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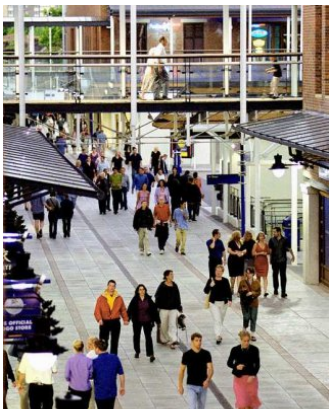

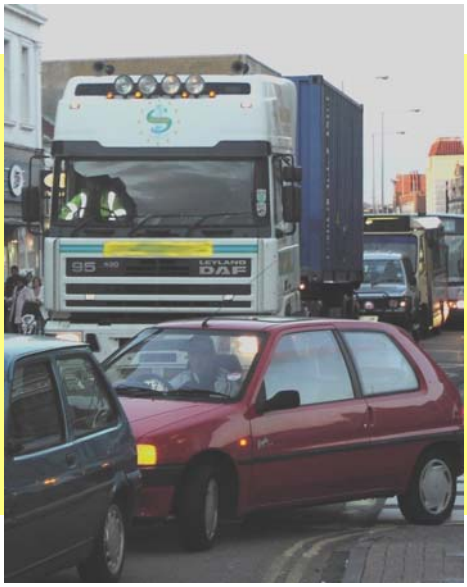

Local Development Framework

AIR QUALITY AND AIR POLLUTION

Supplementary Planning Document

Adopted – March 2006

Supplementary Planning Document

AIR QUALITY AND AIR POLLUTION

Adopted 10th March 2006

March 2006

Prepared jointly with the Public Protection Service,
Directorate of Environment and Transport,
Portsmouth City Council

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INTRODUCTION

I. Any air quality issue may be a material consideration in determining planning applications. The aim of this document is to provide guidance on the way in which air quality and air pollution issues will be dealt with through the planning system. Air pollution and poor air quality can have detrimental impacts on health and the amenity of users of land in terms of odour, dust and nuisance. The Local Planning Authority considers that the planning system has a key role in protecting people from unacceptable risks to their health and in providing an 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 economic regeneration and provide adequate levels of housing. The aim is to achieve sustainable development in the City that achieves the best balance of social, economic and environmental considerations. All of these considerations can have significance for both spatial policy and individual development control decisions.

II. This guidance is sub-divided into three sections:

Part 1: Air quality
This Section deals with the planning issues associated with the quality of ambient air. Consideration is given only to those pollutants identified in the National Strategy for Air Quality [1]. Most emphasis is placed on pollutants that we know or suspect may be an issue in the City.

Part 2: Prescribed processes
This part deals with air pollution issues associated with significant polluting industries that are prescribed for regulation under the Pollution Prevention and Control Regulations [2]. Prescribed processes are sub-divided into Part A1 and A2 processes and Part B processes. Part A1 and A2 processes have the potential to cause significant pollution to all parts of the environment. All processes have the potential to cause significant air pollution. This Document is relevant to emissions to air only. Some processes may also emit pollutants identified in the National Strategy for Air Quality others may emit air pollutants which are not dealt with in the Strategy.

Part 3: Other air pollution issues
This Section gives generic guidance on other potential sources of air pollutants from non-prescribed processes. This includes odour from hot food premises and nuisance dust and fume emission.

III. Portsmouth City Council's Local Plan Review identifies two generic types of development where consideration of air quality and pollution may be important. 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. A second category is low polluting *sensitive developments.* 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. Examples of this latter category include but are not limited to, residential developments with low car use.

IV. Consideration of air quality and air pollution may be relevant during two phases of a development. The *development phase* may give rise to air pollution and air quality issues associated with demolition, construction and remediation of contamination for example. The *operational phase* of the development may also give rise to air pollution and air quality issues. This document primarily concerns the operational phase of a development, as air quality factors during the construction phase cannot be used to determine the acceptability of an application.

Policy Background

Legislation & National Guidance

V. Planning Policy Statement 23: '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/pollution:

Using transparent, accessible procedures
Putting people at the centre
Using scientific knowledge
Applying the precautionary principle (where scientific uncertainty exists)
Respecting environmental limits
Making the polluter pay
Taking account of cost and benefit
Taking a long term perspective

VI. These principles have guided the development of this SPD. In all circumstances the City Council will approach its decision making in relation to air quality based upon these broad principles.

VII. Planning Policy Statement 1: 'Delivering Sustainable Development' sets out the Government's objectives for the planning system. In particular it states that policies 'should take account of environmental issues such as air quality and pollution'. PPS1 also contains guidance on general principles for pollution issues, which include:

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

Local Policy

VIII. Portsmouth City Council planning policies E2 and E35 of the Portsmouth City Local Plan adopted in 1995 and policy DC5 'Amenity and Pollution' of the Proposed Modifications to the Portsmouth City Local Plan Review published in August 2005, all state the need to consider the amenity of

residents, both current and future, in relation to pollution from a variety of sources.

IX. The base policy for this SPD is therefore policy E2 in the Portsmouth City Local Plan adopted in 1995, regarding the quality of new development. However, when the City Local Plan Review is adopted, the Adopted Plan will be archived and the base policy for this SPD will become policy DC5 'Amenity and Pollution'. Currently the SPD relates to both policies. It is anticipated that the Local Plan Review will be adopted in spring/summer 2006.

X. Policy DC5 of the Local Plan Review states that –

> *"New development will only be permitted where:*
>
> *(i) it would not cause unacceptable levels of air, noise, vibration, light, water or other pollution or otherwise cause unacceptable detrimental effects to the amenity of adjoining or nearby occupiers;*
> *(ii) the amenity of future occupiers or users of the proposed development is not adversely affected by existing or projected levels of air, noise, vibration, light, water or other pollution.*
>
> *New development should be laid out and designed to minimise, as far as possible, the impact of the above matters. Particular consideration will be given to the location of sensitive land uses, especially housing, in the context of the above."*

This policy is reproduced in full at Appendix A.

Portsmouth Local Strategic Partnership's Community Strategy 2004-09

XI. The Portsmouth LSP Community Strategy was produced in 2004 to highlight the needs and wishes of the people of Portsmouth, as the city entered the twenty-first century. The Strategy contains a number of key priority areas which arose from a lengthy consultation period. One of these priorities is to create a Portsmouth that "…treasures and sustains a safe, healthy and attractive environment".

XII. Within the defined priority areas, further key outcomes were derived. Of particular interest in this case is the outcome based around the desire to create "a cleaner, healthier environment". Within this outcome is the goal of "achieving air quality objectives by 2010" by monitoring and managing air quality. One of the ways it is identified this will be tackled is through managing traffic in the city in order to reduce congestion.

Development Control

XIII. In making any development control decision, weight will be given in particular to the city council's Local Plan Review policies, this Supplementary Planning Document (SPD) and national planning policies, especially Planning Policy Statement 23 (PPS 23) including Annex 1. Consideration will also be given to any relevant authoritative guidance or research.

XIV. The Local Planning authority will seek to ensure that its air quality aims can be secured in planning submissions before granting permission. Where appropriate the local planning authority will seek to control the necessary measures through planning conditions and planning obligations.

Further advice on any parts of this document can be obtained from:

In respect of **planning policy**:
Planning Services,
Directorate of Environment & Transport,
Portsmouth City Council,
Civic Offices,
Guildhall Square,
Portsmouth
PO1 2AU
Telephone Number: 023 9283 4699

In respect of **technical air quality/pollution issues**:
Public Protection Service,
Directorate of Environment & Transport,
Portsmouth City Council,
Civic Offices,
Guildhall Square,
Portsmouth
PO1 2AZ
Telephone Number: 023 9268 8366

PART 1: AIR QUALITY

1.1 Introduction

1.1.1 This Part of the SPD gives advice on how air quality will influence planning decisions. Two types of environmental limits are set for air quality.

1.1.2 The European Union has set a number of Limit Values for air pollutants. These standards are binding on member states.

1.1.3 The National Strategy on Air Quality [1] sets out pollutants that are of national concern and for which a quality standard has been set. Some of these objectives are set for control at a local level and others at the national level. These objectives are similar to EU Limit values but in some cases are more challenging or must be achieved by an earlier date. The current list of substances includes the following substances:

Air Quality Objectives set for Local Control (Health based)

Nitrogen dioxide	(annual mean, hourly mean)
Fine particulate matter (PM_{10})	(annual mean, daily mean)
Sulphur dioxide	(daily mean, hourly mean, 15minute mean)
Carbon Monoxide	(running 8 hour mean)
Benzene	(running annual mean)
1,3 Butadiene	(running annual mean)
Lead	(annual mean)

Air Quality Objectives set for National Control (Health based)

Ozone

Poly-Aromatic Hydrocarbons (PAH) (Benzo[a]pyrene) (annual mean)

Air Quality Objectives for the protection of vegetation and Ecosystems

Nitrogen oxides	(annual mean)
Sulphur dioxide	(annual and winter mean)

Further information on these objectives can be found at http://www.defra.gov.uk

1.1.4 These pollutants have been ascribed several types of objective dependant upon the type of impact that is expected. Some have long term (e.g. annual average) objectives and some have been ascribed short term (e.g. 15 minute average) objectives. Many have a combination of both. The type of objective (long term or short term) will influence where it is to be applied and therefore its significance for a particular type of development. Further guidance on the application of air quality objectives is set out in LAQM.TG(03) (Local Air Quality Management - Technical Guidance) [3]. Generally however, sensitive land uses for long term health based objectives include residential,

schools, hospitals and other similar uses. Sensitive uses for short-term objectives are more wide ranging and can include any areas to which the public have access. These objectives are subject to review at national and international level.

1.15 Portsmouth city council is committed to periodically assessing air quality in the city to determine the impact on current land uses in the city. The information on air quality in the city will be published periodically on the city council's website (www.portsmouth.gov.uk) and is available in a public register. Developers should check with the local authority to ensure they have the latest available information. The City Council will, when making its decisions always make use of the most up to date information available.

1.16 The City Council's Updating and Screening Assessment 2003 [4] and Detailed Assessment 2004 [5] concluded that given existing patterns of land use, the nitrogen dioxide annual average national objective would be exceeded in large parts of the City during 2005. As of 2004 there is no substantial evidence to show that any other locally controlled objectives are exceeded. However, a risk exists that some other objectives may be exceeded and assessment is continuing. There is concern that the hourly nitrogen dioxide objective may also be exceeded in some area where the annual average objective is exceeded. In addition, daily particulate matter objectives and fifteen minute sulphur dioxide objective might be exceeded or approach the objectives at some sites. New developments might potentially also give rise to concern regarding other objectives.

1.17 Given the possibility of changes at European, national and local level in this area, developers are advised to check for any changes that may affect their development proposals.

1.18 It is the developer's responsibility to provide such information on air quality as is necessary to enable the local planning authority to make a planning decision. This SPD will assist developers in identifying what information they may need to submit. However, where a specific assessment is required and where air quality is likely to be a significant issue, developers are encouraged to enter into early pre-application discussions with the City Council to seek to agree the approach to be taken. Where in particular, monitoring data is likely to be required, developers should be aware that this would most probably need to be conducted over a number of months. Also where developments are likely to generate significant additional traffic flow, air quality modelling will be required. It is important in these cases that traffic assessments are made and agreed with the City Council prior to determining if an air quality assessment is required. It can be seen therefore, that effective project management of a development proposal is important to minimise the risk of unplanned delays in achieving planning permission.

1.19 The following part of the SPD has been set out in the form of a number of questions to assist all stakeholders in understanding the particular approach Portsmouth city council will adopt. These are as follows:

1.2 When may air quality be a material planning consideration for a development?

1.2.1 Any air quality issue may be a material planning consideration. However, air quality will in particular be a material consideration where any of the following apply:

- *A national air quality objective or an EU Limit Value may be exceeded for the first time on a specific site if a development is permitted.*
- *The level of exceedance over a national air quality objective or an EU Limit value will be made significantly worse if a development is permitted.*
- *The concentration of an air pollutant for which a national air quality objective or an EU Limit Value has been prescribed will approach an exceedance such that other developments in the area might be prevented.*
- *The number of people potentially exposed to exceedances of national air quality objectives or EU Limit values is increased if a development is permitted.*
- *To grant permission for the development would lead to a conflict with measures that the Council intends to include in its Air Quality Action Plan (or Local Transport Plan), thus rendering any improvement in air quality unworkable.*

1.2.2 The following section gives generic guidance concerning the types of circumstances where these apply together with example developments. This list is not intended to be comprehensive.

1.2.2.1 *A national air quality objective or an EU Limit Value may be exceeded for the first time on a specific site if a development is permitted*

This may arise where sensitive development is proposed outside existing AQMAs and close to existing sources of the identified air pollutants. In Portsmouth this is likely to include the following types of development:

- The introduction of residential, school, hospital, or library uses closer to busy roads than existing similar uses. This form of development may expose members of the public to pollutant concentrations above objective levels for nitrogen dioxide and PM10.

- The introduction of uses that allow public access closer to shipping lanes, ports, docks than existing similar uses. This form of development may expose members of the public to pollutant concentrations above objective levels for nitrogen dioxide, PM10 and sulphur dioxide.

- The introduction of residential, school, hospital or library uses close to petrol stations may expose members of the public to pollutant concentrations above objective levels for benzene.

- The introduction of new industrial or commercial uses that emit any of the identified pollutants in significant quantities. This is particularly applicable to processes prescribed under the Pollution Prevention and Control Regulations.

- The introduction of new sensitive uses closer to significant prescribed industrial processes than existing sensitive uses where the industrial premises is known to emit significant quantities of the identified pollutants.

1.2.2.2 *The level of exceedance over a national air quality objective or an EU Limit Value will be made significantly worse if a development is permitted*

This will mainly apply to polluting developments within existing AQMAs. In Portsmouth this is currently limited to developments that will add significantly to nitrogen dioxide concentrations within an AQMA such as:

- Developments, which will significantly increase traffic flow, change traffic composition or increase congestion within an AQMA.

- Developments which enclose streets and significantly reduce the dispersion of pollutants.

1.2.2.3 *The concentration of an air pollutant for which a national air quality objective or an EU Limit value has been prescribed will approach an exceedance such that other developments in the area, particularly development plan allocations, might be prevented*

This point refers to situations where development in an area takes place in a piecemeal fashion. Whilst each individual development might only have a minor impact on air quality, over time this could lead to progressive incremental increases in air pollution. This process might prejudice or result in more onerous requirements upon later developments to reduce the impact of air pollution. This could be particularly likely where air quality is already close to exceeding air quality objectives. A more holistic approach (whereby the net effect of all development in a particular area is considered) would be desirable but this would be difficult to implement, due to lack of foresight into

which development sites are likely to come forward and indeed what affect these future developments may have on air quality objectives. In the main the local planning authority will consider the application of this principle in areas where significant development or regeneration is expected to occur in several phases and some of these developments are polluting. In these instances the major development site may be the subject of an Area Action Plan (an area based planning policy document). If air quality levels in this area are close to exceeding objectives, a policy or consideration of air quality issues will be included in the Area Action Plan.

1.2.2.4 *The number of people potentially exposed in sensitive uses to exceedances of national air quality objectives or EU Limit Values is increased if a development is permitted*

By definition this will apply either where a polluting development may extend the area of an existing AQMA or where new sensitive development is proposed in areas where air quality exceeds objectives or limits but where an AQMA does not currently exist. It also applies where new sensitive development is proposed within an existing AQMA that would increase the population exposed above the objectives or limit. Examples include:

- Introducing sensitive development for the first time into sites close to busy roads, which are currently exclusively or largely commercial or industrial in character and subject to air quality in excess of objectives.

- Introducing higher density development sites into areas subject to air quality in excess of objectives.

1.2.2.5 *The likelihood of improving air quality in Air Quality Management Areas is significantly reduced if the development is permitted*

This may apply to a range of potential developments if they were to prevent the City Council from carrying out actions to improve air quality. The measures that the City Council intends to take will be set out in the Local Transport Plan and the Air Quality Action Plan.

1.2.3 Appendix B sets out a checklist to assist in identifying sites where air quality may be a material consideration.

1.2.4 If air quality is a material consideration for a particular development, it may be necessary for the developer to carry out an air quality assessment (AQA). Where required this must be submitted as part of the application for planning permission.

1.2.5 Where the development relates to sensitive uses only in areas where the City Council already has reasonably good air quality data (for example in AQMAs) it is acceptable for the developer to make use of this information. However, it should be recognised that this data may

not have been collected from the actual development site under consideration. If a developer wishes to conduct their own assessment, for example by carrying out site specific monitoring, the Local Planning Authority will take the findings into account. The monitoring program should be agreed with the local planning authority and developers should note that LAQM. TG(03) recommends a minimum monitoring period of six months.

1.3 What type of Air Quality Assessment is required?

1.3.1 The type of AQA required should be proportionate to the likely significance of any air quality impact that may be presented.

1.3.2 The type of AQA required will depend upon how much information is already available, the significance of any air quality issue, the scale over which impacts might be expected and the availability of suitable methodology.

1.3.3 AQAs may initially in some situations involve the use of screening methods such as that set out in the Design Manual for Roads & Bridges (DMRB) [6]. The shortcomings of such methods should be noted, to ensure they are fit for purpose. In the case of screening methods such as DMRB it is important that the significance of non-road traffic related sources such as shipping are recognised and accounted for. Screening methods can be a relatively quick and cheap way of ruling out the likelihood of significant air quality impacts. However, where the screening method predicts that the development may have a significant air quality impact, it will be necessary for a detailed assessment to be carried out.

1.3.4 Detailed AQAs typically make use of dispersion models. It may be necessary to also collect monitoring data for these types of assessment. Appendix C sets out guidance on the type of approach that should be taken for most detailed AQAs and the information that should be reported. However, in some special circumstances a site-specific approach should be developed in agreement with the Local Planning Authority.

1.4 How significant is the air quality impact?

1.4.1 It is important for the Local Planning Authority to be able to assess the significance of any air quality issue presented by a particular proposed development to enable proper weight to be given to this issue **during the decision making process**. There is no simple method for making this determination that can cover all situations that may arise. However, guidance is given below to set out generally how significance will be assessed and also how this will influence the planning decision. This Section is largely based upon the guidance produced by the National Society for Clean Air (NSCA) [7].

1.4.2 In general terms the factors to be considered in determining significance for both new sensitive development and new polluting development are set out below. In the former case the main impact results from either introducing new sensitive uses for the first time or increasing the number of people who may be exposed to poor air quality as a result of the development. In the latter case the main impact will be to cause deterioration in existing air quality at pre-existing sensitive sites. Many mixed use developments that give rise to significant emissions or generate significant additional traffic flow could fall into both categories.

1.4.2.1 Sensitive Development

- Are EU Limits Values for air quality expected to be exceeded on the development site?
- Are National Air Quality Objectives likely to be exceeded on the development site?
- How significant is any breach of the criterion?
- How many members of the public may be exposed above the criterion?
- Whether and the extent to which any of the actions in any final Air Quality Action Plan or Local Transport Plan can be shown as likely to reduce or prevent any public exposure above the criteria?
- Whether the site is located in an area with significant existing residential development already experiencing similarly poor air quality?
- Could the development interfere with or prevent the effective implementation of any actions in any proposed Action Plan or Local Transport Plan?

1.4.2.2 Polluting Development

- Are EU Limits Values for air quality expected to be exceeded as a result of the development?
- Are National Air Quality Objectives likely to be exceeded as a result of the development?
- How many members of the public may be exposed above these criteria?
- How significant is the deterioration in air quality?
- How significant is any breach of the criteria?
- Could the development interfere with or prevent the effective implementation of any actions in any proposed Action Plan or Local Transport Plan?

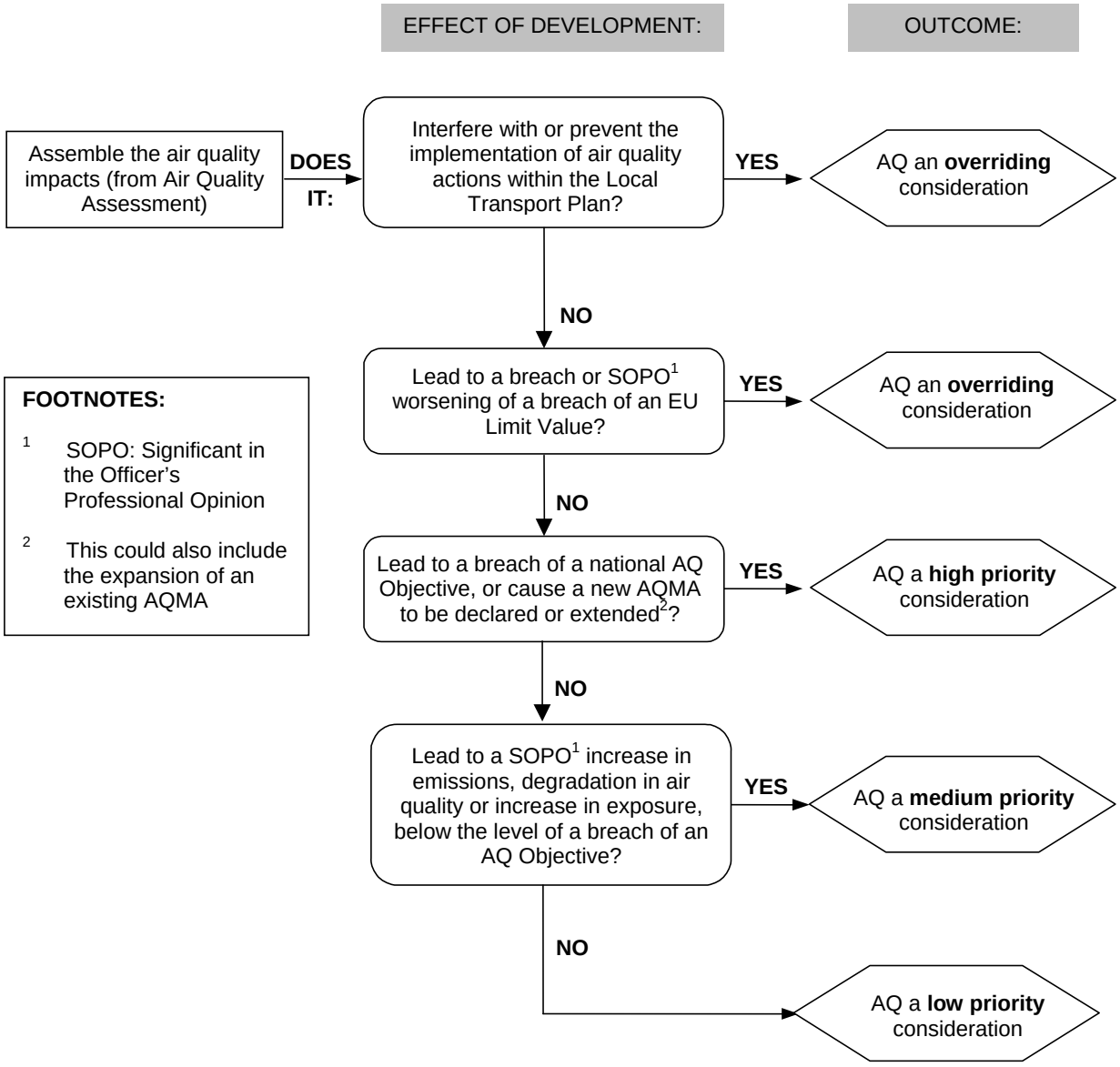
1.4.3 The developer has the responsibility for providing information to enable the Local Planning Authority to determine significance. Where uncertainty exists over the likely impact upon air quality or the expected concentrations, the local planning authority will take a precautionary approach.

1.4.4 The Local Planning Authority intends to use a flow diagram based upon the NSCA Guidance [7] shown below as a tool to assist in determining significance. It is important to note that the process is necessarily iterative and that ultimately decision making will depend upon the extent to which a developer is able to design out or mitigate the air quality issues. Therefore where air quality is likely to be of at least a medium priority significance, to avoid delays to the determination of a planning application, pre-application discussions and negotiations are essential.

1.4.5 It is important to recognise that any given development may give rise to some negative air quality impacts for example on a local scale, whilst being neutral or positive at the wider scale.

Assessing the significance of air quality

(based upon NSCA Guidance)



Note on SOPO

The factors to be considered in deciding if the increase is significant include:

Relative size of increase compared to pre-existing levels
Extent to which the increase approaches or exceeds objectives
Likelihood of other developments causing worsening or improvements in air quality
Number of people who may be affected by the increase

1.5 What measures can be taken to reduce the air quality impact to an acceptable level?

1.5.1 Air quality objectives are set for both short and long term time scales. Current evidence in Portsmouth suggests that the current pattern of land use gives rise to exceedance of annual objectives and the guidance below is mainly focused on this issue. Exceedances of short

term objectives may however also be an issue with certain types of development.

1.5.2 Irrespective of the significance of air quality issues for a particular proposal, developers are encouraged to formulate development proposals which seek to minimise additional air pollution and to preserve or enhance the existing air quality in the City and provide the highest quality environment for people to live and work.

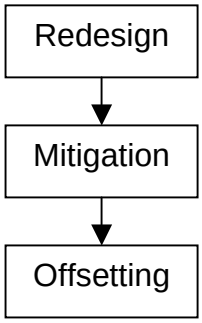
1.5.3 The extent to which air quality should influence the development proposals will depend upon significance. Having determined the significance of any air quality issue the following Table is a guide to possible action and outcomes.

Significance	Action necessary by developer	Outcome
Overriding	Developer must normally re-design or where this is not possible, introduce measures to mitigate the impact of poor air quality.	Normally refuse where impact remains overriding
High	Developer normally must redesign. Where this is not possible measures to mitigate the impact of poor air quality should be included. Measures to offset any air quality issues should be included	May refuse where the impact remains high
Medium	Developer should redesign if possible or develop measures to mitigate the effects of the deterioration in air quality as far as possible. Inclusion of measures to offset any air quality issues should be included.	May refuse if additional measures have not reasonably been included
Low	Developer may redesign or mitigate any impacts.	Application would proceed as normal

1.5.4 Where the local planning authority consider that the air quality issues are of at least medium significance it will expect developers to demonstrate that they have taken this issue into account. Where impacts are overriding or high, preference should be given to a fundamental re-design of the project. Avoiding air quality impacts that are overriding or high impacts should be a key driver in this process.

1.5.5 Where redesign cannot reasonably reduce the significance of the air quality issue, it may be acceptable to include measures to mitigate as far as possible, air quality issues that arise. These measures should not be considered as an alternative option to fundamental redesign but as a fall back position. By definition mitigation, will still result in a significant air quality impact remaining and therefore additional measures to offset the potential consequence of a development should also be considered. The degree to which any air quality impact has been designed out, where that is not possible, mitigated and the package of offsetting measures proposed will influence the ultimate planning decision. The decision will balance the residual significance against any other economic, social or environmental objectives of the Local Planning Authority.

Hierarchy of methods for addressing air quality issues:



1.5.6 The City Council accepts that in some cases it may not be possible or desirable to redesign a scheme for new sensitive development to reduce the air quality impacts to a moderate or low significance. This is particularly likely to be the case with small infill developments where existing sensitive uses are immediate neighbours and the development is in no worse a position than the neighbouring uses. In these cases the focus may be on mitigation and offsetting. However, mitigation based upon sealed and artificially ventilated building designs are not considered a desirable option and will only be accepted as a last resort.

1.5.7 With larger development sites or sites where future occupants might be exposed to higher air pollution concentrations than immediate neighbours, it is expected that the applicants will design acceptable solutions by considering in particular, site and internal layout. The aim should be to ensure that sensitive facades are a suitable distance from pollution sources such as busy roads. For mixed-use sites, generally sensitive uses should be placed in the least polluted parts of the site. This may result in sensitive uses being located at greater horizontal or vertical distances from busy roads. For such sites the City Council is unlikely to support residential developments that rely upon artificially ventilated and sealed buildings to protect the occupants. This is because in the City Council's view, sealed residential buildings that cannot be naturally ventilated are not desirable or sustainable.

1.5.8 Any proposed engineering measures, must be presented at the application stage as a sufficiently mature design to allow the city council to assess its adequacy.

1.5.9 The following part of this Chapter sets out some principles of good design and measures that can be used to mitigate and offset against air quality impacts. The list is not comprehensive and developers are encouraged to explore innovative measures.

1.5.10 Polluting Development

1.5.10.1 <u>Design</u>

Factors to consider include:

- Increasing the distance between any significant pollution source and existing sensitive uses.
- For larger or mixed use sites, arrange site layout to ensure sensitive and polluting development is adequately separated.
- Ensure that the development design allows for the effective dispersion of pollutants. Ensure high emission sources are not compromised by tall sensitive buildings.
- For large developments consider carefully the best location for car parks and significantly trafficked access roads.
- Ensure car park control systems minimise queuing in entry/exit and car parks have well designed circulation patterns
- In mixed use schemes consider provision of car free areas
- Design commercial/industrial premises to allow for 24 hour servicing
- Consider the impact of the development on the wider road network.

1.5.10.2 Mitigation

- Positively encourage the use of public transport and low emission transport and commit to monitoring air pollution through a transport management strategy (eg green travel plan)
- Minimise the need for travel.

1.5.10.3 Offsetting

- Provide a contribution to allow improvements in traffic management systems to reduce congestion, re-route traffic etc.
- Provide a contribution to allow changes in road design, e.g. increasing kerb width, one way systems, changed speed limits and improved signing
- Provide a contribution to allow development of improved public transport, and facilities to encourage cycling and walking

1.5.11 Sensitive Development

1.5.11.1 Redesign of Scheme

Factors to consider here include:

- Increasing the distance between the development façade and the pollution source.
- For larger or mixed use sites, arrange site layout to ensure sensitive development is not within the areas of poorest air quality
- Place sensitive uses at higher storeys only. There is no precise way of determining for any development site what is an acceptable height. A precautionary approach should be taken. It is important to ensure that uses at lower storeys are compatible with sensitive uses.
- Internal arrangement to present non-habitable rooms to polluted façades with suitable ventilation and fixed glazing.
- Avoid features encouraging residents to spend significant parts of their time in polluted external environments e.g. balconies

- Where integral car parks are proposed sufficient distance must exist between residential uses and ventilation systems. This may require detailed assessment.
- Provision of car free areas

1.5.11.2 Mitigation

- In some cases, fixed (unopenable) glazing with system for suitable artificial ventilation. Development that relies upon these measures is undesirable and will only be accepted as a last resort. Suitable ventilation systems will need to:
  - Take air from a clean location
  - Designed to minimise energy usage
  - Be sufficient to prevent summer overheating
  - Have robust arrangements for maintenance
  - Be designed to ensure satisfactory internal acoustics and prevent loss of amenity to neighbouring uses
- Avoid providing external doors communicating directly with habitable rooms on polluted façade

1.5.11.3 Offsetting

- Providing on and off-site measures to encourage and facilitate cycling including well designed, secure cycle stores and improved cycle routes
- Provide a contribution to improve bus services, bus stop provision or facilities
- Provide a contribution to allow new or improved traffic management measures (e.g. improved signalling and signing etc)
- Commit to establishing and funding car club set-ups
- Provide a contribution to allow footways to be widened

PART 2: AIR POLLUTION FROM INDUSTRIAL SOURCES REGULATED UNDER THE PREVENTION OF POLLUTION AND CONTROL REGULATIONS 2000

2.1 Introduction

2.1.1 Industrial Sites which are regulated under the Pollution Prevention and Control Regulations 2000 (PPC), as listed in Schedule 1 of PPC are dealt with under this section rather than under 'Part 3 Other Air Pollution Issues'. These are known as PPC Installations. (An overview of the main types of industrial processes listed in Schedule 1 of PPC is given in Table 1 at the end of this section).

2.1.2 These sites are regulated by the Environment Agency for the more polluting part A1 installations and Portsmouth City Council for the lesser polluting Part A2 and Part B sites. This document deals with Local Authority control although the Environment Agency will also need to be consulted on matters involving Part A1 Processes.

2.1.3 PPS 23 sets out general guidance on planning and industrial sources of pollution.

2.2 Consultation by Local Planning Authority with the Regulator

2.2.1 Consultation with the Regulator will be required in the following cases:

- Where the proposed use includes a PPC installation.
- Where the proposed use includes sensitive use and is situated within 250m of an existing or proposed Part A(2) or Part B PPC installation.
- Where the proposed use includes sensitive use and is situated within 500m of an existing or proposed Part A(1) installation.

2.3 Material Considerations

2.3.1 As defined in Part 1 any air quality consideration can be material, the following however will be regarded as particularly significant:

a) Those developments which might cause a detrimental effect on the emissions of pollutants from an existing or potential PPC installation and/or which compromise the ability of a PPC installation to meet the conditions of their permit.

b) Those developments which may lead to public exposure or exposure of a sensitive habitat to emissions from an existing or proposed PPC installation.

c) Those developments relating to a PPC installation which may impact on an existing or potential AQMA.

2.4 Applications in Parallel and Communication

2.4.1 In order to assess the above factors; it is recommended that all developments including uses which are required to be permitted under PPC also submit an application for a permit under PPC in parallel with the planning process.

2.4.2 Communication between Applicants, Planners, and the regulator is essential at an early stage to assess whether the proposed use of the development will fall under PPC or whether proximity to PPC installations may have an impact.

2.5 What The Planning Authority Will Do Next

2.5.1 The authority would generally require the developer to provide further information where a development may cause one or more of the material considerations listed. These would be considered as follows:

2.6 Ensuring Compliance with PPC and Assessing Public Exposure to Emissions from PPC Installations (Assessing 2.3.1a, b or c)

a) Any development relating to the modification or addition of plant, equipment or buildings within a site containing a PPC installation.

b) Any development involving public exposure due to being within range of an odour source or grounding of stack emissions or within range of potential exposure in the event of an abnormal emission at a PPC installation.

2.7 Risk Assessments

2.7.1 Some pollutants may be harmful to health. Development within a certain range of existing or proposed PPC installation may require sampling, monitoring and/or analysis of these risks.

2.7.2 Risk Assessments may be required in particular, in the following situations:

- A development close to the storage of chemicals at a PPC installation where there is potential for a release in emergency or abnormal situations.
- A development which due to its position has potential for exposure to hazardous particles or vapours which may cross a site boundary under abnormal conditions.
- A development which due to its position may impact on the dispersion of a pollutant from point sources at a PPC installation.

2.7.3 Risk assessments and associated monitoring and sampling exercises would be required to be carried out by a competent body to the satisfaction of the regulator.

2.8 Air Quality Assessments (Assessing 2.3.1c)

2.8.1 A development relating to a PPC installation within or within range of an AQMA would be required to carry out an AQA in accordance with the method laid out in section 1 if the proposal:

a) Would affect the mass emission of a relevant pollutant from an existing or proposed source from a PPC installation. And/or
b) Would affect the dispersion of a relevant pollutant from an existing or proposed source from a PPC installation. And/or
c) Would lead to new exposure to a relevant pollutant from an existing or proposed source from a PPC installation.

A relevant pollutant would be the pollutant(s) on the basis of which the AQMA has been declared.

2.8.2 Examples of the above:

An example of a). A new combustion unit is added to an existing site which would increase the mass emission of NOx.

An example of b). A development physically impacts on the topography of the area directly affecting dispersion of emissions by forcing the plume to ground before it has properly dispersed.

An example of c). The construction of a residential property within range of a plume grounding from an installation currently discharging particulates, thus giving rise to a potential new exposure to PM10.

2.9 Odour

2.9.1 Conditions relating to odour exist in all permits held by operators in Portsmouth. The requirements normally stipulate that no odour generated by the installation shall be perceived beyond the site boundary. Where an operator has been deemed to have used the Best Available Techniques (BAT) to reduce odour, however, some exposure beyond the site boundary may still be permitted.

2.9.2 There is potential for a development to impact on both 2.3.1a and b above where there is development within range of an odour from a PPC installation.

Table 1
Summary of main types of Industrial Processes found Under Schedule 1 of PPC i.e. those processes which may be PPC installations.

Gasification, liquefaction and refining activities
Heating of any metal in a furnace
Use or bulk storage of chemicals in tanks
Manufacture of organic and inorganic chemicals or refining of inorganic chemicals.
Use of isocyanates and certain other hazardous chemicals
Mineral processes (cement, lime, grinding and crushing of aggregate)
Manufacture of ceramic products or firing of clay products in a kiln
Mobile crushing plant
Tar and bitumen processes
Manufacture of glass or glass fibre
Activities involving asbestos
Activities using solvents e.g. printing, painting, adhesive coatings etc.
Large timber operations
Large fibre glassing operations
Rubber processes
Dry cleaners
Petrol Stations
Large combustion plants
Incineration or combustion of waste
Operation of a landfill facility
Disposal of hazardous waste
Recovery involving distillation or use of abated pollutants
Production of fuel from waste using heat
Processing involving animal carcasses
Large animal and vegetable food processing plants
Breeding of maggots
Intensive farming

PART 3: OTHER POLLUTION ISSUES

3.1 Introduction

3.1.1 A wide range of air pollution issues not covered in Part 1 and 2 may also be of importance for consideration. This guidance will only deal with the more common issues.

3.1.2 Typical air pollution issues include:

- Odour emissions from commercial / industrial sites, for example the emission of odour from restaurants and take away premises.
- The emission of dust and odour from major re-development projects
- The emission of combustion gases from flues and chimneys
- The emission of solvent fumes from small scale paint shops and commercial premises

3.1.3 These types of emission can cause detrimental effects on health but more usually can have an impact upon the amenity to neighbouring uses. In extreme circumstances some of these matters can be subject to statutory action under Part III of the Environmental Protection Act 1990 where the impact gives rise to statutory nuisance. This type of action however, does not protect amenity and is limited by the availability of statutory defences. The Local Planning Authority recognises that the planning system presents the best way of protecting amenity.

3.2 Odour Emission from Food Preparation

3.2.1 Development proposals for A3/A4/A5 uses can give rise to odour emission from extract systems or where attached to sensitive uses by the permeation of odour through the fabric of the building.

3.2.2 In respect of emissions from cooking extract systems, generally the Local Planning Authority expects that such systems should incorporate the following design features:

- The extract should discharge at a high level 1 metre above roof ridge height of any sensitive premises within 20 metres.
- Vertical discharge with sufficient efflux velocity
- Incorporate appropriate grease filters
- Incorporate suitable odour abatement equipment.

3.2.3 Where it is not possible to achieve a sufficiently high level discharge, the Local Planning Authority will normally not permit the development unless it can be demonstrated that a low level odour abatement system can operate effectively for the use proposed.

3.2.4 The effectiveness of any abatement equipment is highly dependant upon adequate maintenance. Where this is critical to the success of

the system the Local Planning Authority will require the developer to show how the system will be maintained and will require that maintenance occurs.

3.2.5 In some circumstances odour penetration through the structure of the building can pose a significant risk. This may be the case for example where residential uses exist immediately above commercial kitchens. In these circumstances the separating floor must be adequately sealed to prevent the transmission of odour.

3.2.6 Guidance has been produced by Department of Environment, Food and Rural Affairs (DEFRA). [8]

3.3 The emission of nuisance dust and odour from major re-development projects

3.3.1 All construction and demolition projects pose the risk of significant emissions of dust and emission from construction plant and vehicles. Where contaminated material is being removed from sites other air pollutants and odour issues may also be a significant risk.

3.3.2 Developers are encouraged to seek agreement with the pollution regulator (Public Protection Service) to agree appropriate means of control.

3.3.3 Advice on the control of dust from construction and demolition activities is contained in a joint Building Research Establishment / Department for Trade and Industry (DTI) publication [9].

3.3.4 Where the development phase is likely to extend over a significant period of time, is likely to pose unusual or very significant impacts the local planning authority may seek to control the impact through the planning system. In particular the control of off-site impacts from the routing of construction traffic will be considered.

3.4 The emission of combustion gases from flues and chimneys

3.4.1 Combustion products from flues serving domestic and commercial or industrial uses can give rise to a loss of amenity at sensitive sites where there is inadequate dispersion.

3.4.2 It is important to ensure that new development does not interfere with the effective dispersion of combustion gases from existing flues. In addition any new combustion sources should not have a significant impact on existing sensitive uses.

3.5 The emission of solvent fumes from small scale paint shops and commercial premises

3.5.1 Organic solvents are used in a range of commercial and industrial processes including:

- Car bodyshops
- Painting and varnishing processes
- Dry cleaning (after 2006 these will become prescribed processes)
- Nail varnishing
- Degreasing in car repair and engineering premises

3.5.2 Organic solvents can be odourous at low concentrations. Care must be taken to ensure that both emissions from stacks and fugitive emissions from doors and windows do not give rise to odour that can be detected within sensitive uses.

APPENDIX A: LOCAL POLICY CONTEXT - CITY PLAN REVIEW (PROPOSED MODIFICATIONS) 2005

DC5 AMENITY AND POLLUTION

New development will only be permitted where:

(i) it would not cause unacceptable levels of air, noise, vibration, light, water or other pollution or otherwise cause unacceptable detrimental effects to the amenity of adjoining or nearby occupiers;

(ii) the amenity of future occupiers or users of the proposed development is not adversely affected by existing or projected levels of air, noise, vibration, light, water or other pollution.

New development should be laid out and designed to minimise, as far as possible, the impact of the above matters. Particular consideration will be given to the location of sensitive land uses, especially housing, in the context of the above.

This policy is intended to control two issues - the potential adverse impacts which could arise from a development itself and, conversely, the adverse effects which could occur as a result of the inappropriate location of new development close to existing or projected sources of pollution or other amenity impacts. The City Council will seek to ensure that, at a local level, people can enjoy public places and their own dwellings without undue disturbance or intrusion from neighbouring uses, while, at the wider scale, developments do not raise ambient pollution levels unacceptably. For the purposes of this policy, air pollution includes odour and water pollutants include leachate.

Air quality is influenced by the emission of air pollutants in the city, input of pollutants from surrounding areas and atmospheric processes and dispersion. Across the whole city, the major source of air pollution is emissions from road traffic. Other significant sources include industrial processes. The Government's national air quality strategy, aimed at reducing public exposure to air pollution and improve air quality, includes air quality objectives for a number of important pollutants. The council's ongoing review and assessment of air quality has concluded that, given the current pattern of land and projected changes in traffic flow the objectives are not expected to be exceeded. This assessment will continue as more information becomes available and Government policy develops. The consideration of air quality impact will apply particularly to developments expected to generate significant additional traffic and sensitive developments located close to significant sources of air pollution. New developments that are expected to exceed the air quality objectives will not be acceptable. Developments that are expected to result in significant increases in air pollution in all or part of the city may also be unacceptable. A Supplementary Planning Document on Air Quality is currently being prepared.

Other potential sources of disturbance, such as noise, vibration, odour, light or contaminants, can also potentially have a significant effect on the quality of life of those living or working nearby. This tends to be greater when activities continue during unsociable hours. While PPS1 strongly promotes the creation of areas of mixed use activity, this must not be at the cost of local amenity, and there may be some circumstances where uses are incompatible. Where this is not the case, the most effective method of minimising such impacts is to give careful consideration to layout and design at an early stage. This applies equally to the generating and the sensitive uses. Other engineering or administrative controls, whilst not a substitute for appropriate layout, may also be necessary to minimise impact. Where necessary,

such measures may be required by planning conditions or secured through section 106 agreements. Despite the strong emphasis upon mixed use developments within this plan, it may be necessary in some circumstances to avoid granting permission for developments which could result in a loss of amenity for sensitive land uses.

Where a proposed development may adversely affect local amenity, the applicant may be required to submit an impact study as part of the application. This will need to include both an assessment of the likely impact and proposed remedial or mitigatory measures to minimise the impact.

In order to minimise light pollution and increase energy efficiency, the City Council will need to be satisfied that any external lighting scheme is the minimum required for security and working purposes and that it minimises potential pollution from glow and spillage. Conditions will be attached to any floodlighting approvals for landmark buildings and features (policy DC3) or for the evening use of sports facilities to control light intensity, spillage and hours of use. In determining the level of lighting appropriate to new developments, the council will have regard to the Institution of Lighting Engineers' Guidance Notes for the Reduction of Light Pollution (2000). Criterion (i) also includes the effect of adjoining or nearby development on the amount of privacy and daylight available to occupiers of existing buildings, especially residential.

Revised regulations prescribing the circumstances for preparing Environmental Impact Assessments came into force in March 1999 (amended November 2000). Proposals not requiring formal statements will still be considered in the light of other policies in this plan and all other material considerations, with further information being sought from developers as necessary.

APPENDIX B: LIST OF DEVELOPMENT TYPES TO INDICATE IF AIR QUALITY MAY BE A MATERIAL CONSIDERATION

Type of proposals	Tick if applicable
1. Processes governed by the Pollution Prevention and Control (PPC) regime.	
2. Sensitive development located in an area of poor air quality (AQMA or other area in excess of the Air Quality Objectives or limits) as identified in the latest review and assessment report	
3. Sensitive development close to existing prescribed processes	
4. Proposals with potential to significantly change road traffic characteristics on any busy roads (those in excess of 10,000 vehicles per day) in the City or any roads in AQMAs. Significant changes include: o Change in traffic volumes for example 5% (AADT or peak)[1], o Change in average vehicle speed or significant increase in congestion (+/-10kph). o Significant increase in the percentage of HDVs (includes HGVs and buses and coaches)	
5. Proposals that introduce or increase car parking facilities by 300 spaces or more.	
6. Proposals forming part of a major phased re-development of an area	
7. Proposals with particularly extensive development phases	
8. Proposals close to ecological sites or SSSI.	
9. Proposals that will enclose busy roads and reduce dispersion of pollutants	
10. Proposals that alter significantly the road network.	
11. Proposals that may interfere with the Local Transport Plan air quality actions	

Where air quality may be a material consideration, further advice should be obtained from the Public Protection Service.

A development proposal must be accompanied by an air quality assessment unless it relates to sensitive development within an existing or proposed AQMA or the City Council believes it already has sufficient information on existing air quality relevant to the site. In any case a developer may still wish to carry out their own site specific assessment.

[1] annual average daily traffic flow.

APPENDIX C: AIR QUALITY ASSESSMENTS FOR PLANNING APPLICATIONS

Guidance for developers and consultants

SUGGESTED TOPICS FOR INCLUSION IN AIR QUALITY ASSESSMENTS WHERE MODELLING IS REQUIRED

This note is designed to set a framework for air quality practitioners on elements that should form part of an appropriate Air Quality Assessment (AQA)[2] to ensure a relevant assessment addressing the significance of the impact of any proposed development.

Where air quality may be a material consideration, further advice should be obtained from PCC's Public Protection Service.

Requirement for a provision of an AQA as a part of the planning application should be based on the physical characteristics of the proposed development and /or the changes in emissions (e.g. change in road traffic flows predicted and/ or anticipated). An AQA is a quantitative study undertaken to estimate the likely change in pollutant concentration (relevant to the national air quality objectives[3]) arising from the proposed development compared with the ambient concentration before the release. This process can be quantified effectively by an air quality dispersion modelling study.

A development proposal must be accompanied by an AQA unless it relates to sensitive development within an existing or proposed AQMA or the city council believes it already has sufficient information on existing air quality relevant to the site. In any case a developer may still wish to carry out their own site-specific assessment.

An AQA 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) and any other proposals which planning officers consider are likely to proceed, to ensure that a realistic scenario of air quality is presented for both the "without development" and "with development" predictions of the air quality impact of the development.

An AQA ought to demonstrate how a development would affect air quality (either negatively[4] or/ and positively[5]). This can be achieved with detailed study using dispersion modelling of the following three scenarios:

1. Assessing the current air quality situation in the domain study;
2. Predicting statistics relevant to the air quality EU limit and objective values without the development in place, i.e. the baseline scenario;
3. Predicting statistics relevant to the air quality EU limit and objective values with the development in place for the completion date.

An AQA should consider the following factors:

GENERAL ISSUES

The assessment should aim to be as consistent as possible with the latest air quality assessment work carried out by Portsmouth City Council.
Set out the aim of the assessment.

[2] This is also termed "Air Quality Impact Assessment" (AQIA), it is a detailed study of an effect of a proposed development on air quality, particularly if the development may impact on air quality in an Air Quality Management Area (AQMA).
[3] The Air Quality (England) Regulations 2000, SI 928/2000
[4] Negatively if the air quality is made worse.
[5] Positively if the air quality is improved.

Description of the site and modelled scenarios.
The proposed development should be clearly identified on an OS map in relation to nearby landscape.
The modelled area should also be clearly identified on an OS map.
All relevant sensitive receptors should be identified and represented on an OS map in relation to the modelled domain for all scenarios considered.

POLLUTANTS AND AIR QUALITY GUIDELINES

Identify and justify the list of air pollutants being considered in the modelling section. This includes the pollutants speciation when necessary (e.g. oxides of nitrogen).
Relevant air quality objectives and EU limit values appropriate to the modelled pollutants should be included and discussed.

AMBIENT/BACKGROUND LEVELS

The determination of an appropriate background concentration should not only be determined for each pollutant being considered but also justified.
Monitoring if required should be agreed.

MODEL DESCRIPTION

There is a selection of three different levels of AQA:

- Screening methods: A generic approach based on a limited number of variables designed to identify the need for detailed AQA. This is also used to compare various scheme designs.
- Local scale dispersion models to address single road and/ or single industrial process:
- Regional scale dispersion models to deal with air pollution sources over a large area

The selected Air Quality Dispersion Model should fit the purpose and be based on established science, i.e. it should be suitable for the scenario being modelled.

The model's information should include model name, type of model (Gaussian, new-generation etc), supplier and version of model used should be reported.
The model should be capable of predicting statistics relevant to the air quality objectives.
Different air quality dispersion models are employed for the purpose for which were built and can accommodate special treatment for special environment. This should include relevant information on specialised model treatments, for instance short-term (puff) releases, coastal models, fluctuations, photochemistry, wet/dry deposition, flare releases, etc.
The AQA should document and justify the use of any inclusion of specialised model treatment.

EMISSIONS PARAMETERS

The required input data should be presented in a tabulated format.

- **Point source.**

Parameter	**Units**
Stack location	OSGR
Stack height	m
Pollutant Emission rate for individual pollutants (Specify the Pollutant).	g/s
Exit diameter	m
Exit temperature	K, ^{o}C

Efflux velocity(actual), and/ or	m/s
Volumetric flow rate(actual)	m^3/s
Whether the release is continuous or intermittent	Number of hours/day/week/month/year
Whether there are fugitive emissions	

- **Line source.**

If a Traffic Assessment is required it is important that the data used in the air quality assessment is consistent with its findings. Any traffic data used in the model must be agreed with the authority's transport planners.

The input data for road traffic used in the model should be specified in the report including:

- AADT and or peak
- Average speed.
- Diurnal profile (s)
- HGV composition

MODELLED DOMAIN/ RECEPTORS

The area affected by the proposed development should be adequately covered by the model output.
The resolution of the model receptor grid should be 10m.
If different from the above, the scale of the modelled area/ domain and the resolution of the model receptor grid used should be justified,
The height at which the modelling exercise was performed should be justified.

METEOROLOGY/ SURFACE CHARACTERISTICS

Portsmouth is a coastal city. The meteorological file to be used should reflect Portsmouth environment and should be taken from an appropriate site (within a reasonable distance of the area to be modelled, and with similar topography)
One year of hourly-sequential data should be used.
A " typical" or "worst–case" meteorological data can be used as long as they are justified and agreed with the local authority.
For consistency with Portsmouth City Council Detailed Assessment report Hurn airport meteorological data is recommended.
The meteorological data information should include:

- The year of the met file used.
- Presentation of windrose of the data used for clarity,
- The format of the data used (either hourly sequential or long-term statistical).
- The source of the met file (e.g. Met Office).

All variables used in the model should be reported e.g. roughness length, albedo, Bowen ration/Priestly-Taylor parameter should also be reported.

TREATMENT OF BUILDINGS AND SITE PLAN

Building near/ around the stack should be identified and reported with their relative locations, rotation, height, and on a site map, and if necessary include in the AQA.
The building treatment inclusion/ exclusion should be justified in the assessment.
Committed development building should be taken into account.

SENSITIVITY ANALYSIS

In some circumstances it may be necessary to include a sensitivity analysis.

ASSESSMENT OF IMPACTS

Predict statistics relevant to the air quality objectives and EU limit values without the development in place.
Predict statistics relevant to the air quality objectives and EU limit values with the development in place.
For nitrogen dioxide, include NO_x predictions and ensure that a relevant conversion scheme for NO_x/ NO_2 is used for different averaging time if appropriate, with appropriate input data. Any assumption should be justified
Present outputs on a suitably scaled detailed map covering the modelled domain.
The model output results should be included in an Appendix to the report and should clearly be represented as follows:

- Numerically in a tabular form, indicating:
  - Total (process plus background) concentration values and locations of maximum air quality impacts and the process contribution to this
  - Percentage impact upon the relevant air quality objective or EU limit values.
- Graphically in contour plots relative to each air quality objective being assessed indicating:
  - Pollutant name being assessed,
  - Modelling scenario(s) being considered,
  - Averaging time and appropriate percentile plotted,
  - Geographical extent of areas of exceedance when applicable,
  - Colour scale for all contours plots relating to a particular air quality objective.

Discussion should focus on any potential breaches or not of relevant air quality standards or objectives.
The AQA should address:

- The model uncertainty and take it into account.
- Assessment of different stack heights and emission characteristics.
- Account for different process operation scenarios.

Allow for an audit trail.
Any significant assumptions made should be specified.

MODEL INPUT FILES

All input files for the air dispersion model used in the assessment should be included as an Appendix to the report. This will permit for the model to be audited in terms of model configuration and the parameter values used to define all sources and meteorological inputs to the model.

MODEL VERIFICATION

Model verification and adjustment should be carried out in accordance the guidance in LAQM TG(03) taking local monitoring data into account.

REPORT SUMMARY

Information required to assess the significance of the likely impacts of the proposed development.

- The changes in emissions to air as result of the development, by source sector, pollutant and time.
- The impact that these emissions will have on ambient air quality,

- Where possible and particularly in the case of residential developments, the likely changes in population exposure over time,
- Any exceedance of air quality objective brought about as result of the development, or any worsening of a current breach.

APPENDIX D – GLOSSARY OF AIR QUALITY TERMINOLOGY

Air Quality Assessment (AQA)	An assessment of the impact of a development on the levels of certain pollutants in the local area.
Air Quality Management Areas (AQMAs)	Areas where the air quality objectives are likely to be exceeded. Declared by way of an order issued under the Section 83(1) of the Environment Act 1995.
Air Quality Objectives	*National policy targets set out in the Air Quality Regulations 2000. Objectives are expressed as pollution concentrations over certain exposure periods, which should be achieved by a specified target date. Some objectives are based upon long-term exposure (e.g. annual averages) other short term objectives are statistical. Objectives only apply where a member of the public may be exposed to pollution over the relevant averaging time.*
Best Available Techniques (BAT)	The basis for determining the appropriate technique for reducing pollution under the Prevention and Control of Pollution Regulations.
LAQM.TG(03)	Local Air Quality Management Technical Guidance (2003). This document provides national advice on how local authorities should assess air quality.
Exceedance	Concentrations of a particular air pollutant is expected to be greater than the appropriate Air Quality Objective.
Limit Values/EU limit values	The maximum pollutant levels set out in the EU Daughter Directives on Air Quality. In some cases the limit values are the same as the national air quality objective but may allow a longer period for achieving.
Line source	Mathematical models are important tools for assessing air quality. Necessarily they require a number of assumptions to be made. Sources such as constantly flowing road traffic is typically modelled as a line source rather than as a large series of individual cars.
Mitigation	The SPD places most emphasis on significant air quality impacts or issues by the correct design or redesign of the development. Where it is accepted that redesign cannot resolve the air quality issues satisfactorily mitigation may be acceptable. Mitigation measures will minimise (but not necessarily remove) the impact of or effect of poor air quality on a development.
National Air Quality Objectives	See Air Quality Objectives.
National Air Quality Strategy	The Air Quality Strategy for England, Scotland, England, Wales and Northern Ireland. The current version at the time of producing this SPD was January 2000. This sets out the Governments strategy for improving air quality in the UK. It makes reference to the importance of the planning process.

NO_2	Nitrogen Dioxide. Currently this is the only air pollutant in Portsmouth which is expected to exceed national air quality objectives.
NOx	Nitrogen oxide plus nitrogen dioxide. Many pollution sources emit both nitrogen oxide and nitrogen dioxide directly into the atmosphere. However, once in the atmosphere nitrogen oxide can be converted to nitrogen dioxide. Therefore it is important to know the amount of both NOx and NO_2.
Offsetting	Measures which 'compensate' for anticipated increases in pollution in the area. This might be for example by funding more general measures to improve air quality in the City.
PM10	Fine particulate matter with a diameter of less than 10 microns diameter (full definition available in the National Air Quality Strategy).
Part A1 and A2 Processes	Industrial processes which are regulated under the Pollution Prevention and Control Regulations for emissions to all media (i.e atmosphere, land and water).
Part B processes	Industrial processes which are regulated under the Pollution Prevention and Control Regulations for emissions to air only.
Point source	A specific location where a known concentration of a certain pollutant is emitted such as a discharge stack.
Polluting development	A development which will directly or indirectly increase levels of relevant pollutants. This may include industrial processes but may also include developments which could cause increased traffic emissions within the City. These types of developments may increase pollution concentrations within the City.
PPC Regulations	Pollution Prevention and Control Regulations 2000 (as amended).
Risk Assessments	A comprehensive assessment of the risks associated with a particular hazard which is relevant to the development site.
Sensitive development	A development which would allow users of the site to potentially be exposed to pollutants above the objective for the relevant period. For example, the introduction of a new residential development in an area where an air quality objective is already exceeded, would create the potential for the exposure of residents to poor air quality above the objective. Incidentally, this type of development may also generate significant additional traffic flow and also be a polluting development.

REFERENCES

[1] The Air Quality Strategy for England, Scotland, Wales and Northern Ireland, Department of Environment, Transport and the Regions, The Stationery Office, 2000
[2] Pollution Prevention & Control, Regulations, 2000
[3] DEFRA, LAQM.TG(03), 2003
[4] Portsmouth City Council, Updating and Screening Assessment, 2003
[5] Portsmouth City Council, Detailed Assessment of Air Quality, 2004
[6] Highways Agency, Design Manual for Roads & Bridges (DMRB), 1997
[7] NSCA, Development Control: Planning for Air Quality, 2004
[8] DEFRA, Guidance on the Control of Odour and Noise from Commercial Kitchen Exhaust Systems, 2005
[9] Kukadia, V, Upton, S, Hall, D, Control of dust from construction and demolition activities, 2003

SOURCES OF FURTHER INFORMATION

Portsmouth City Council website (http://www.portsmouth.gov.uk/)

Links to:

1. Current information on air quality in the City
2. Location of Air Quality Management Areas
3. Location of existing prescribed processes

DEFRA (http://www.defra.gov.uk/)

1. Information on Air Quality and Prescribed Processes

University of West of England (http://www.uwe.ac.uk/aqm/index.html)