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Part IV of the Environment Act 1995 Local Air Quality Management

Policy Guidance: Addendum
LAQM.PGA(05)

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Chapter 1

Introduction

1.01 This guidance document is intended to help local authorities with the integration of their air quality action plans (AQAPs) into local transport plans (LTPs), where appropriate. It supplements the *policy guidance LAQM.PG(03)* issued in February 2003 under section 88(1) of the Environment Act 1995 in England and Wales and should be read in conjunction with the *Full Guidance on Local Transport Plans* published by the Department for Transport (DfT) in December 2004. Under Section 88(2) of the Act, local authorities are required to have regard to this guidance when carrying out any of their duties under, or by virtue of, Part IV of the Act.

1.02 This guidance applies to all local authorities in England only (however, different arrangements exist for London local authorities with regard to transport planning). London local authorities are required to produce local implementation plans (LIPs) in accordance with LIP guidance issued in July 2004. London local authorities must make reference to air quality action plans in their LIPs, where relevant. London local authorities should nevertheless have regard to the following sections within this guidance, which will apply to them, as follows:

- Arrangements with respect to AQAPs for local authorities rated as excellent (apart from paragraphs 1.11 and 1.15-1.17 which relate to two-tier authorities)
- Evaluation of cost effectiveness and wider scale issues (Chapter 2)
- Annual Progress Reports (paragraph 1.43)
- Additional information for inclusion in Air Quality Progress Reports (paragraphs 1.45-1.46)

Air Quality Action Plans

Background

1.03 Where local authorities have designated air quality management areas (AQMAs), they have a duty under section 84(2) of the 1995 Act to produce an AQAP (with the exception of authorities rated as “excellent” under the Comprehensive Performance Assessment (CPA) – see paragraphs 1.09-1.18 below). AQAPs set out the measures to be implemented to work towards meeting the air quality objectives in the designated areas.

1.04 In December 2001, the Office of Deputy Prime Minister (ODPM) set out proposals to reform council services in their Local Government White Paper, *Strong Local Leadership – Quality Public Services*. The White Paper (paragraph 4.30) states, that ‘We (i.e. HMG) will no longer require the

production of a separate air quality management action plan where an air quality problem arises because of transport pollution. Instead, councils will be free to address this through their local transport plan (LTP)'.

1.05 The Government has since set in place a system for giving more freedoms and flexibilities to local government. Announcements were made by ODPM in November 2002 and November 2003 (see information at http://www.odpm.gov.uk/stellent/groups/odpm_control/documents/contentservertemplate/odpm_index.hcst?n=1965&l=2). One of the aims has been to reduce the burden on local authorities of the requirement to produce and submit plans.

1.06 *LAQM.PG(03)* set out specific guidance on drawing up an action plan (see chapter 3 for information – the guidance can be found at <http://www.defra.gov.uk/environment/airquality/laqm/guidance/pdf/laqm-pg03.pdf>) and made reference to the links between AQAPs and LTPs. This current guidance explains in more detail how to address air quality issues in the LTP, and where doing so is not appropriate.

Local Transport Plans

1.07 Local Transport Authorities are required to produce a LTP as a 5-year programme for delivering transport infrastructure and services that achieve transport objectives at the national and local level. When preparing their LTP, Local Transport Authorities should consult with other local authorities, community groups and service providers. They should also liaise closely with the Highways Agency.

1.08 Most Local Transport Authorities in England, outside London, are required to submit their provisional second round LTPs by 29 July 2005 and their final LTPs by 31 March 2006 to cover the period 2006/7-2010/11. Authorities rated as excellent under the Comprehensive Performance Assessment, which produce their own plans or produce joint plans exclusively with other CPA excellents are not required to submit LTPs. The other exceptions are the Cambridgeshire and West Midlands Joint LTP area, which produced early second round plans and the Isles of Scilly. Within the second round LTPs, authorities should focus on delivering outcomes that are relevant to the authority and achieve the four shared priorities; these are: road safety; congestion; air quality; and accessibility. DfT issued guidance for the second round of LTPs in December 2004.

Arrangements for Local Authorities rated “excellent”

1.09 In delivery of the “Freedoms and Flexibilities” agenda, the Government made an Order under Section 6 of the Local Government Act 2000 which came into effect on 1 February 2005, and removed the duty for those local authorities rated as “excellent” to produce seven statutory plans, including LTPs and AQAPs.

1.10 The Section 6 Order includes paragraphs, which allow excellent authorities to voluntarily choose to produce statutory LTPs or AQAPs. Excellent authorities have to follow the statutory legislation under the Transport Act 2000 and Environment Act 1995 respectively, and the relevant statutory LTP/LAQM guidance, should they choose to produce them. Some excellent local authorities may find it useful to continue to produce an AQAP or LTP, as good management practice, as some authorities indicated in their consultation response to the Section 6 Order.

1.11 Sections 5.17 to 5.27 of DfT's *Full Guidance on Local Transport Plans* (December 2004) set out arrangements for CPA excellent authorities. This includes a set of minimum requirements for all these authorities (outside London).

1.12 Where excellent authorities have AQMAs, they still have a statutory duty to work towards meeting the air quality objectives, so they will still have to take action or implement measures in co-operation with stakeholders with the aim of improving the local air quality, even if these are not detailed in an AQAP. Should an authority choose not to produce an AQAP, it would not be required to formally submit action plan progress reports detailing progress on implementation of the measures; however, Defra would welcome any information as necessary on what action the authority is taking.

1.13 Should an excellent authority in future cease to be classified as excellent, that authority will be treated as excellent for a period of one year. Should that authority fail to regain its excellent status that authority would have to produce an AQAP within 12-18 months from the end of the one year period.

1.14 Some excellent authorities will already have AQAPs in place. As these AQAPs are in existence prior to the Section 6 Order coming into force, those authorities must keep their action plan measures under review, and report on progress on implementation of the measures (see paragraph 1.42 and 1.43 below)

1.15 With regard to two-tier authorities, where the County Council is rated as excellent and any one of the shire districts with AQMAs has a lower classification, it is important to note that the County Council still has to submit "as a minimum" requirement for the LTP a set of provisional and final targets relating to the mandatory indicators and trajectories (including for air quality, where applicable) by 29 July 2005 and 31 March 2006 respectively (see paragraph 5.19 of DfT's *Full Guidance on Local Transport Plans*), so the shire districts will need to provide information on air quality to the County Council, as necessary. Furthermore the County Council may decide to produce a full LTP in accordance with DfT's *Full Guidance on Local Transport Plans*, in which case any of these shire districts should look to integrate their air quality action plans into the LTP, where local road transport is the primary source. Only following confirmation from the County Council that they do not intend to produce a full LTP in accordance with DfT's requirements (see paragraph

5.25 of DfT's *Full Guidance on Local Transport Plans*), would the Department recommend that the shire districts produce a stand alone AQAP.

1.16 Where the County Council has a non-excellent classification and any of the shire districts with AQMAs are rated as excellent, it will be up to the shire districts as to whether they choose to integrate AQAPs or air quality information into the LTP. It would, however, be in the interest of the shire districts to feed air quality information into the LTP, along with having to contribute to the set of provisional and final targets relating to the air quality mandatory indicator and intermediate outcome targets, where AQMAs exist. Whether or not the districts choose to fully integrate their action plans into the LTP, they will still have to take action or work with the County Council to work towards meeting the air quality objectives.

1.17 Where both the County and the shire district are excellent, they will at least have to meet the minimum requirement by producing a set of provisional and final targets relating to the mandatory indicators. It will be up to both the County and the shire district jointly as to whether to choose to produce a full LTP and integrated AQAP.

1.18 The Secretary of State's reserve powers under section 85 of the 1995 Act have been amended by the section 6 order in that the Secretary of State may no longer direct an excellent authority to produce an action plan. However, the Secretary of State may direct an excellent authority to exercise its powers in pursuit of the air quality objectives.

Air Quality Action Plans and LTPs: Taking the integration process forward

1.19 It will ultimately be up to those local authorities with AQMAs to decide whether they should integrate their AQAPs into the LTP. However, it is recommended that integration should take place, where, for example, local road transport is identified as a major source of local air pollution concentrations (aside from background concentrations) within the AQMA or where local road traffic is the major source of predicted exceedences of the air quality objectives.

1.20 Motorway and trunk road traffic is outside the scope of the LTP. However, those authorities with AQMAs relating to trunk roads/motorways should report within the LTP on any joint work with the Highways Agency and also include any road transport measures within the local authorities' remit such as, for example, workplace travel planning, car parking schemes, that will improve air quality in the AQMA. In addition, authorities are required to report in the LTP on the impact that de-trunked roads (as any other local road) have on pollutant concentrations within their area

1.21 For those authorities that fit the category as stated in paragraph 1.19 above, and have other significant sources that contribute to the pollutant

concentrations, they should report on any other **key** non-transport measures by attaching an annex to the LTP. This annex should summarise the options that were considered, including costs and impacts, and list the chosen measures for implementation.

1.22 In future, for all other AQMAs, which primarily relate to industrial processes, other transport sources, i.e. shipping, motorways/trunk roads, or where for example, local road transport sources only form a small part of the air quality concentrations within the AQMA, those local authorities should continue to produce a stand-alone AQAP (unless they are classified as excellent – see paragraph 1.09-1.18) in accordance with the requirements set out in chapter 3 of policy guidance *LAQM.PG(03)* (as well as taking into account the further guidance on cost-effectiveness in Chapter 2 below and Annex 1), and produce an LTP which addresses, as far as possible, air pollution originating from local road transport (see paragraph 1.20 above in relation to AQMAs due to motorways/trunk roads).

1.23 Local authorities that have integrated their AQAP into the LTP, should circulate the air quality sections/information to the statutory consultees as set out in schedule 11 of the Environment Act 1995 for consultation

1.24 Where an authority integrates an action plan into the LTP, we would also encourage those authorities to produce a separate summary document of the full AQAP measures within the AQMA area for engagement with the public and other stakeholders.

Benefits of integrating Air Quality Action Plans and LTPs

1.25 There are a number of advantages for incorporating an AQAP or taking air quality considerations into account within the LTP, as follows:

- Road transport is a major source of local air pollution. A large majority of the AQMAs are traffic related so it makes sense to integrate those action plan measures which deal with traffic management, congestion relief into the LTP;
- It will help increase the profile of air quality in transport planning and it will also help authorities take a more balanced overview of the other LTP transport measures in respect of the other key priority areas: congestion; accessibility; and road safety;
- It should increase communication across local authority departments in unitary authorities, i.e. environmental health and transport planners would have to work together on the LTP and this should ensure that air quality is being dealt with in a more corporate and multi-disciplinary way;

- In two-tier authority areas, this should further help to strengthen links between the county council and the districts in handling air quality and transport related issues (county councils already have an important role to play in working with the district authorities on AQAPs); and
- It can assist with funding schemes that benefit air quality.

Non-AQMA authorities

1.26 Even if an authority does not have any AQMAs, they are recommended to include any information within the LTP, as follows:

- the outcomes of the latest review and assessment work to show the current status of air quality across the LTP area;
- highlight any major sources of air pollutants, where possible;
- identify any air quality benefits resulting from the proposed LTP measures aimed at other shared priorities (i.e. congestion relief); and
- feed local/regional air quality strategies into the LTP, by highlighting key specific transport and non-transport policies, where applicable.

1.27 Local authorities without AQMAs do not have to set out annual trajectories or indicators.

Two-tier authorities

1.28 In two-tier areas, county councils should be aware as to whether any of their shire districts has AQMAs relating to transport and work closely with them all to obtain the relevant information for integration of air quality within the LTP.

1.29 County councils have a duty under section 86 (3) of the Environment Act 1995 to put forward proposed actions which they themselves can implement to work towards meeting the air quality objectives in AQMAs. County councils should therefore include these measures within the air quality section of the LTP.

1.30 The LTP should include statements from shire district councils, especially those with AQMAs, setting out the districts' views on the measures in the transport plan. If any district authority is unable to reach agreement with the county council, that authority should inform Defra as early as possible (please also see paragraphs 1.15 – 1.17 setting out arrangements for authorities rated as excellent within the two-tier system) .

1.31 County Councils should also be open to including information on air quality within the LTP, even where their shire districts do not have any AQMAs (see paragraph 1.26 above).

1.32 The Secretary of State for Environment, Food and Rural Affairs has reserve powers under section 86 of the 1995 Act to require county councils to submit proposals to the district council, as well as modify those proposals and/or to implement any measures, should the county council be failing in its duties, or the actions are inappropriate, or developments in science and technology have rendered the actions inappropriate, or it appears that the objectives are not being achieved within any AQMA.

What should a LTP include on air quality issues?

1.33 The general aim of the integration process is to take a common approach to air quality and the other key shared priority areas. There should be a balance within the LTP between those schemes that are being implemented to tackle other key priority areas, such as congestion, which can have a beneficial impact on air quality and those schemes/measures that are being implemented specifically to tackle air pollution emissions, such as low emission zone, bus quality partnerships, etc..

1.34 The LTP should include the following information:

(a) A summary of the air pollution situation – for example, the number of AQMAs, and the main sources. This will build on the air quality review and assessment work, particularly the further review and assessment indicating the source apportionment, i.e. a breakdown of the sources – it might also be useful to include a picture/map of the AQMA(s) as an annex;

(b) Local authorities will have to show that they have considered **all** available measures to tackle the sources and that these measures have been considered on the grounds of air quality impacts, cost effectiveness and feasibility. It would be useful to include a table setting out both the costs and anticipated air quality improvements for each of the principal measures, and to indicate whether these proposed measures will deliver the improvements required to work towards meeting the objectives. A ranking of the measures, based on air quality impacts, their cost-effectiveness, feasibility and timescale should also be included (see further details in Chapter 2 below and Table A1 in Annex 1 which sets out a suggested approach);

(c) Local authorities should also set out the wider environmental, social and economic impacts of the proposed principal measures. Where possible these should be quantified, (for example, a particular scheme is expected to reduce noise levels or overall CO₂ emissions by 4 per cent per annum). This is consistent with the guidance in third bullet point, paragraph 3.07 in LAQM.PG (03);

(d) There should be a summary of **all** the chosen measures that will be implemented, incorporating all the local transport measures, regardless of whether or not the measures are to be funded through the LTP (all key non transport measures can be included in an annex), setting out:

- the main impact assessments (looking at the reductions towards meeting the air quality objectives);
- the wider environmental, economic and social consequences of each option;
- target dates for implementation of the measures;
- responsibility for the action (i.e. relevant local authority department, external stakeholder);
- indication of the funding mechanism for the measures; and
- how the authority will monitor the progress on implementation of the measures.

(e) Local authorities should set out, where possible, a 2004 baseline, and a 2010 target(s) relating to pollutant concentrations **in those calendar years** (as opposed to financial years set for the other mandatory targets) supplemented by annual trajectories for progress against target(s) for “intermediate” outcomes (Setting baseline and targets by calendar year is in line with the review and assessment process, in which authorities report on a calendar year basis),

Examples of intermediate outcomes are as follows:-

- total transport emissions within the AQMA area or area of exceedence (depending upon the circumstances)
- reduction in transport emissions related to specific key action plan measures
- bus patronage
- reduction of number of vehicles on the road (see paragraphs 1.35-1.36 below for further information on outcomes and trajectories)

Local authorities should demonstrate that any risks for not meeting the target(s) have been considered;

(f) There should also be evidence of internal and external consultation on the proposed measures that have fed into the development of the LTP, and how stakeholders have been involved in the process (please see paragraph 1.23 with regard to consultation); and

(g) Where an authority has a local/regional air quality strategy, it should also use that strategy to inform the LTP process by highlighting specific transport and non-transport policies on air quality, as applicable.

1.35 Within the LTP process, DfT are encouraging local authorities to set ambitious yet realistic targets for key outcome indicators to measure the achievement of the four shared priorities, including air quality. With regard to the air quality outcome indicator, we are suggesting that authorities should set a 2004 baseline of the pollutant concentrations within the AQMA area or area of exceedence and a target for 2010. Local authorities are expected to set annual trajectories for assessment against the targets, however, it is accepted that it would be difficult to set robust trajectories for a concentrations indicator due to outside influences such as the weather in any given year.

1.36 Due to these circumstances, local authorities are therefore encouraged to also set targets for intermediate outcome indicators, so that annual trajectories can be used to measure progress in working towards meeting the air quality objectives. Some examples of intermediate outcome indicators are set out in paragraph 1.34(e) above but authorities are free to choose other appropriate intermediate outcome indicators that may apply to specific measures within the AQMA area. Further guidance on setting intermediate outcomes will be made available in the form of Frequently Asked Questions on the Action Plan Helpdesk.

Local Authorities with existing Air Quality Action Plans

1.37 It is recommended that those local authorities that already have AQAPs in place that meet with the criteria set out in paragraph 1.19 should either integrate the existing AQAP into the LTP (and this would supersede the existing action plan) or revise the AQAP in light of the LTP2 process to take on board any other new measures that have been identified for implementation.

1.38 Where local authorities have AQAPs in place that do not meet the criteria as set out in paragraph 1.19 these authorities will continue to have stand alone AQAPs, on which they will have to report progress.

Strategic Environmental Assessment

1.39 Directive 2001/42/EC on assessment of the effects of certain plans and programmes on the environment (known as the Strategic Environmental Assessment (SEA) Directive) has been transposed into UK law by the Environmental Assessment of Plans and Programmes Regulations (the SEA Regulations), and came into force on 20 July 2004. The Directive requires environmental assessments to be carried out for a range of plans and programmes likely to have significant effects on the environment.

1.40 The SEA Directive will apply to all LTPs. It gives authorities a duty to produce an environmental report assessing the likely significant environmental effects of implementing the plan. In defining the scope of the environmental report authorities will need to consult with the Consultation

Bodies designated under the SEA Regulations (that is, the Countryside Agency, English Heritage, English Nature, Environment Agency). The environmental report should accompany the proposed LTP at each consultation stage with the public and the Consultation Bodies. This environmental report should cover the likely effects of the measures on local air quality and any other significant environmental effects. Authorities should refer to the ODPM Practical Guide to the Directive (issued as a consultation draft in 2004 and due to be published in its final form in 2005). This is available on the ODPM website at http://www.odpm.gov.uk/stellent/groups/odpm_planning/documents/page/odpm_plan_029817.pdf

1.41 For stand alone AQAPs, the SEA Directive may or may not apply depending on whether the plan meets the criteria (for example, whether the AQAP “sets a framework for future development consent of projects”). The ODPM Practical Guide includes a diagram to help authorities determine whether the Directive applies in such cases.

Annual Progress Reports

1.42 For those AQAPs that have been integrated within the LTP, DfT and Defra will work on arrangements for integrating future annual reporting from 2007. 2007 is the first year in which progress reporting on the second local transport plans will be needed. In the interim, authorities should send Defra the table as set out in Box 3.1 in LAQM.PRG(03), which sets out the recommended format for the progress reporting on air quality action plans by each April, until arrangements change. Any authority whose AQAP is strongly linked with the first LTP may however choose, subject to the agreement of both Defra and DfT, to report on progress through the LTP APR until the new arrangements begin in 2007.

1.43 For all other stand-alone AQAPs, authorities are also still expected to submit their AQAP progress reports in the recommended format by April of each year. This can be submitted at the same time as any Air Quality Progress Report, where applicable.

1.44 In future, where authorities declare AQMAs during the 5 year LTP cycle, they should not wait until the next LTP round for integrating the AQAP into the LTP, they should instead integrate the action plan into the next APR within 12-18 months following designation of the AQMA(s), or where the impacts of the air quality designation are particularly substantial, they may wish to consider reviewing their LTP as suggested in paragraph 2.72 of DfT’s LTP Guidance published in December 2004.

Additional information for inclusion in Air Quality Progress Reports/Action Plan Progress Reports

1.45 In order for Defra and the Devolved Administrations to keep a check on progress in working towards meeting the air quality objectives, it would be useful to secure additional information from authorities other than recording numbers of AQMAs in existence. It would be useful for us to know the population exposure, for example, or, where known, by when the air quality objective will be met which will help in checking progress in meeting the EU limit values. We should therefore like to receive the following:

- Estimated number of people exposed to the exceedence of the pollutant;
- Maximum concentrations (measured and/or modelled) at a relevant location within each AQMA; and
- Expected time by which the air quality objective will be met.

1.46 Please note, that in future, all local authorities are being encouraged to provide this additional information, where possible, in the next progress reports that they produce and in subsequent progress reports if circumstances should change. Further guidance on how to provide the above information will be made available as Frequently Asked Questions on both the Review and Assessment and Action Plan Helpdesk websites.

Further guidance

1.47 For further assistance on the integration of the AQAP into the LTP, please contact the Action Plan Help Desk in the first instance. The details are as follows:

Casella Stanger	Telephone:	020 7902 6130
	Email:	actionplanhelp@stanger.co.uk
	Web site:	http://www.stanger.co.uk/actionplan

Chapter 2

Evaluation of cost effectiveness and wider scale issues

2.01 Defra's report, "An Evaluation of the Air Quality Strategy" published in January 2005 shows that government air quality policies have achieved huge cuts in air pollution from road transport and the electricity supply sector (ESI). Over the evaluation period (1990-2001) emissions of SO₂, NO_x and PM₁₀ have been reduced by between 36% and 96% annually in the road transport sector and between 58% and 78% in the ESI sector. These large emission reductions have led to significant health benefits with a combined annual reduction in 2001 across both sectors, of up to 4,225 deaths brought forward and 116,971 life years lost. Furthermore, an important conclusion of this evaluation was that these policies have been cost-effective in achieving the desired emissions reductions. The report also investigated a number of local transport measures and concluded that local schemes directed at emission improvements also tend to have relatively good benefit to cost ratios.

2.02 This section on evaluation of cost effectiveness and wider scale impacts is based on the best practice carried out by local authorities in action planning, which we are disseminating for the benefit of all authorities. Defra expects all local authorities that produce air quality action plans, in future, to take this advice on cost effectiveness and wider scale impacts into account, whether or not they choose to integrate their action plans into the LTP or produce stand-alone documents.

2.03 In preparing their AQAPs, local authorities are required to evaluate the cost-effectiveness of the individual measures proposed, and to appraise the wider environmental, economic and social consequences of each option and package of options.

2.04 Guidance on the approach to evaluating cost effectiveness has previously been set out in policy guidance *LAQM.PG(03)* and in FAQs hosted on the action planning help desk (www.stanger.co.uk/actionplan). In addition, the NSCA guidance 'Air Quality Action Plans: Interim Guidance for Local Authorities' also sets out an approach that might be taken.

2.05 The following section sets out additional guidance on how these issues can be considered, drawing upon examples of good practice from AQAPs submitted to date. Please read the following section along with the tables in Annex 1 for a suggested approach.

Suggested approach

2.06 In terms of an assessment of cost-effectiveness, it is not expected that local authorities should carry out a detailed cost-benefit analysis, and the process is not intended to be unduly onerous. The intent is that authorities should set out the principal intervention measures that have been considered

by them in pursuit of the air quality objectives, and then give a broad indication of costs (or exact costs if available) to each. This will allow the measures to be ranked according to their cost and the improvements to air quality that they are expected to deliver. This will ensure that the authority is able to demonstrate that the package of measures that it proposes is both proportionate and reasonable.

2.07 There are no strict rules on how an assessment of cost-effectiveness should be carried out, only that the authority should take a consistent approach. To simplify matters, it is usually helpful to categorise both the costs and the expected air quality improvement (e.g. as $\mu\text{g}/\text{m}^3$ reduction in NO_x or NO₂) into bands, such as HIGH, MEDIUM, LOW etc.. It is not practical to provide more prescriptive guidance on how these bands should be set, as circumstances will vary from one authority to another, e.g. a small district authority may be considering measures within the cost range of £10,000 to £100,000, whilst a much larger metropolitan authority may have measures ranging up to £5 million or more. The bands will need to be set such that the costs and air quality improvements can be easily compared.

2.08 Where schemes or measures are already committed as part of another initiative, then the authority may choose to assume the **additional** cost for the AQAP is zero. Authorities may choose to include costs for officer time within their evaluation, provided they do so in a consistent manner.

2.09 In terms of wider-scale impacts, these may be described in general terms, citing both positive and negative aspects. For example, particular measures may impact upon pedestrian access, local noise levels, or road safety. If possible however, authorities are encouraged to quantify these impacts (see Table A1, Annex 1 for further details).

Annex 1

Cost effectiveness and wider scale issues

A1.1 Table A1 sets out a suggested approach for summarising the costs, wider scale effects and air quality impacts, which allow an overall ranking of the measures to be considered. This table has been based upon AQAPs submitted to date, but is illustrative only. The costs, air quality impacts and wider-scale impacts are likely to vary significantly from one authority to another depending upon local circumstances.

A1.2 For each measure, the table sets out a brief description of what is intended, the lead/key organisation involved, the timescale for implementation, the cost, and the air quality and non-air quality impacts. Measures with high air quality impacts and low costs would tend to be ranked higher, although clearly issues of timescale may also be important, particularly if implementation is expected to be long-term, or funding is uncertain. For example, a low cost measure that is expected to have a high impact on air quality may be ranked lower if the implementation timescale is many years into the future.

A1.3 The bands that are used in Table A1 for cost and air quality impacts are illustrative only, and authorities are encouraged to devise scales that are appropriate to their own action plans.

A1.4 The ranking of measures in Table A1 has been based on professional judgement, giving higher priority to those measures that deliver the greatest air quality improvement, bearing in mind the expected costs. Local authorities may also find it useful to apply a more quantitative approach by calculating a 'cost-effectiveness' score for each measure. This can be done by replacing the 'HIGH', 'MEDIUM' and 'LOW' scales with a numerical scale for both costs and air quality improvement¹. The scores may then be simply multiplied together to give a single indicator of 'cost-effectiveness'.

A1.5 An example of how this approach may be applied to the information in Table A1, is shown in Table A2. Once again, the bands that are used in Table A2 for cost and air quality impacts are illustrative only, and authorities are encouraged to devise scales that are appropriate to their own action plans.

A1.6 This system in Table A2 provides a slightly different ranking of measures to those given in Table A1. It is recommended in all cases that local authorities should take into account other factors such as feasibility, timescale and funding, and that a final ranking of measures should be based on professional judgement.

¹ If this system is applied, it is essential that the scales for cost and air quality improvement are inverse, i.e. costs should run from highest (1) to lowest (5), and air quality improvement from highest (5) to lowest (1). The measure that delivers the greatest air quality improvement at the lowest cost will attain the highest score.

Table A1: A suggested approach^(a) for summarising costs, air quality impacts, and wider-scale effects

Measure	Description	Lead/Key Organisation	Air Quality Impact	Timescale	Cost	Non-air quality impact	Ranking
A46 Inner Relief Road	Development of new ring road to divert traffic away from town centre	County Council/Borough Council	HIGH	MEDIUM	££££	Positive improvement to town centre environment, reduced noise and improved safety. Disbenefit of 5% increase to CO ₂ emissions due to longer journeys.	1
A45/M60 layout changes	Improved junction layout and signalling to reduce congestion	Highways Agency	LOW	SHORT	£££	Improved safety. Shorter journey times.	3
Park and ride scheme	Development of new park and ride facility associated with ring road	Borough Council	LOW	MEDIUM	££££	Reduced congestion and improved travel times. Reduced CO ₂ emissions (1%).	4
Pedestrianisation	Downgrading of main traffic routes in town centre to provide pedestrianised areas and enhanced quality public spaces	County Council/Borough Council	MODERATE	SHORT TO MEDIUM	££	Positive improvement to environment in terms of noise and safety. Reduced vehicular access may increase traffic in other areas.	2
Example Key: Timescale: LONG = 5 to 10 years; MEDIUM = 2 to 5 years; SHORT = Less than 2 years Cost: ££££ = Greater than £1 million; £££ = £500k – 1 million; ££ = £100K - £500K; £ = Less than £100K Air Quality Impact^(b) (shown as reduction in annual mean NO₂): HIGH = 2 µg m ⁻³ ; MODERATE = 1 to 2 µg m ⁻³ ; LOW = 0.2 to 1 µg m ⁻³ ; NEGLIGIBLE = Less than 0.2 µg m ⁻³							

Notes:

(a) The action plan measures set out in this table have been derived from AQAPs submitted to date. However they are provided in this table in order to illustrate an approach for summarising costs, air quality benefits and wider-scale effects, and do not represent an endorsement or recommendation of any specific measures that should be implemented within an AQAP.

(b) The air quality impact may also be recorded as a reduction in annual mean NO_x emissions. If this is the case, authorities should indicate the cumulative impact of their measures in terms of µg/m³ reduction in NO₂ so that an assessment of compliance with the objective can be carried out.

Table A2: A suggested approach for calculating a ‘cost-effectiveness’ score

Measure	Cost (A)	Air Quality Impact (B)	Cost-effectiveness (A*B)	Ranking
A46 Inner Relief Road	1	5	5	2
A45/M60 layout changes	2	2	4	3
Park and ride scheme	1	2	2	3
Pedestrianisation	3	2	6	1
Example Key: Cost: 1 = Greater than £1 million; 2 = £500k –1 million; 3 = £250K - £500K; 4 = £100K - £250K; 5 = Less than £100K Air Quality Impact (shown as reduction in annual mean NO₂): 5 = >2.0 µg m⁻³; 4 = 1.5 to 2.0 µg m⁻³; 3 = 1.0 to 1.5µg m⁻³; 2 = 0.2 to 1.0µg m⁻³; 1 = Less than 0.2 µg m⁻³				

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