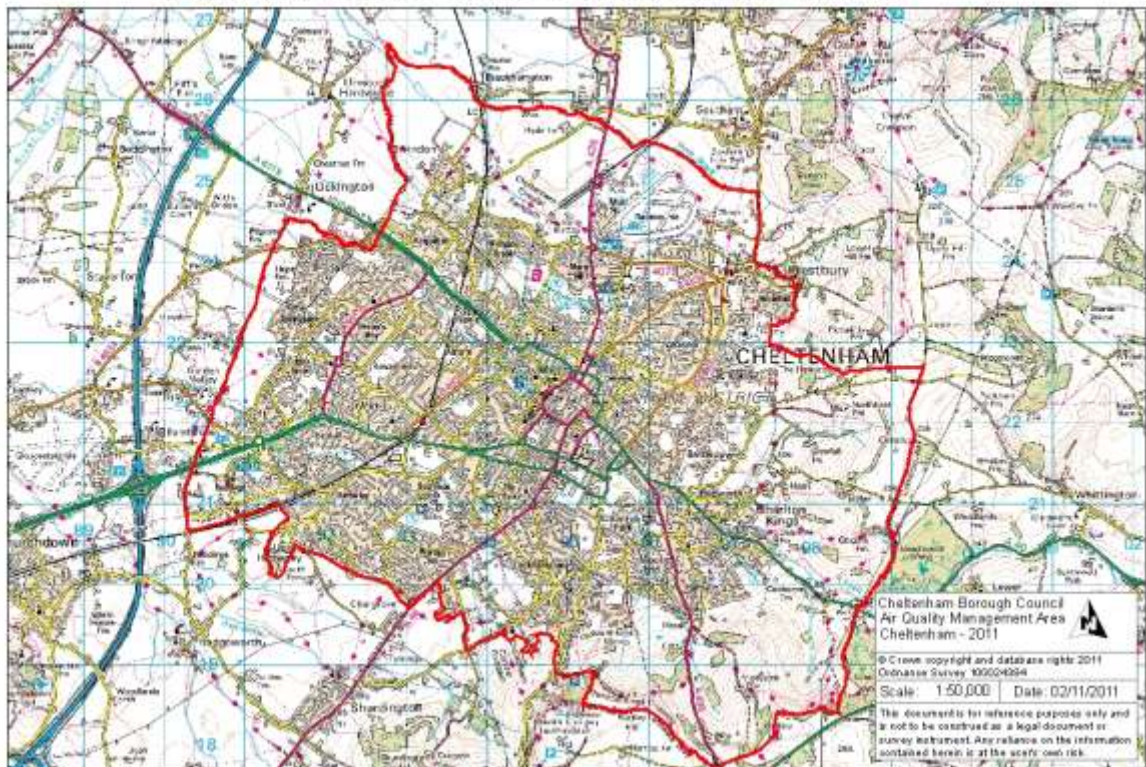
Air quality concerns should be addressed as early as possible in the development control process.

Community Infrastructure Levy (CIL)

The Community Infrastructure Levy was introduced as an alternative to Sec106 planning obligations. It provides a simpler, fairer and more transparent system of standard charges to unlock additional funding for infrastructure and respond to the needs of local communities. CBC is currently considering implementing a formal CIL policy.

The Community Infrastructure Levy could help to encourage more sustainable patterns of travel, for example, by providing the infrastructure to facilitate more journeys by foot and cycle. Additionally, funds could be attributed for on going air quality monitoring infrastructure required as a result of a development.

New Air Quality Management Area for Cheltenham 2011



On the basis that the AQMA covers all of Cheltenham Borough, all significant developments will need to consider air quality as part of their application procedure and where developments are in close proximity to areas of pollution exceedance, then an air quality assessment will always be required.