Planning Protocol

for Herefordshire & Worcestershire

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1 Introduction

1.1 This Air Quality and Planning Protocol is intended to support local planning decision-making in respect to all future developments within the local authorities of Herefordshire and Worcestershire, and to ensure a consistent process is used to asses the likely impact of development on local air quality.

1.2 The Protocol begins with an introduction to the context of air quality and planning. The document then goes on to discuss requirements for air quality assessments (when are they required and what they should include) and how the outcomes of the air quality assessment should be interpreted. There is also a section on control of dust and emissions from construction and a section on mitigating impacts.

1.3 A number of guidance documents have been used in the preparation of this protocol, in particular the NSCA[1] 'Development Control: Planning for air quality' document, which has been adapted for local use within this document, and the GLA guidance on 'The control of dust and emissions from construction and demolition: Best Practice Guidance'. Links to these and other useful documents have been included in Appendix 4.

[1] National Society for Clean Air – now renamed Environmental Protection UK (EPUK)

2 Context of Air Quality and Planning

Local Air Quality Management Policy Background

2.1 The local air quality management process in the UK is legislated through the Environment Act 1995 (Part IV). The Environment Act puts a requirement on the Secretary of State to publish an Air Quality Strategy, which was initially published in 1997[2], and more recently revised in 2007[3]. The National Strategy establishes a set of health-based objectives for local air quality management for seven pollutants as follows:

- Nitrogen dioxide (NO_2) (annual mean, hourly mean)
- Fine particulate matter (PM_{10}) (annual mean, daily (i.e. 24-hour) mean)
- Sulphur dioxide (SO_2) (daily mean, hourly mean, 15-minute mean)
- Carbon Monoxide (CO) (running 8-hour mean)
- Benzene (running annual mean)
- 1,3-butadiene (running annual mean)
- Lead (Pb) (annual mean)

2.2 The various objectives associated with different pollutants are dependant upon the type of health impact resulting from exposure to them. Some pollutants have long-term health impacts, and so there are annual mean objectives ascribed to them (e.g. nitrogen dioxide and PM_{10}). Other pollutants have short-term health impacts, and so short-term objectives are ascribed (e.g. 15-minute mean objective for sulphur dioxide and the 1-hour mean objective for nitrogen dioxide). The current air quality objectives relevant for Local Air Quality Management are included in Appendix 1.

2.3 The averaging period of the objective influences the locations where public exposure is considered relevant, and therefore the significance for planning developments or proposals. Further guidance on the application of air quality objectives is set out in policy guidance[4] and technical guidance[5] for local authorities on Local Air Quality Management. It should be noted that these guidance documents are currently being updated and are likely to be superseded by the end of 2008.

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2 Department of the Environment and the Scottish Office (DoE) 1997. The United Kingdom National Air Quality Strategy. CM3587. The Stationery Office, London.

3 Department of Environment, Food and Rural Affairs (Defra) 2007. National Air Quality Strategy, http://www.Defra.gov.uk/environment/airquality/strategy/

4 Department of Environment, Food and Rural Affairs Defra, 2003. Local Air Quality Management Policy Guidance, LAQM.PG(03).

5 Department of Environment, Food and Rural Affairs Defra, 2003. Local Air Quality Management Technical Guidance LAQM.TG(03).

2.4 Guidance document TG(03) provides clarification on locations defined as relevant receptors. Residential properties, schools, hospitals and other such premises should be considered with respect to pollutants with long-term objectives. Relevant locations where the short-term objectives should be considered are more wide-ranging, and may include any location where members of the public have access for the averaging time in question.

2.5 Where objectives are not likely to be achieved at relevant locations, local authorities must declare an Air Quality Management Area (AQMA), following which there is a requirement to undertake a Further Assessment and prepare and implement an Action Plan, setting out how air quality will be improved.

2.6 The UK Air Quality Strategy published in 2007 introduces the concept of exposure reduction for fine particulate matter ($PM_{2.5}$) which does not exhibit a threshold for effect (i.e. there is no recognised safe level for exposure). The exposure reduction approach is designed to be a more cost-effective way of achieving reductions in the health effects of air pollution by providing a driver to improve air quality everywhere in the UK rather than just in hotspot areas. It is an objective focused on reducing average exposures across the most heavily populated areas of the country, and is not directly applicable to individual developments. The exposure reduction approach is supplemented by a 'backstop objective' or 'concentration cap' to ensure a minimum standard of protection for the whole population. It should be noted that these objectives have not been included in Regulations for the purpose of LAQM. however, they are included within the recent 'Clean Air for Europe' Directive[6] and therefore will need to be considered within Environmental Statements under the EIA Regulations.

Air Quality Management in Herefordshire and Worcestershire

2.7 All local authorities have a duty to assess air quality periodically across their Districts, and to report on the findings. Information on air quality is published regularly through reports, which are provided on Council websites. Developers working across the Counties are urged to make use of individual Council air quality review and assessment reports to ensure they have the latest available air quality information.

2.8 Air quality across the counties of Herefordshire and Worcestershire is generally good. There have, however, been some hotspots identified where the health-based air quality objectives are currently not being met. In all cases, the problems are associated with the annual mean objective for nitrogen dioxide. In Herefordshire, two AQMAs have been declared (in Hereford and Leominster), Wychavon has declared an AQMA in Evesham, Bromsgrove has declared at Lickley End (junction

[6] http://ec.europa.eu/environment/air/index_en.htm

of the M42 and A38) and Wyre Forest has declared 2 AQMAs (Horsefair and Welch Gate). As the Review and Assessment process progresses, it is likely that this picture will change and potentially more AQMAs will be declared.

National Guidance

2.9 Planning Policy Statement 1 on *Delivering Sustainable Development*[7] sets out the Government's objectives for the planning system in the UK, stating that policies *should take account of environmental issues such as air quality and pollution.* PPS1 also contains guidance on general principles for pollution issues, stating that:

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

2.10 Planning Policy Statement 23 on *Planning and Pollution Control* develops the concept of sustainable development and sets out eight principles that are of overarching importance to decision making in relation to air quality and pollution generally. These principles include :

- Using scientific knowledge
- Respecting environmental limits
- Making the polluter pay
- Taking a long-term perspective

Air quality as a material planning consideration

2.11 Annex 1 of PPS23 states that any air quality consideration that relates to land-use and its development is capable of being a material planning consideration. The impact on ambient air quality is likely to be particularly important:

- Where the development is proposed inside, or adjacent to, an Air Quality Management Area (AQMA) designated under Part IV of the Environment Act 1995;
- Where the development could in itself result in the designation of an AQMA; and
- Where to grant planning permission would conflict with, or render unworkable, elements of a local authority's air quality action plan.

2.12 Appendix A of PPS23 is particularly significant in identifying developments, plans and strategies, which are material considerations in the preparation of development plan documents and in

[7] Department of Communities and Local Government (DCLG), 2005. Planning Policy Statement 1: Delivering Sustainable Development http://www.communities.gov.uk/publications/planningandbuilding/planningpolicystatement

individual planning application decision-making processes. Such matters of relevance to this Planning Protocol for the Herefordshire and Worcestershire area include the following:

- Air quality within AQMAs is subject to local variation. Poor air quality in excess of the air quality objectives may only occur along the most heavily trafficked roads.
- AQMAs are often designated because of emissions from heavy traffic flows. Exposure to pollutants of concern when proposals include developments such as housing, hospitals, schools, nurseries or elderly persons homes. Such developments may not require an EIA because they do not necessarily generate large volumes of traffic themselves, but the provision of ventilation, location of opening windows etc, needs to be considered in relation to exposure. These considerations could form part of an Air Quality Assessment for a proposed development
- The footprint of a buildings and design of the development can affect the exposure of users to poor air quality within an AQMA. This should be considered at the earliest stage in the preparation of a planning application, as its overall air quality performance can affect the viability of a scheme.
- Air quality deterioration may be cumulative. The effects of multiple developments on the air quality of an area may need to be considered, and in particular, the overall effect of additional load from further development proposals.

2.13 In addition to the above, the forthcoming Air Quality Strategy for Herefordshire and Worcestershire, together with this Air Quality and Planning Protocol, constitute management plans with a bearing on environmental quality, and as such are material in the consideration of individual planning applications.

Regional Spatial Strategy

2.14 At a regional planning level, Herefordshire and Worcestershire are encompassed within the Regional Spatial Strategy for the West Midlands (RSS11). The full West Midlands Regional Spatial Strategy (formerly RPG 11) was initially published by ODPM in June 2004. Following the publication of the Phase One Revision, a revised West Midlands Regional Spatial Strategy was issued in January 2008. As such, it guides the preparation of local authority development plans and local transport plans in the West Midlands up to 2021.

2.15 Within the Regional Spatial Strategy, the policy most relevant to air quality is policy QE4 C, which states that "*Local authorities and others should also encourage patterns of development which maintain and improve air quality and minimise the impact of noise upon public space*". The importance of the air quality management process is recognised in paragraph 8.45 of the RSS.

Air Quality and Local Planning Policy Background

2.16 Many Local Plans across the Herefordshire and Worcestershire area are currently under review, as the process of developing Local Development Frameworks (LDFs) is underway. In 2004, the planning system in England and Wales underwent a significant change, with the Planning and Compulsory Purchase Act 2004 (the 'Act') replacing much of the Town and Country Planning Act 1990. The provisions in the Act intend to provide a more flexible plan-making system locally and regionally, with more community involvement and an improved development control process. The Act abolishes Structure Plans and Local Plans, replacing them with Local Development Frameworks (LDFs), Local Development Schemes (LDS) and Local Development Documents (LDDs). Local authorities are now preparing their Local Development Frameworks under the new regime, although the statutory status of Unitary Development Plans, Local Plans or Structure Plans will be retained until LDFs are in place. It is therefore timely to incorporate air quality issues and considerations into the planning process as a new regime evolves.

2.17 More detailed information on local planning policies can be found in the Air Quality Strategy for Herefordshire and Worcestershire (Part 2: Supporting Information).

3 Requirements for Air Quality Assessments

3.1 An Air Quality Assessment is a qualitative or quantitative study undertaken to estimate the impact of a proposed development on air quality in the locality. An air quality assessment should also determine whether a proposed development will cause new residents to be exposed to unacceptable air pollutant concentrations (which is usually translated to mean above any specific air quality objective). This assessment process is likely to involve the consideration of local monitoring data and the prediction of future concentrations using an air quality model.

When is an AQA Required?

3.2 An Air Quality Assessment may be required as part of a formal EA being carried out for the development or as a standalone report in support of the Planning Application. The requirement to provide an air quality assessment to accompany a planning application should be based on the specific characteristics of the proposed development and the potential for impacts from local emissions during the construction phase and operational phase of the development proposal.

3.3 An Air Quality Assessment should be designed to fit the scale of the likely impacts, taking into account the cumulative air quality impacts of committed developments (i.e. proposals that have been granted planning permission at the time the assessment is undertaken), to ensure that a realistic scenario of air quality is presented for both the "without development" and "with development" predictions.

3.4 Across Herefordshire and Worcestershire, each local authority currently has different ways of ensuring that air quality is considered within the development control process. Some follow the NSCA Guidance on Planning and Air Quality for deciding when to ask for air quality assessments, with others having a more *ad hoc* approach where Environmental Health colleagues are consulted in relation to all planning applications and those with a potential impact are identified. Other local authorities currently have no procedure for identifying where air quality assessments may be required. It is hoped that this document can provide a more structured and consistent approach across Herefordshire and Worcestershire. It should be noted that the criteria included in this document are based on the NSCA Planning and Air Quality guidance, so those authorities already using that document will have no change in approach.

3.5 The decision as to whether an air quality assessment is required or not will require judgement as it is not possible to apply an exact and precise set of criteria to all development proposal situations.

However, the following criteria, taken from the NSCA Guidance on Air Quality and Planning, may help define when an air quality assessment should be considered necessary:

- Proposals for industrial or commercial activity requiring regulation under Pollution Prevention and Control Regulations (PPC);
- Proposals that will result in increased congestion, a change in traffic volumes (typically a change in annual average daily traffic (AADT) or peak traffic flows of more than + 5% or 10%, depending on local circumstances), or a change in vehicle speed (typically of more than +/- 10 kph), or both, usually on a road with more than 10, 000 AADT;
- Proposals which significantly alter the composition of traffic locally (i.e. increase the proportion of HGVs) for example bus stations, HGV parks, increased delivery traffic etc.;
- Proposals that include new parking – e.g. >300 spaces or an increase in current parking provision by, for example 25%, although account should be taken of car park turnover, i.e. the difference between short-term and long-term parking or new coach or lorry parks;
- Developments located in, or which may affect, sensitive areas (e.g. ecological sites) or areas of poor air quality (including AQMAs), where either direct emissions to air occur, or where any of the preceding criteria are met;
- Introduction of new exposure close to existing sources of air pollutants, including road traffic, industrial operations, agricultural operations etc.;
- Potential impacts from construction on nearby residents;
- Development which would give rise to significant dust emissions in areas where people and/ or commercial activities would be exposed.

3.6 Some local authorities make use of the criteria used to trigger a transport assessment as trigger criteria for an air quality assessment. Assessments, may, however not be required in every circumstance when a transport assessment is required. A balance must be struck between burdening developers with unnecessary assessments, and ensuring that all significant impacts are quantified.

What should an Air Quality Assessment include?

3.7 An Air Quality Assessment is required to demonstrate the impacts of a development on local air quality concentrations (i.e. whether the proposed scheme is likely to have a negative or positive impact). The assessment should determine whether a specific development is significant or otherwise in terms of local air quality, which could be ascertained through a detailed dispersion modelling study (e.g. see LAQM.TG(03)[8] for examples of modelling tools), taking account of the following scenarios:

- Current air quality concentrations in the vicinity of the proposed development location;

[8] Department of Environment, Food and Rural Affairs Defra, 2003. Local Air Quality Management Technical Guidance LAQM.TG(03). http://www.defra.gov.uk/environment/airquality/local/guidance/pdf/laqm-tg03.pdf it should be noted that TG(03) will be superseded in 2008 by Technical Guidance currently being prepared

- Future predictions of air quality concentrations (in relation to the EU Limit Values and national air quality objectives) without the proposed development in place (i.e. a baseline scenario). This scenario should include impacts from any committed development in the vicinity of the proposed development site;
- Future predictions of air quality concentrations (in relation to the EU Limit Values and national air quality objectives) with the proposed development, at the completion date.

3.8 A developer is strongly advised to discuss the requirements of an AQA with Officers from Environmental Health departments.

3.9 An air quality assessment should ensure that the following issues are considered and the information provided:

General issues

- The assessment should set out the aims and objectives clearly.
- Relevant pollutants and objectives being considered should be identified.
- Location maps should be provided, with a detailed description of the location of any proposed residential property in relation to the local road network.
- Sensitive receptors and locations of relevant exposure, either existing or proposed, should be clearly identified.
- Any modelling area studied should be clearly identified.
- The assessment should consider any committed developments in the vicinity of the proposed development in question, so as to address the potential for cumulative impacts.

Modelling work

- Modelling work undertaken should be described in detail, with the rationale for using a specific model provided and the modelling scenarios clearly presented. The information should include the type of model and the version of the model used.
- Model verification should be undertaken, using appropriate local monitoring data. The Government's technical guidance LAQM.TG(03) provides information on suitable approaches to model verification.

Model input data

- All emissions input data for point sources should be clearly tabulated (i.e. stack heights, emission rates, and stack exit parameters).
- Road traffic input data should be specified, including traffic flows (including criteria such as annual average daily flows (AADTs), average speeds, HGV composition), and the source of such information should be made clear.
- The meteorological data used in modelling work should be described.
- Any variables used in the modelling work, such as surface roughness, should be detailed in the report. With respect to nitrogen dioxide, the appropriate methodology used to address the NO_x:NO_2 relationship should be expressed. The source of background concentrations used should be detailed.

Impact Assessment

- Modelling results should be expressed in relation to relevant exposure, on scaled maps suitable for visualising any impacts. Figures should clearly indicate the pollutant and averaging time being assessed, the modelling scenario being considered and the spatial extent of any potential exceedences.
- The potential for any exceedences of the Limit Values or air quality objectives should be discussed.
- Modelling uncertainty should be taken into account, and all assumptions made should be discussed.
- The overall impact of the proposed development should be considered in terms of the potential significance of any predicted increase in pollutant concentrations.
- Proposals for mitigation, both in terms of measures to reduce the impact from construction and demolition phases of the proposed development and in terms of the operation of the development, should be discussed.

Introduction of exposure into polluted area

3.10 As well as assessing the impact of the proposed development on local air quality, the air quality assessment should also include the impact of existing air quality on potential sensitive receptors within the proposed development. This would apply where new sensitive development is proposed within an existing AQMA or could include scenarios that introduce exposure for the first time into sites which are subject to air quality in excess of objectives, but currently have no relevant exposure (and are therefore are not currently declared as AQMAs). Where relevant, air quality assessments should include the impact of potential air quality on residents in the first year of operation, including the impacts of the development and any other committed developments which may have an impact.

How should 'significance' be considered within an Air Quality Assessment?

3.11 The outcome of an Air Quality Assessment should be a description of the significance of the proposal in question on local air pollutant concentrations. Significance should not only relate to a comparison of pollutant concentrations against the national air quality objectives and EU Limit Values, but should consider the magnitude of any change.

3.12 The NSCA Guidance on Planning and Air Quality sets out the consideration of significance at two stages in the process:

- The first is the requirement to set out the significance of any air quality impacts within the air quality assessment using the professional judgement of the authors;

- The second is the requirement for the local authority to evaluate the significance of the air quality impacts using the professional judgement of its officers to help it reach a decision on the planning application.

Significance within the Air Quality Assessment

3.13 Different Air Quality Assessments will use different descriptors and terminology. Again, the NSCA Guidance on Planning and Air Quality has been used as an example of one methodology of defining the 'significance' of air quality considerations of any particular development. The main requirement within the Air Quality Assessment will be to describe significance in terms of the change in concentration with the development, and the absolute concentration after the change in relation to the air quality objectives. The numbers of people exposed to the change should also form part of the judgement of significance. The magnitude of change is likely to become an increasingly important component of the significance particularly for pollutants such as particulate matter for which there is no threshold for effects. An example of the descriptors included in the NSCA Guidance on Planning and Air Quality have been included in Appendix 2.

Assessment of significance by local authorities

3.14 When a planning application is received with an accompanying Air Quality Assessment, the planning authority will then need to carry out its own evaluation of the significance. Figure 3.1, taken from the NSCA Guidance on Air Quality and Planning has been included for help in this respect.

3.15 There are a number of key points which should be borne in mind when using the flow chart:

- Air quality has the potential to be a material planning consideration in all planning applications. Whether it is a material consideration for any individual application will depend on the circumstances of the case, both in terms of the proposed development and its environment or location;
- Likewise the significance of impacts will depend on the context of the development. For example, a proposal for a highly polluting industry in an already highly polluted, and populated, urban area would see air quality as one of the prime considerations. For a low polluting office development in an area of low pollution, air quality is likely to be of low priority;
- The flow chart is equally applicable to a development which increases emissions (worsens air quality) as to one where the main impact us to increase exposure, such as a residential development;

- The weight given to the EU Limit Values reflects their status in law. The Limit Values are binding on the UK as a whole, whereas there is no legal obligation placed on central government or local authorities to meet the UK Air Quality Objectives, despite the fact that they are contained in regulation;
- Several steps require a judgement to be made of the 'significance' of the worsening that will take place. This judgement should be carried out by a suitably qualified officer and the exercise of professional judgement is an important part of the assessment. The exercise of judgement by the local authority should be as transparent and open as possible, and is clearly open to challenge by either the developer or third party stakeholders.

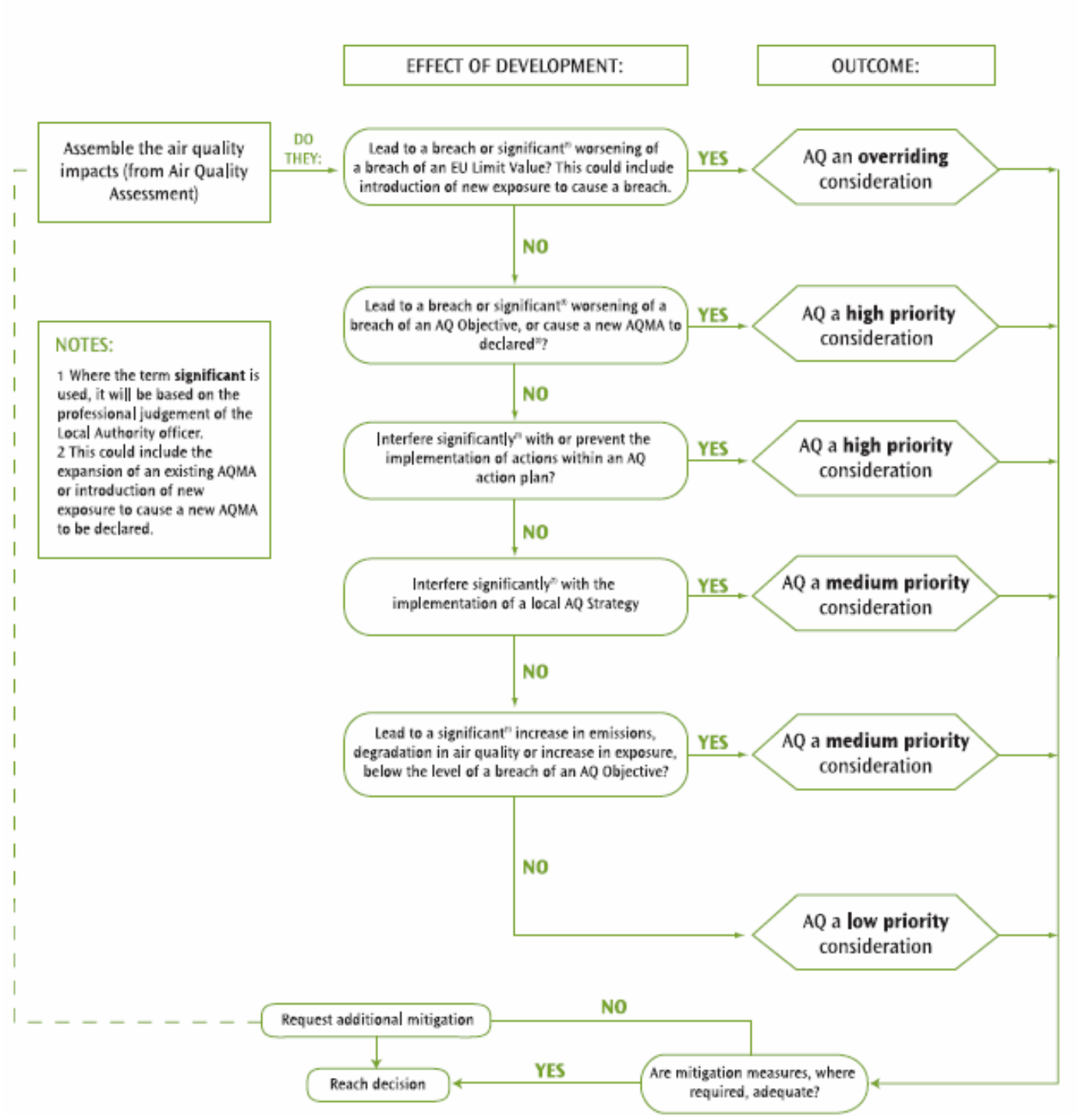

Figure 3.1 Steps for the Local Authority to Assess the Significance of Air Quality Impacts of a Development Proposal (taken from the NSCA Planning and Air Quality Guidance)

When is an Air Quality Assessment adequate or not?

3.16 The adequacy of an assessment should be judged on whether or not the approach and methodology is acceptable, supporting evidence is provided and whether the outcomes of the assessment appear reasonable.

3.17 Developers intending to submit an air quality assessment to accompany a planning application should ensure that they have familiarised themselves with the expected requirements of an assessment, as discussed in the previous section. This will follow on from dialogue with Environmental Health Officers, to establish the scope of the required assessment. The issues outlined in paragraph 3.8 provide a useful starting point to base an appraisal of the adequacy of an air quality assessment.

4 Construction Dust and Emissions

4.1 The construction phase of a development (particularly a large development) can cause emissions of dust and fine Particulate Matter, PM_{10} which can be a source of nuisance and also has the potential to add to air quality objective exceedences. There can also be a potential for cumulative impacts from construction, where a number of nearby developments overlap in the construction phase. Most dust particles are too big to be inhaled but can cause eye, nose and throat irritation and lead to deposition on cars, windows and property. PM_{10} is of more concern to human health as the particles can enter the lungs.

4.2 Where relevant, air quality assessments should include an assessment of the construction phase of the development which in some cases can last for many months or even years. The impacts of construction traffic, demolition activities as well as construction plant on site may be relevant.

4.3 Some local authorities already have their own Considerate Contractors Scheme and there is a national scheme, which includes many elements of best practice and aims to reduce the environmental impact of construction sites. Some local authorities have their own Best Practice Guidelines for construction dust emissions which they can use as a planning condition. There is a London Best Practice Guide which sets out the sizes of sites which are at risk of causing an impact, and then sets out in detail, the mitigation measures expected for the different categories of building site. Mitigation measures come under headings of Site Planning, Construction Traffic, Demolition works and Site activities.

4.4 There are no formal assessment criteria for dust. In the absence of formal criteria, a set of distance based criteria has been developed (Table 4.1). These criteria are based on professional experience, drawn from many years of involvement with assessments of different types of project, together with discussions with practitioners in the field, and consideration of a range of published reports.

Table 4.1: Assessment Criteria for Dust from Construction Activities, with Standard Mitigation in Place

Source		Potential Distance for Significant Effects (Distance from source)		
Scale	**Description**	**Soiling**	**PM_{10}[a]**	**Vegetation effects**
Major	Large construction sites, with high use of haul routes	100 m	25 m	25 m
Moderate	Moderate sized construction sites, with moderate use of haul routes	50 m	15 m	15 m
Minor	Minor construction sites, with limited use of haul routes	25 m	10 m	10 m

[a] Significance based on the 2004 objective, which allows 35 daily exceedences/year of 50 $\mu g/m^3$

4.5 There is also the possibility of dust being tracked out of the site along roads. Table 4.2 sets out the assessment criteria in terms of distance from the site to which significant dust may be tracked out and the potential distance from the roadside for significant effects.

Table 4.2: Assessment Criteria for Construction Dust Track-Out with Standard Mitigation in Place.

Source		Potential Distance from roadways for Significant Effects (Distance from edge of road)		
Scale	**Distance along roadways that dust might be tracked**	**Soiling**	**PM_{10}**	**Vegetation effects**
Major	250 m	50 m	15 m	15 m
Moderate	100 m	25 m	10 m	10 m
Minor	25 m	15 m	5 m	5 m

5 Mitigating Impacts

5.1 The final stage in the Air Quality Assessment process is to recommend the actions which should be undertaken, or measures put in place, in order to remove impacts as far as is reasonably practicable. The types of measures proposed to achieve improvements in air quality will depend on the nature and scale of the proposed development.

Planning Conditions and Obligations

5.2 Conditions can be placed on planning permissions, where they are necessary in order to make the development proposal acceptable. Government advice in Circular 11/95 sets out 6 tests for conditions. Conditions must be: necessary, relevant to planning, relevant to the development to be permitted, enforceable, precise and reasonable in all other respects. Conditions may not require the payment of money or the transfer of land ownership.

5.3 There may be times when the Council wants to control the impact of the development, but the desired restrictions go beyond the scope of planning conditions. In such cases it may be possible to enter into a legal agreement with the applicant and anyone else who has a legal interest in the land, under Section 106 of the Town and Country Planning Act 1990.

5.4 Planning obligations (or 'section 106 agreements') are private agreements negotiated (usually in the context of planning applications) between local planning authorities and persons with an interest in a piece of land (i.e. developers). They are intended to make development acceptable, which would otherwise be unacceptable, and can either prescribe the nature of development, secure a contribution from a developer to compensate for loss from development or mitigate impacts.

5.5 Where development in areas of poor air quality is proposed, the overall benefit of the development must be balanced against the specific harm, in air quality exposure terms, of locating that particular development at that particular site. It may also offer the opportunity to secure air quality or other environmental improvements which would not otherwise be available. In general terms, development can often be allowed to proceed providing due regard has been made to the air quality in the area. In all cases, the planning process should seek to obtain the best possible air quality conditions that would be reasonable for the development proposed. In some local authorities this has led to some innovative planning measures which have made a positive contribution to improving air quality.

5.6 Measures which it might be possible to consider for Section 106 agreements include: limiting car parking; car-free developments; supporting public transport; other transport infrastructure such as waling and cycling routes/ paths; and the purchase, installation, operation and maintenance of air quality monitoring equipment or provision of other assistance or support to enable authorities to implement any necessary monitoring or other actions in pursuit of an Air Quality Action Plan.

Planning Gain Supplement and Community Infrastructure Levy

5.7 At the end of 2006, the Government consulted on a proposal for Planning Gain Supplement (PGS) which is designed to capture a 'modest proportion' of the increase in land value accruing to landowners as a result of the granting of planning permission. As part of the proposal, the use of planning obligations would be scaled back to cover only 'direct impact mitigation' plus affordable housing.

5.8 The Community Infrastructure Levy (CIL) was an approach proposed in the Housing Green Paper to the implementation of the PGS. Following consultation with industry, local government and other stakeholders, the Government concluded that the best way to increase contributions towards infrastructure was the introduction on a CIL (formerly Planning Charges). The CIL option enables local authorities to apply a levy to all new developments (residential and commercial) in their area, subject to a threshold. Where appropriate, the local planning authority would use a CIL to supplement a negotiated agreement, which may be required for site specific matters.

5.9 The CIL will be based on a costed assessment of the infrastructure requirements arising specifically out of the development taking account of land values and potential uplifts. Standard charges would be set, which may vary from area to area and according to the nature of the development proposed. The CIL would break the link between a contribution and a particular development. Infrastructure requirements would include those mitigation measures which would be beneficial to improving air quality such as public transport improvements, infrastructure to encourage walking and cycling etc.

Impacts from construction and demolition

5.10 A number of useful documents covering the control of dust and emissions from construction and demolition activities have been published. Guidance is available from the Building Research Establishment on controlling dust from construction sites. The London Code of Practice: the control of dust and emissions from construction and demolition also includes mitigation measures for controlling dust and PM_{10} emissions from construction. See Appendix 4 for details of documents.

Post development measures

5.11 Examples of mitigation have been included in the EPUK guidance on Planning and Air Quality and in the more recently published guidance 'Low Emissions Strategies: using the planning system to reduce transport emissions'. See Appendix 4 for details of documents.

6 Conclusions and Key Points

6.1 The need for closer integration of air quality within planning policy and development control has been recognised both within this planning protocol, and within the air quality strategy for Herefordshire and Worcestershire. This planning protocol seeks to facilitate this closer working between planners and air quality professionals across Herefordshire and Worcestershire and with closer collaboration, a more consistent approach to the treatment of planning issues within air quality management and the treatment of air quality issues within the planning system. To achieve this aim, there are a number of key points as follows:

- Any air quality consideration that relates to land use and its development is capable of being a material planning consideration. The weight given to air quality against other considerations is case specific;
- Two kinds of impact must be considered – the impact of the development on air quality (including both construction and operational impacts) and the impact of existing sources on the development (i.e. introducing exposure into an area already exceeding air quality objectives);
- In order for air quality to be properly considered within development control decisions, effective inter-professional relationships and efficient administrative systems are vital;
- Where air quality assessments are undertaken, it is important to seek agreement on the datasets, methodologies and outputs which are appropriate to the assessment of the developments air quality impacts;
- In assessing whether any particular development is likely to have a 'significant' impact on air quality, the ultimate assessment of the significance of air quality impacts should be made by the local authority with the assistance of data provided by the developer (usually in the form of an air quality assessment or chapter of an Environmental Statement). In assessing significance, professional judgement is necessary;
- The scale of mitigation imposed on a development must reflect the severity of its impacts and the context within which the development is to take place.

6.2 Development control carries the responsibility for integrating a very wide range of issues into planning decisions. Development control officers must therefore rely on the input on experts from other policy areas to inform those decisions. This protocol is intended to promote greater consistency in the process and help maximise the beneficial effects of good development control on air quality and the wider environment.

7 Appendix 1: Air Quality Objectives

7.1 The table below illustrates the air quality objectives within Regulations in England for local air quality management.

Table A1.1 Air Quality Objectives (England)

Pollutant	Time Period	Objective	To be achieved by
Benzene	Running annual mean	16.25 μg/m^3	2003
	Annual mean	5 μg/m^3	2010
1,3-Butadiene	Running annual mean	2.25 μg/m^3	2003
Carbon Monoxide	Maximum daily running 8-hour mean	10 mg/m^3	2003
Lead	Annual mean	0.5 μg/m^3	2004
	Annual mean	0.25 μg/m^3	2008
Nitrogen dioxide	1-hour mean	200 μg/m^3 not to be exceeded more than 18 times a year	2005
	Annual mean	40 μg/m^3	2005
Sulphur Dioxide	1-hour mean	350 μg/m^3 not to be exceeded more than 24 times a year	2004
	24-hour mean	125 μg/m^3 not to be exceeded more than 3 times a year	2004
	15-minutes mean	266 μg/m^3 not to be exceeded more than 35 times a year	2005
Fine particles (PM_{10})	24-hour mean	50 μg/m^3 not to be exceeded more than 35 times a year	2004
	Annual mean	40 μg/m^3	2004

8 Appendix 2: Descriptors for Impact Magnitude

Table A2.1 An Example of Descriptors for Changes in Ambient Concentrations of Nitrogen dioxide and PM_{10} (taken from the NSCA Guidance on Planning and Air Quality)

Magnitude of Change	Annual Mean NO_2 / PM_{10}	Days PM_{10} >50 µg/m³
Very large	Increase/decrease > 25%	Increase/decrease > 25 days
Large	Increase/decrease 15-25%	Increase/decrease 15-25 days
Medium	Increase/decrease 10-15%	Increase/decrease 10-15 days
Small	Increase/decrease 5-10%	Increase/decrease 5-10 days
Very Small	Increase/decrease 1-5%	Increase/decrease 1-5 days
Extremely Small	Increase/decrease <1%	Increase/decrease <1 days

Table A2.2 An Example of Descriptors for Impact Significance for New Relevant Exposure (taken from the NSCA Guidance on Planning and Air Quality)

Air Quality Impact Significance Criteria – New Exposure

Absolute Concentration at New Properties in Relation to Standard	Number of new properties exposed to concentration			
	0-20	20-100	100-500	>500
Above Standard	slight adverse	moderate adverse	substantial adverse	very substantial adverse
Below Standard but not Well Below	negligible	negligible	slight adverse	slight adverse
Well Below Standard	negligible	negligible	negligible	negligible

Well below the standard = < 75% of the standard level.

'Standard' in the context of this table relates to specific air quality objective or Limit Value in question
The number of properties relates to the number exposed to a particular concentration range, i.e. 10 properties within a development may be exposed to concentrations above the objective and therefore would be affected by slight adverse impacts. However 80 properties may be in locations where the predicted concentration is below the standard but not well below, and thus the impact on those properties is negligible.

Consideration may need to be given to drop off with height above ground level where there are flats involved.

Table A2.3 An Example of Descriptors for Impact Significance for Nitrogen dioxide and PM_{10} (taken from the NSCA Guidance on Planning and Air Quality)

Air Quality Impact Significance Criteria						
Absolute Concentration in Relation to Standard	Extremely Small	Very Small	Small	Medium	Large	Very Large
Decrease with scheme						
Above Standard with Scheme	slight beneficial	slight beneficial	substantial beneficial	substantial beneficial	very substantial beneficial	very substantial beneficial
Above Standard without scheme Below with Scheme	slight beneficial	moderate beneficial	substantial beneficial	substantial beneficial	very substantial beneficial	very substantial beneficial
Below Standard without scheme, but not Well Below	negligible	slight beneficial	slight beneficial	moderate beneficial	moderate beneficial	substantial beneficial
Well Below Standard without scheme	negligible	negligible	slight beneficial	slight beneficial	slight beneficial	moderate beneficial
Increase with scheme						
Above Standard without scheme	slight adverse	slight adverse	substantial adverse	substantial adverse	very substantial adverse	very substantial adverse
Below Standard without scheme Above with Scheme	slight adverse	moderate adverse	substantial adverse	substantial adverse	very substantial adverse	very substantial adverse
Below Standard with Scheme, but not Well Below	negligible	slight adverse	slight adverse	moderate adverse	moderate adverse	substantial adverse
Well Below Standard with Scheme	negligible	negligible	slight adverse	slight adverse	slight adverse	moderate adverse

Well below the standard = < 75% of the standard level.

'Standard' in the context of this table relates to specific air quality objective or Limit Value in question

9 Appendix 3: Glossary

AQA	Air Quality Assessment
AQS	Air Quality Strategy
AQMA	Air Quality Management Area
AQAP	Air Quality Action Plan
Defra	Department for Environment, Food and Rural Affairs
HGV	Heavy Goods Vehicle
IPPC	Integrated Pollution Prevention and Control
LAQM	Local Air Quality Management
LDD	Local Development Document
LDF	Local Development Framework
LDS	Local Development Scheme
NO_2	Nitrogen dioxide
NO_x	Nitrogen oxides
PM_{10}	Particulate Matter with an effective diameter of less than 10 microns (µm)
PPC	Pollution Prevention and Control
PPS	Planning Policy Statement
RPG	Regional Planning Guidance
RSS	Regional Spatial Strategy
TA	Traffic Assessment
UDP	Unitary Development Plan

10 Appendix 4: Useful Documents and Websites

Planning Policy Statement 23: Planning and Pollution Control (November 2004) ISBN 97801175392793.
http://www.communities.gov.uk/publications/planningandbuilding/planningpolicystatement23

Planning Policy Statement 23: Planning and Pollution Control - Annex 1: Pollution Control, Air and Water Quality. ISBN 9780117539310.
http://www.communities.gov.uk/publications/planningandbuilding/pps23annex1

Planning Policy Statement 1: Delivering Sustainable Development. ISBN 978 0 11 753939 6
http://www.communities.gov.uk/publications/planningandbuilding/planningpolicystatement1

Development Control: Planning for Air Quality. Produced by Environmental Protection UK.
http://www.environmental-protection.org.uk/assets/library/documents/Development_Control_planning_for_air_quality.pdf

London Councils Air Quality and Planning Guidance.
http://www.londoncouncils.gov.uk/Transport/briefings/LondonCouncilsAirQualityandPlanningGuidance.htm

Building Research Environment (2003) Controlling particles, vapour and noise pollution from construction sites. BRE Bookshop, London. www.brebookshop.com

The Control of Dist and Emissions from construction and demolition. Best Practice Guidance. Produced in partnership by the Greater London Authority and London Councils.
http://www.london.gov.uk/mayor/environment/air_quality/docs/construction-dust-bpg.pdf

Technical Guidance for Review and Assessment (TG(03))
http://www.defra.gov.uk/environment/airquality/local/guidance/pdf/laqm-tg03.pdf

Policy Guidance for Review and Assessment (PG(03))
http://www.defra.gov.uk/environment/airquality/local/guidance/pdf/laqm-pg03.pdf

Low Emissions Strategies. Using the Planning System to reduce transport emissions. Good Practice Guidance (currently under consultation).
http://www.beacons.idea.gov.uk/idk/core/page.do?pageId=7613079 http://www.cenex.co.uk/uploaded-documents/LES_Consultation_Draft.pdf

Regional Spatial Strategy 11. West Midlands. http://www.wmra.gov.uk/page.asp?id=47

Review and Assessment Helpdesk Planning Page: http://www.uwe.ac.uk/aqm/review/planning.html

Websites for local authority air quality information:

Herefordshire Council http://www.herefordshire.gov.uk/environment/pollution/2264.asp

Redditch Borough Council http://redditch.whub.org.uk/home/rbc-live-pollution_control-local_air_quality_

Bromsgrove District Council. http://bromsgrove.whub.org.uk/home/bdc-environmental-health-air-pollution

Wychavon District Council http://wychavon.whub.org.uk/home/wdcindex/wdc-env/wdc-env-air.htm

Wyre Forest District Council http://www.wyreforestdc.gov.uk/ccm/navigation/planning-environment/pollution/pollution-control---air-quality/;jsessionid=60A07C69E115B1B59FF534F177B8605A

Worcester City Council http://www.worcester.gov.uk/index.php?id=541

Malvern Hills District Council http://www.worcestershire.gov.uk/home/mhc-env-air-quality